Arab Banking Corporation Bank (ABC Bank-Jordan): A Case for Using Mobile Banking

Application to Increase Efficiency and Improve Customer Satisfaction

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Abstract

This paper recommends ABC Bank-Jordan use a mobile banking system to increase the bank's efficiency and improve customer satisfaction. By implementing a mobile banking system that would allow customers to view their transactions, deposit checks, and use location-based services using their mobile phones, ABC Bank-Jordan would be one of the first banks in the region to offer this platform to its clients. The paper analyzes the costs and benefits associated with such implementation and the resources required to strategically and successfully implement the plan. The case study of Bank of America is used to support the benefits of implementing the mobile banking platform.

Introduction

The world is changing rapidly, especially in the technological arena. The competition in creativity of using technology and smartphones in our lives has become an essential component of excellence in service. In the financial sector, specifically in the banking business, there is a shift in banking trends recently. The competition between providers is taking an approach, where providing financial services outside of offices and regular office hours is essential to compete for customers. According to Nielsen (2013), "The important thing is that mobile banking is gaining momentum at the highest speed while traditional means of banking i.e. call centers, ATM machines, branches are trending in the opposite direction" (as cited in Pitafi, 2014, para. 5). To keep pace with the development in technology, banks are competing fiercely in how well they provide services to customers; and they focus on quality, rather than quantity, of the financial services they provide.

Today, most banking interactions will not take place at a bank's employee desk; banking through branches is no longer the essential banking channel. With the spread of mobile devices and the availability of applications, mobile devices are expected to serve as digital branches in customers' hands. Mobile devices will become, and in some cases already are, the main starting points for several banking services. Banks can, and should, use the ever expanding ideas and devices to provide new services and learn about customers and their needs.

Mobile banking allows customers immediate access to their accounts and the ability to conduct their transactions at their leisure. Therefore, customers seem to be spending more time using mobile, instead of computer, access to banking services. This trend is considered a big opportunity for the banks to inaugurate mobile banking solutions and change their ways of doing business. The use of mobile banking has expanded by more than a third in 2012, and it is

expected that it will be increased more in the coming years as a result of the increase in the

number of users of smartphone (The Board of Governors of the Federal Reserve System, 2013,

p. 21).

Prior to coming to California, the author had worked at the Treasury Department (TD) of

the Arab Banking Corporation in Jordan (referred to as ABC Bank-Jordan hereafter). The

Treasury department is considered the profit center of a bank; the responsibilities of working in a

TD involve assets and liabilities management. Though exciting, such responsibility involves

several challenges. Safety and efficiency in working in the TD requires quick thinking, making

instant decisions while at the same time balancing what is right, reasonable and safe with what is

profitable. Perhaps the best description of my work in the TD was to make the most profit with

the least risk within the bounds of the bank's policies, plans, goals and expected budget. During

my experience at ABC Bank-Jordan, I noticed that the use of nontraditional modes to offer

services were minimal and somewhat primitive. Banking services are mostly offered through

traditional modes (at the physical bank locations) and the online services that are offered are

somewhat primitive and narrow in scope.

When I arrived to the United States of America, I noticed how widely mobile banking is

utilized and had even expanded over the nearly two years I have spent in the U.S. so far. The use

of mobile banking on smartphones and tablets is helpful and efficient for both banks and the

customers. One can access his/her account and execute many transactions at any time and

anywhere as long as an internet connection is available. The first time I used a mobile banking

application, I wondered about the benefits of such service for ABC Bank-Jordan. If they were to

utilize the full fledge mobile banking format they would be recognized as one of the first banks

in the country to offer a full-featured application. Based on the experience of banks in the U.S., it

would be safe to assume that offering mobile banking services increases the banks' reach to customers in a cost-efficient way that allows for full customers' engagement in services. It is also clear that such services attract current day customers.

Problem Statement

Using mobile banking applications has become one of the latest ways in increasing customer satisfaction, and decreasing operational costs. Customers, who are mobile themselves, are expecting mobile banking services. In the current environment of fast evolving technologies, mobile banking is a must for a bank to remain in the highly competitive banking arena. According to Gaynor (2014), "Businesses have a very compelling reason to embrace mobile, as there are abundant opportunities for them and their banking partners to further automate their relationship and create efficiencies in how they interact" (para. 2).

Mobile banking allows banks to reach further in terms of offering services while advertising, marketing, and attracting customers. Banks are continuously looking for opportunities to extend services in efficient, profitable, and low cost ways; mobile banking offers exactly that. Customers use their own mobile phones or gadgets, and conduct most of their business independently, reducing the need for using bank employees. This makes customers feel more satisfied with the ease and convenience of mobile banking. According to Bryan Kirschner (2013), "As more shifts in everyday behavior occur, it will be key for every organization, from government to brick-and-mortar stores to banks to understand how they can best connect with their key audiences in the app economy" (as cited in Eddy, 2013, para. 6)

Although the crisis did not manifest initially in developing countries, the situation changed as the cyclical downturn that was already under way in September 2008 intensified as time went by. The Kingdom of Jordan was not isolated from the global financial crisis of 2008.

Banks in Jordan were affected by the crisis and lost some of their customers due to the economic

slowdown, and as a result the competition between banks has increased through providing new

and updated banking services in order to increase and maintain their customer base. Furthermore,

the crisis triggered an increased demand for Islamic banking; therefore Islamic banks now play a

larger role in Jordan, especially with the newer Islamic products that have been developed to suit

customer's requirements, which enticed customers who are coming from conventional banks.

This shift also increased the competition between conventional banks further. Currently, most

banks provide more or less similar banking services with minor differences. Despite the lack of

"differentiation," there is a huge competition between banks to attract new customers and gain

their loyalty. With the global openness and the increase of using smartphones in Jordan,

customers are demanding more efficient, flexible, secure, and faster services. Currently, a very

limited number of banks in Jordan offer mobile banking applications, however, the services they

offer through mobile banking are very limited and are mostly basic features.

Currently, ABC Bank-Jordan does not use mobile technology, yet it is looking to increase

its customer base and achieve a significant market share in the Jordanian market. In Jordan, the

penetration rate of smartphones reached 41% of the population, and the growth rate of that

penetration hit around 107% in 2013 (Ipsos Media CT, 2013, p. 6). This accelerating growth rate

is partly attributable to the increase of population as a result of the influx of refugees because of

the political unrest in the area. Ipsos Media CT (2013) notes, the projection is that the

percentage of people who are going to use smartphones will be more that 50% by the end of

2014. Given that the political situation is not improving in the surrounding countries, it is safe to

conclude that the mobile network in Jordan is rapidly catching up with the global trends of

smartphone utilization. I believe it is essential for ABC Bank-Jordan to start mobile services with

a fully-featured application. Offering this service will secure ABC's place in the competition. Not only would instituting such services benefit ABC's customers, but it will also benefit the bank in the short run and long run by increasing customers' satisfaction, eventually their loyalty, and cutting the bank's cost. Implementing mobile banking would spare the costs at enormous levels by excluding the need of physical resources, such as basic facilities and staff. In addition, mobile banking would increase the reach of ABC Bank-Jordan in terms of advertisement and marketing itself to the largest proportion of Jordanians, the young adults who are also more tech savvy.

Company Profile

Arab Banking Corporation (ABC) is one of the first wholesale Arab financial institutions. ABC was established in 1980, with its headquarter in Manama, Kingdom of Bahrain. Currently it has units in eighteen other countries in the Middle East, North Africa, Asia, the United States of America, and Europe, and ten representative offices in the world. The major shareholders for ABC are the Central Bank of Libya and Kuwait Investment Authority, and it is listed on the Bahrain Bourse. ABC offers a variety of international wholesale and retail banking services, such as project and structured finance, corporate banking, syndications, trade finance services, treasury, and Islamic banking. ABC also is expanding in the retail banking network on the MENA region (Arab banking Corporation, n.d., para. 1, 2).

ABC Bank-Jordan was started in 1990 as a corporate bank that focused on big companies. After 2004, ABC Bank-Jordan changed its strategy by providing Retail Banking services (RTB) in addition to Corporate Banking services. Since 2004, ABC Bank-Jordan has been targeting small businesses in order to expand its customer base, and working hard to increase its market share. ABC Bank-Jordan has twenty-seven branches spread all over the

kingdom of Jordan (Arab Banking Corporation, n.d., para 1, 2).

In addition to its services, ABC Bank-Jordan owns an investment company, ABC Investment, which offers local, regional and international financial market services to its clients. With the expansion of using technology in financial services, the increase in connectivity of all things becomes more and more intertwined, and the growth of "Internet of Things", ABC–Jordan strives to keep pace with the newer developments that are added to the wide range of services offered by banks and other financial institutions in the region (Goldman Sachs, 2014). The implementation of fully-featured mobile banking applications would contribute to ABC's aspirations and increase its appeal to customers.

Action Plan

In the following sections, a discussion of an action plan is presented. The discussion focuses on a plan to develop and execute a full-featured mobile banking application. This plan is a road map that addresses specific functions that must be accomplished from 2015 through 2016. Two facts should be considered in the context of this plan. One, ABC should consider seriously the timeline (2015-2016), which is somewhat tight, yet essential and motivated by the fact that a few banks in Jordan (such as Arab Bank, and National Bank of Abu Dhabi) have started using mobile applications with basic features, therefore, it is expected that several banks will start using mobile applications that are beyond basic banking. Offering a fully-featured application sooner than other banks can help ABC secure its place "ahead of the pack" in the country, possibly the regions. Two, ABC Bank-Jordan should start providing its banking services by creating a mobile application that is characterized by convenience, friendliness, and ease of use anywhere and anytime. According to Deloitte (2011), "By being able to access account information and perform transactions without requiring access to bank branches, ATMs, or

computers, consumers are able to 'bank' wherever and whenever they want — and they are

learning to expect such convenience" (p.2). The application that ABC Bank-Jordan should create

is a full-featured one and far ahead of basic banking services (checking, transferring, and

executing payments) that are already offered by other competitors. At a minimum, the proposed

application should have three additional features: check deposits, long distance wire ins, and

GPS location service to enable customers to find where the closest branches and ATM machines

are located. I believe that these features would differentiate ABC Bank-Jordan as the first bank in

Jordan to provide such services.

       To design, develop, and make such an application requires a serious engagement during

the planning process of the mobile application. One of the main aspects that should be

considered in the process is the role that "big data" can play in the success of this application.

Data collected from social media would benefit ABC Bank-Jordan beyond marketing and

advertising, and more so in analyzing the trend and the needs of customers. It will also help the

bank to stay ahead of its competitors to attract and retain customers who are transitioning to

mobile solutions, to reach and provide information to customers in real time, leverage the unique

market expansion opportunities, and take advantage of the emotional connection that customers

have towards mobile devices, all of which would help ABC to move faster than the competitors

and build a sustainable competitive advantage. According to Adrian (2011), "Big data is driving

innovative approaches that change as frequently as the problems do. Remaining open to new

ideas, and frequent experiments, is the order of the day" (para. 17). Social media and 'big data'

reaches much farther than traditional tools (hardware and software) to capture data in real time,

manage the flow of information, and process all incoming data within a reasonable time for both

the bank and its customers (Adrian, 2011, para. 4).

Developing and implementing a functional mobile application also requires the collaboration of a whole team, because it demands different skills and expertise in each stage. ABC Bank-Jordan will need to seek the assistance of its experts in retail banking, Information Technology (IT), marketing, security and customer service departments. Each of the departments has a role in the design, integration, and implementation of this application across all bank systems. In addition, ABC Bank-Jordan will need to arrange with outside experts (such as telecommunication companies - Orange Jordan, Zain, and Umniah) and regulatory bodies (such as the Central Bank of Jordan) to get the approvals needed to activate the services.

The Upside and Downside

Moving to a mobile application will be a very challenging task for ABC Bank-Jordan. The bank will encounter challenges with mobile banking arising from its employees and business customers. Instituting this service will be costly, complex and time consuming for the bank in terms of consulting with outside experts in banking and telecommunications, finding a specialist company (vendor) in this field, preparing the infrastructure needed, staff training, testing the service, and finally launching the service.

In addition, ABC Bank-Jordan will have to complete the process and have the product, a mobile application, within a timeline that may not be long given that other banks might be planning similar services (as first movers). Otherwise it will be a greater challenge for ABC Bank-Jordan not only because there will be new entrants in the mobile banking world but also because they will lose the opportunity of having a competitive advantage of being pioneers in providing this service.

Another challenge is the need for ABC Bank-Jordan to stay up-to-date with technology to satisfy increasing customers' demands and special needs. The mobile industry is very dynamic

and is expanding and changing rapidly.

Scalability issues will be another challenge for ABC Bank-Jordan, since mobile banking is growing very fast and there are a notable number of adopters for this service who are switching to mobile banking instead of traditional banking services. This will require high and well-built infrastructure to cope with the potentially high numbers of customers.

Compatibility of mobile devices will be an additional challenge to ABC Bank-Jordan; with the development in technology and mobile zone, new devices are being invented in the market every day, which support different systems. With the desire of customers using the latest technologies and gadgets available in the market, it will be a challenge for ABC Bank-Jordan to provide such a mobile application solution that is independent and separate of mobile device compatibility matters.

Despite all the above challenges, implementing mobile banking is still a win-win service for both the bank and customers, and there are several advantages of mobile banking, including higher customer satisfaction, because it offers easy and quick access, security, saves time, and offers free services at no fees for the application. According to Dyke (2010), one of the biggest benefits to customers is that they have more control of their money (as cited in Bankrate, para. 2). Customers will be able to access their accounts and check their records anywhere, anytime. At the same time, it is safer than other channels, since such bank applications can be set up with multiple layers of protection such as dual authentication or secure certificates (SSL) (Global Sign, 2014).

Moreover, ABC Bank-Jordan will take advantage of reducing branches' overhead that will result in reducing operational costs, which will end up with increasing the efficiency of the bank. Furthermore, ABC Bank-Jordan can utilize these savings in cost to be distributed to

customers in the form of lower interest rates, which could assist the bank to serve its existing

customer better and give the opportunity to reach a new segment of customers and enlarge its

customer base. According to Bain Report (2012), "Digital channels don't just create 'wow'

experiences that make routine transactions fast and easy. They also can divert volumes from

higher-cost brick-and-mortar channels if done correctly" (para. 9).

Additionally, mobile banking will lead to the greatest flexibility in working by

facilitating working from home, or working during travelling. The growth of cloud computing

has also affected positively the use of mobile devices, which support more flexibility on working

practices through offering services over the internet.

Finally, creating a mobile banking application is a one time pain for ABC Bank-Jordan,

because setting up the banking application portal and bringing on experts will happen only one

time, and once the setup is completed, the running costs will be limited only to maintenance and

upgrades when such operations are needed in the application.

Results Defined

ABC Bank-Jordan will be one of the early adopters of this technology with a full-featured

application. Having a fully featured mobile application will benefit the bank, especially in the

long run. Mobile banking will increase the productivity and the efficiency of the bank's

operations which will lead to increased profitability; it will provide a real-time delivery of

transactions, provide immediate access to products and services, and it will help the bank to

expand beyond its physical geographical locations to virtual branches.

Productivity and efficiency of the bank will be achieved when the output of quality

improvement evaluation standards are used as benchmarks to assess the performance of branches

and by facilitating the reallocation of employees as needed. Since the mobile application will

function as the front office of the bank, the savings in the number of employees needed in this

position will be less. As a result, the savings can be used to open new low budget branches to

achieve a greater presence of the bank everywhere, hence marketing the brand of the bank. In

addition, the employees who are usually staffed in the front office can be transferred to the back

offices to be in charge of the verification and authorization of the transactions that are executed

from the mobile application. This will be important since more staff will be in the back office,

given that eventually a lot more transactions will take place at the same time and all the time.

Some of these employees can also be used for marketing, or to staff call centers for the new

application to answer and help customers in any query of the mobile application.

The new low budget branches (cash offices) will work only on non-mobile transactions,

such as opening new accounts, arranging loans requests, financing projects, and cash

transactions. Furthermore, the branch staff would work on marketing and walking first-time

users through the mobile banking experience. This will help educate and inform clients about the

mobile application while at the same time help the bank to increase the quality of services

offered to customers. Due to the ability of clients to use mobile banking, a smaller number of

customers will be physically visiting the branches, allowing more time to service them. The time

spent on clients in branches will increase which facilitates are given more attention and

customized care and this will increase the customer satisfaction.

Additionally, it will enable the bank to promote and cross-sell products to existing

customers, increase its customer base, and attract potential customers/smartphone users that are

significantly growing in Jordan. The bank should use the new mobile application for marketing

its products and services by adding promotional content to the mobile site. These ads should be

customized/targeted and related to customers' needs to increase the possibility that customers

will click on it. The promoting messages can be feasible to customers when they login to the mobile application. Customers then can go through these advertising messages and act accordingly by calling the phone numbers specified with each advertisement. That way, the bank can track what ads the customers saw, and how they responded. This feedback could help the bank to tailor promotional content appropriately to optimize the bank's marketing results.

The bank could add advertisement messages within the new application that attract customers such as: 'Refinancing? Qualified customers pay no closing fees! Apply now'. 'You could benefit from our new housing loans standards/requirements! Press more details'. 'Want to enjoy your summer vacation with ABC credit cards? Press Here'. The bank should utilize the new application and go beyond its focused service of using the application towards marketing its products and services and optimize its desired goals.

Access and satisfaction will turn into greater loyalty, which will eventually strengthen customer-banking relationship (increasing Know Your Customer). It is expected that mobile banking will outperform online banking and be the most extensively used channel by 2020 (Deloitte, 2011, p.3).

Mobile applications can enhance the services that are provided to customers. For example, when an employee of a bank is meeting with clients outside of the bank, it is imperative that this employee have access to the bank's systems - over the internet - to allow him/her to access and update a client's details or transactions while he/she is working away from the office. Alternatively, the customers should be able to make payments for products and services without having to use cash, swipe a credit or even write a check. More efficient solutions can be designed by linking employees directly into a bank's network to access the bank's database/accounting systems while they are working on job-related projects away from

their offices. Their services in that way are not bound to one location; thus they improve their productivity.

As mobile banking grows, ABC Bank-Jordan will increase its profit and realize efficient operation that decrease the cost of processing transactions compared to traditional ways (such as remote check deposits that will reduce dependency on branches), which will shift more transactions into mobile channels. It is estimated that the average cost would drop to $0.10 per transaction as service escalates, while ATM machines would cost about $0.16 on average and about $1.34 for the face-to-face branch interactions per transaction (Mallon, 2010, p. 8). These changes over time will increase the efficiency of employees, and change their role to advisory services rather than transaction providers. This in turn will boost operational efficiency and lead to greater sales rates. Also, mobile banking can potentially help the bank to cut the cost by closing poorly performing branches.

Using mobile banking will not only help ABC Bank-Jordan to be more efficient, but it will also help the bank to be the place where people want to work. This will be an edge for the bank to increase competitiveness in hiring and embracing talented employees in the coming years. Mobile banking applications will need creative minds in marketing, design, and software building, and it will offer new opportunities for employment outside the traditional boundaries.

Case Study: Bank of America

In the United States of America, the use of mobile banking has increased rapidly; most banks use and offer this service. One of these banks is Bank of America (BOA). BOA is considered one of the largest banks in the United States. BOA was founded in 1904 and has widened its reach through several acquisitions (Encyclopedia Britannica, 2014, para. 2). BOA initiated mobile banking services in 2007. Since then, the number of users of mobile banking has

increased to reach fifteen million active customers in 2014. Marc Warshawsky, senior vice president and mobile solutions executive at Bank of America, declared that, "Bank of America now has more than 15 million active mobile banking users who access their accounts on a mobile device over 165 million times per month. We've seen this number continue to grow and recently the number of monthly mobile banking logins surpassed online banking logins for the first time" (2014, para. 17).

BOA provides a browsers-based service, which is a simplified version of the online site that fits within a cell phone or a tablet screen. Mobile banking became one of the primary methods of banking and is widely used by customers, especially for mobile check deposits, which has been the fastest growing service that Bank of America has offered. According to Marc Warshawsky (2014), customers are enjoying the accessibility of being able to execute their financial transactions anytime and anywhere. Also, the bank receives 170 thousand check deposits on average through their mobile platform every day (para. 10). Along with the convenience, BOA has prioritized and emphasized high security and maintenance of mobile banking.

Beyond improved customer loyalty, mobile banking has increased acquisition rates, and provided opportunities to cross-sell BOA's products. Going to mobile banking has helped BOA cut and save costs by increasing customer self-servicing and eliminating the need of traditional spending on ATM machines, call center and branches. BOA was able to gain benefits as a result of using mobile banking by cutting expenses to eight billion dollar and cutting 30,000 job through decreasing the number of ATM network by nine percent and shutting down 108 branches in 2012 (Son and Tracer, 2012, para. 1, 2).

BOA's mobile application provides customers with their balances, checks and transfers, records tracking, check deposits, and e-bills. Many enhancements that BOA are working on mobile banking include a calendar tool that will help customers to schedule appointments with a banking center, card replacement requests in case of lost or stolen cards, notifying the bank of any travel plans, money request from another party, and finally "click to call" which helps customers have representatives call them back (Crosman, 2013, para. 10). BOA is trying to drive mobile banking in the banking sector in today's world where smartphones are the most preferred tool for customers

Implementation Plan

According to Deloitte (2011), "The marketplace will soon be crowded with competition from a variety of sources. Banks have a window of opportunity to establish a leadership position in the marketplace, but they will need to act swiftly" (p.8). ABC Bank-Jordan can be one of the leaders in the region in mobile banking, and if ABC Bank-Jordan succeeds to deliver all business targets from this application it will be considered as a pilot project and proof of concept (POC) from the head office's perspective, which will lead to it being implemented in all its business units around the world. The implementation plan of the new application must be accomplished from 2015 through 2016 to achieve the desired goal to be at the forefront of banks in this technology.

Pre-implementation Requirements

Before starting the implementation plan, ABC Bank-Jordan should assign a project manager for the new application project, who will lead and assign responsible personnel from each department to cooperate in the planning and implementation process.

Furthermore, ABC Bank-Jordan should have an approved project charter that would be the roadmap during the implementation process and would be as a contract between the project manager and the management of the bank. This would explain and identify the required facilities needed to create and build the application, and the appropriate budget that should be allocated for this project. Additionally, a project outline would explain the different set of phases needed for the project, and time needed for each phase, starting with preparing requirements, conducting scenarios of the affect, building and designing a high level application. Moreover, it would identify and prioritizing the tasks needed for developing the new application with adequate timelines, coding, testing, and implementing. Further, the project charter should have tracking and reporting systems of the accomplishment and effectiveness of each phase.

Implementing Master Data Management

The first step in the implementation plan is to have the full support of the top management by proposing the project through the IT steering committee and to have full involvement from the marketing department. Also, the bank should implement Master Data Management (MDM) to be used as a sole source of information for their application, which will integrate all data content that is available on all the bank's systems and its relationship, access management (security and compliance), change management procedures, and finally processing and work flow integration. Wolter and Haselden (2006), "Define Master Data Management (MDM) as the technology, tools, and processes required to create and maintain consistent and accurate lists of master data" (para. 22). Implementing MDM should improve operational effectiveness, value creation, and risk mitigation.

The second step of the implementation plan is that, ABC Bank-Jordan should schedule weekly meetings between the technical, business, and marketing teams to make decisions about

what features should be included in the application, and should plan, design, and develop the application processes. In addition, experts in the regulations that govern the banking industry in the country (the Central Bank of Jordan) should be consulted because these regulations will affect the bank's strategies in mobile banking (which are available but suspended until new regulations are developed and approved by the CBJ).

Next, the business team should choose the features of the application. As a corporate team, they will define their requirements (such as multiple accounts, two level authentication, remittances, and letter of credit) to utilize this application as a chance to serve their customer base segment. As a retail team, their requirements for their targeted customer segment should be to enhance the reputation of the bank by being a leader in this service. Additionally, mobile banking will expand their market share by offering this service, and give the bank a chance to have a competitive advantage by creating a fully featured application.

In addition, the marketing team should decide how to utilize this application as a dynamic marketing channel to attract and approach more customers to this channel of service. This will help to increase their sales, promote new products in order to increase their customer base and to understand what best would fit and exceed the customers' expectations. Also, the public relations department should integrate their role in the new application by arranging for new announcements and achievements of the bank.

After that, all teams should meet and discuss with the technical team regarding the feasibility of developing the application in relation to the bank's IT resources. The technical team should prepare a gap analysis and create sizing for all business requirements according to current resources such as hardware, communications, infrastructure requirements, skills and

security tools. Then the technical team should provide a flowchart of the process to the business teams to get their approval and do all the changes needed.

Quality Improvement Department

The third step in the implementation plan is creating a focused department on quality improvement, staffed by qualified and trained people to evaluate the bank's systems and establish service standards to be used as a benchmark in agreement with the best business practices. This is an essential component to the success of mobile banking. The first step the quality improvement (QI) department should take is to analyze existing service standards in the bank and assess their performance impact on the different functions. This should be done to establish up-to-date standards that conform to the best practices in the industry. Then, the QI department will need to use these up-to-date standards to evaluate each process and every branch in the bank's network. Key components the QI department will need to assess include resources, time and flow of information associated with each transaction process where verification and authorization take place. The output of the QI evaluation will need to be used to map the mobile application architecture; this is clarified in the section below.

Any financial transaction, prior to the emergence of applications, goes through a teller or customer service personnel to execute it on the bank's systems. For example, when depositing a check, the teller will first check the name, signature, amount, and any other information on the check, and if all information is correct he/she will then execute the transaction on the customer's account. After that, this transaction is transferred to the back office where it will be verified by checking the availability of the specific amount on the drawee's account, the beneficial bank, and if all the information is correct, the head of the central operational department will authorize the transaction and the financial impact will be reflected on the customer's account balance.

However, when the bank implements the mobile banking application, the role of the teller on this

process will be replaced and transferred to the application since this part will be done on the

mobile application directly. As clarified in the example, the QI department will map out each

step in each process that takes place when any transaction is performed. This map will be the

template that the IT department will use to build the application features and how it functions.

The creation of the application will lead to minimizing or eliminating the need for some

of the staff who traditionally performed/oversaw the different steps involved in each transaction.

Therefore, the QI department will have to re-evaluate the actual time and resources that are

needed to perform each process and the bank will need to reallocate the resources and the

employees between branches and departments in a way that will help to increase the productivity

of the employees and the bank as whole.

Implantation Phases

First Phase

The fourth step in the implementation is that the technical and business teams should

work on three phases of implementing the application. The first phase includes two steps. The

first step is providing a proposal of recommended features of the application by the business

teams. These features should include basic features such as balance inquiries, credit card

transactions, claims and requests, money transfers, offers and promotions, interaction with

contact center agents (click to call), bill payments, alert systems, foreign exchange rates, local,

regional and global stock markets updates, integration with VIP customers to expedite their

transactions in case of conjunction at braches, and integration with the investment arm of the

bank. In addition, the mobile application should have the ability to deposit checks without going

to branches, by utilizing the phone's camera as a check scanner, and utilizing GPS service to get the nearest ATM's or branches according to the customer's location wherever he/she is.

In-House/Outsourced Application

The second step of the first phase is deciding whether to build an in-house application or acquire a mobile application from a leading vendor. In case of an in-house application, ABC Bank-Jordan should consider the ability of building such application, the cost and resources. The IT team should create the application according to business requirements by using their coding resources (preferable platforms being Oracle or Dot Net). In the case of going with a vendor, ABC Bank-Jordan should proceed with the selection process with the assistance of the project manager or by cross functional teams in each concerned department (infrastructure, support, development, and security) to pick a vendor. They should access and research the best vendor, such as using Gartner's website, which provides the leading vendor in each technology.

The bank should compare the pros and cons of using an in-house application or going with a vendor prior to making decisions regarding who develops, maintains and upgrades the mobile application. Using an in-house application will help the bank to benefit from the customization through meeting the exact aspects and specifications that the bank business's needs and avoiding any extra packages when going with vendor. Also, an in-house application will provide the bank with full control over the customized application. In addition, the interface will be easier to use and more similar to the bank system compared to a vendor's. Moreover, an in-house application will benefit the bank because it will allow access to knowledgeable support since it will be developed by trained and qualified teams within the bank. In house developers will understand the bank's needs and the subtle details of its uniqueness and will minimize the time to explain errors when dealing with outside technicians.

However, it is possible that developing an in-house application by the bank's team may involve making many errors in the application if developers lack the knowledge and necessary expertise to build a sophisticated application to handle all the required tasks. Such errors will be costly and the bank may be forced to still consult outside experts who may not be familiar with the bank's business. Another possibility that should be considered is that building an in-house application may cost the bank more in the future if the bank's team is not be able to upgrade the application according to changing technology.

Going with an outsourced application builder/vendor may offer the bank a broadly tested application that might have been already adopted by other banks. This will make the integration quicker, smoother and less troublesome. Furthermore, if a qualified and highly skilled team of developers create the outsourced application, the complications and errors will be reduced, which guarantees that the application will be built correctly and be with less hick ups when it is first introduced to customers. Additionally, purchasing a readymade application will benefit the bank because in this fast-paced technology world it will save the bank time of deployment and testing, and the time can be invested in solving other issues. Nonetheless, an outsourced application could cost the bank a lot for maintenance fees and support. If the bank needs to address any technical complications, it might be at the mercy of the vendor who could charge more or increase the price to fix any technical issues, and cost time, which will end up slowing operations. (M. Khraim, personal communication, November 10, 2014).

The author recommends that the bank should go with an in-house application rather than an outsourced application. This recommendation is based on several reasons; first, if initial costs are taken into consideration, it will almost cost the same. The initial budget to purchase an outsourced application could be invested on the human resources in the bank by providing

certified training for the developers of the new application to build a scalable, easy to integrate

mobile solution, if the bank goes with building an in-house application. The bank should choose

a team from the IT department to be fully dedicated to this project and fully supported with all

necessary resources and training. If needed, the team should have funded access to external

expertise/consultants whether from ABC-Bahrain or Jordan. The bank already has a qualified

team who has qualifications in terms of business and technical experiences, since they previously

created many successful solutions to develop/support the bank's systems and processes. The IT

team is new in this application's technology but are not new in the concept of building solutions.

Second, if the bank builds an in-house application, it can benefit from the economies of scope (it

will allow ABC group to benefit from this technology without any extra charges). Building an in-

house application will start with building the knowledge, the training and developing a team for

the new technology. The cost involved initially will be mostly on the training of this team.

Though their training will cost money, this team can potentially be the reference for the entire

ABC Group and help develop the entire ABC Group application (new mobile application) after

succeeding in developing the ABC Bank-Jordan application. Finally, by investing in the bank's

technical team, this team will be a reference to the bank in any future requirements of the

application. In addition, the benefit of the in-house team is that this team is part of the bank and

knows the bank's business, so they know how to customize an application that fit the bank's

needs.

After the method of creating the application is selected, approval from a committee of IT

and business teams is needed. This approval should consider requirements, resources and costs,

and the application of an Application Processing Interface (API) that is compatible and adjusted

with current banking systems to facilitate the integration.

Second Phase

Users Acceptance Test (UAT)

The second phase of the implementation plan should start with implementing a test version of the new application on a test environment of the bank's infrastructure. Then they must work on the verification and testing of the Users Acceptance Test (UAT), and/or end user testing. UAT is "a phase of software development in which the software is tested in the 'real world' by the intended audience or a business representative. Whilst the technical testing of IT systems is a highly professional and exhaustive process, testing of business functionality is an entirely different proposition" (Bordo, 2014, para. 4). UAT is an important part in the software development cycle, which will affect the improvement of the project's success. ABC Bank-Jordan should consider UAT to eliminate change requests and to reduce the total costs of the project. Also, it will ensure that the application behaves exactly as expected, because this test will increase and develop loyalty and word-of-mouth between customers.

The implementation of the UAT test should be based on the "V" model for testing. According to Bordo (2014), the "V" model is "a methodology where development and testing takes place at the same time with the same kind of information available to both teams. It is good practice to write the UAT test plan immediately after the requirements have been finalized" (para. 9).

ABC Bank-Jordan should give this phase a great importance, since the testing stage will confirm if the application can support business as usual (BAU) and user scenarios and assess that the application is sufficient and correct for business usage. UAT tests should help ABC Bank-Jordan to discover errors and mistakes that might happen in the earlier stages of developing the

application, and to verify that the application's behavior is working side by side with the

business requirements.

ABC Bank-Jordan should confirm all the basic steps when performing its UAT test to

make sure that the application is tested thoroughly and meets business requirements. At the

beginning, ABC Bank-Jordan should analyze the bank's business requirements, and identify

scenarios/plans, and create cases for UAT test. Through the process of running the test, ABC

Bank-Jordan should record the results, and finally confirm that the objectives of the business are

met. Furthermore, the business teams should ensure that these deliverables (UAT test plan, cases,

and defect log captures problems) are in place and that they provide appropriate coverage of all

the UAT scenarios, and this process should be done within two weeks.

Third Phase

Running/Re-evaluation the Application

The third phase of the implementation plan should begin with the purchasing process of

the required hardware infrastructure items, communications lines, and security tools, which

should not exceed more than eight weeks on average. At the same time, a proper training plan for

all concerned people in this project should include customer service agents, back office

personnel, technical people, and contact center agents. Also, the marketing department should

select loyal customers to install the application to have their feedback about the application

before going live.

When all the necessary requirements are delivered and installed, transferring to the

production environment should take place and they should start with the going live process of the

new application.

While the technical teams take care of the technical aspects of the new application, the training department should take care of implementing the training plan of employees. Parallel efforts from the marketing team should focus on advertising and promoting the new application inside and outside the bank. Also, preparations to ensure security and handling customers' questions should all be meticulously planned and addressed.

After the application is made live, the last step in the implementation plan should take place. The role of the project team will shift to involve continually following up and evaluating the application with its benefits and costs. Changes and adjustments to the application configuration might be needed. It is advisable in the follow up stage to practice some activities such as building a help desk, creating handbooks, maintaining the results, and writing a report for the project. This is done by the collaboration between the different teams to ensure the functionality-featured solution, with the technical team emphasizing the efficiency of the application.

Recommendation

After going live with the new application, the bank and the marketing department specifically should insure that the new application is promoted on a large-scale and that aggressive efforts are put to encourage all types of customers to use it. In addition to the common and traditional ways of marketing that the bank uses, new marketing strategies should be used such as creative TV ads, social media, ATM messages, mail and email. Additionally, the marketing department might encourage customers to adopt the mobile application by providing different kinds of incentives when customers enroll/use the mobile application. For example, the bank can grant points, discount commissions on transactions done on the mobile application, waive credit cards fees, admit a customer to the discount club of ABC bank and enter them for

raffle tickets for prizes. In addition, the bank can deter unnecessary use of tellers by adding teller transaction fees when such service is provided. It is essential that the bank promote the new application focusing on individual features and functions ('there's an app for that') rather than generically promoting the availability of the application. Moreover, the bank can add a video inside the application to describe how the new app could provide customers with unique ways rather than traditional ways when banking, highlighting the benefits of the new technology. The marketing department will play a very critical role in the success of the new application through its widespread use among customers, and thus achieve the desired goal in a timely manner.

Banks in Jordan do not have much experience in mobile banking at this time, but they realize that they have to be ready for this technology as soon as possible. ABC Bank-Jordan should reap the benefits of the demographic advantage of the large young population in Jordan and their widespread reliance on smartphones. According to a study published by Ipsos Media CT (2014), the smartphone penetration is around 41% in Jordan, with a growth rate of 107% in 2013. Furthermore, 50.5% of smartphone owners are 15-24 years old (P. 5, 24). A full-featured mobile application would, and should, give ABC Bank-Jordan wide access to this population.

ABC Bank-Jordan should balance, rather carefully, convenience and security. According to Camhi (2013), although we "are now firmly in the customer experience world [in mobile]. Everything [we] do from a security standpoint has to be balanced with the experience" (Para. 19). It may not come easy, but this balance is essential and can be achieved over time.

ABC Bank-Jordan should have the necessary authentications needed to provide this service in a more secure yet convenient format that would widen the experience of the customers with mobile banking. Therefore, ABC Bank-Jordan should have specialists and a trained team

for mobile banking that is separate from other IT teams to guarantee a consistent experience and

execution of transactions when a mobile transaction starts in one channel and ends in another.

ABC Bank-Jordan should guarantee local regulators' consistency with the new

application and features, especially since some of the new features are not approved yet by the

Central Bank of Jordan. Also, ABC Bank-Jordan should prepare a feasibility study that proves

the benefits of these features not only for the bank but also for the banking environment at large,

which should increase the level and quality of banking services of Jordan compared to leading

banks in the Middle East.

Before starting the project of a new application for smartphones, ABC Bank-Jordan

should review and study all scenarios and documents that belong to this project. These are the

project charter, flows of business process, diagram of context, document of business

requirement, specification of system requirements, guidelines and techniques of testing, and

deliverables. With these, the bank will have a full picture of the risks, costs, and benefits that the

bank will face with this project, and confirm the application is of high quality so the individuals

are motivated to perform the rigorous project. This will help avoid any risks that will affect

returns and the reputation of the bank.

While proceeding with the second phase of the implementation plan, ABC Bank-Jordan

should avoid errors that affect the cost, process, and the software testing quality, this can be done

by taking into consideration the testability of the application design, the usability of the testing,

and most importantly the meeting of the written requirements.

Since the UAT is considered the final stage before going live, the UAT tester plays an

essential role in the success of the testing phase by matching and validating the application with

the business requirements. ABC Bank-Jordan should ensure that the UAT tester has the required

qualifications and skills needed to proceed with the testing.

The UAT tester needs a good background not only in IT related experience, but also

operational experience. The UAT tester should have proper skills by being a good

communicator, who ignores politics, emphasizes that the new application will not fail, and has

the independence needed to perform reporting. Also, the UAT tester should not be involved in

the specifications of the user, and should have a good attitude, being a lateral thinker who is

tenacious and analytical.

To mitigate the risk that is involved in the change of banking processes, the project

manager should emphasize the full support from the top management to proceed with the

implementation plan as proposed, otherwise the application will be working as designed but not

as expected. ABC Bank-Jordan should ensure that proper APIs are available in the in-house,

which should facilitate the integration process with all applications running in the environments

of the bank.

One of the mobile banking's great promises but challenges is enhancing security. ABC

Bank-Jordan should ensure the safety and security of the financial services transactions through

smartphone devices, since financial regulations require that all data communications between the

financial service and mobile device should be encrypted. Customer adoption of a mobile

application depends on soft (perception of security) and hard (actual) security (Mistral Mobile,

2013). Measurements for security must be applied with the cooperation of all stakeholders,

starting with the developers of the mobile application to the providers of the wireless network

service and ending with the IT department of the bank.

Finally, ABC Bank-Jordan should go with mobile banking, because if the bank reduces costs in its traditional processes while handling its routine transaction through traditional channels, the bank should be more efficient and able to serve more segments of customers more profitably. It could then invest its time in creating and developing additional services and incentives to its customers, especially those who lost trust in the banking industry after the global crisis of 2008. Mobile banking can be considered a blessing to banks because it is a tool not only to attract and grow a loyal customer following, but also to mobilize customers as advocates for their banks. The consequence of this is an increase of profitability and customer base in the long run.

Conclusion

Mobile banking is spreading rapidly, which is proven by the number of applications known in the globe, the interest level, and analysis around the technology and its implementation. It is also proved by the number of providers for this technology cropping up in the space of mobile banking.

There are several alternatives that should be considered on how to implement a mobile banking application. These alternatives comprise of whether or not to build the application within the bank by using a shared infrastructure, or purchase this technology from vendors. These alternatives offer numerous bearer channels that cater to different market segments and offer different capabilities of consumers' handsets. The bearer channels have specific requirements in customizing and securing applications and consumer data.

Before making a decision about the implementation, several factors should be considered, including consumer adoption and ease of accessing the service of the mobile banking

application, affordability of the bearer channel and technical capability of the mobile phones in the target market.

A mobile banking application has the potential to be the most important changer in terms of profitability, efficiency, and customer service. Time efficiency and immediacy in finances are important for both banks and customers. Changing the way of providing banks' services through mobile banking will promise to enhance the relationship between banks and their customers. Mobile banking offers highly valued benefits for customers, which eventually will benefit the bank and increase its profitability. ABC Bank-Jordan should use a mobile banking application to increase profitability, efficiency, and improve customer satisfaction to remain in the competitive arena.

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