

# THE DECISION MAKER

## Data-Driven Decisions in Community Financial Institutions

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### Measuring Return on Investment Using Data to Track Mobile Banking Initiatives

In today's banking industry, technological advancements are being increasingly demanded and adopted by financial institutions and their customers. One of the fastest growing advancements in the industry today, is the move from banking at brick-and-mortar branches to mobile devices. The popularity of mobile banking is becoming more evident with time, but should it be a top priority investment for a Community Financial Institutions (CFI's) in 2014? How much value does it really add and how can CFI leaders determine the added value?

Mobile banking, which less than a decade ago felt like an idea from Robert Zemeckis' *Back to the Future*, is now a widespread practice throughout the banking industry. The "big four" banks, CFI's, and everyone in-between stand to benefit from the move to mobile devices but CFI's stand to gain the biggest benefit. Why you ask? A community bank or credit union doesn't have an extensive matrix of branches spread throughout the world as the big banks do, nor is it feasible for them to reach a similar number of branches. With the use of mobile banking; however, smartphone using members/customers carry their branch with them wherever they are in the world. Utilizing the mobile application space allows small CFI's to acquire and retain members/customers just as efficiently and effectively as the big banks. That being said; however, how can a CFI leader determine if their investment in mobile banking is paying dividends?

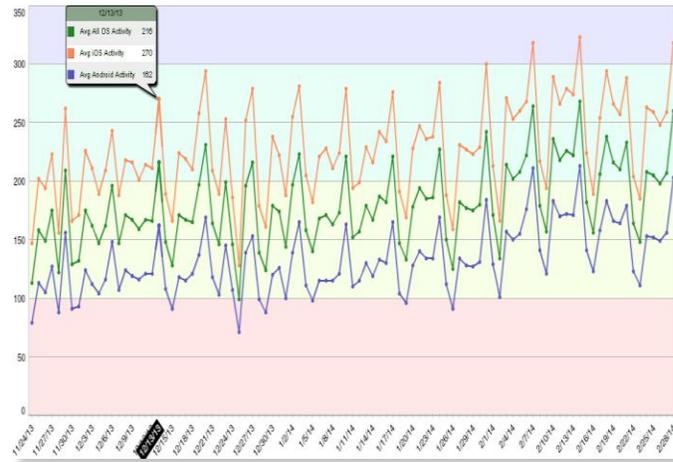
#### The Power of Data

Big Data, another rapidly growing advancement in the industry, uses data to improve decision-making. Providing CFI's with a competitive advantage over their competitors by utilizing the most accurate and timely information available, their own data. Big Data analytics and reporting enables companies to test theories and analyze results to guide investment decisions and operational changes. It enables CFI leaders to access precise information about the successes (or failures) of their investments such as a mobile banking initiative.

#### Mobile Application Usage

The ability to visualize mobile application activity on a yearly, monthly, daily and even hourly timeframe provides valuable insight about the successes (or failures) of a mobile banking initiative. Allowing a CFI to better serve its members/customers by gaining a robust understanding of their needs and

preferences. An example of how Big Data reporting can be used to strategize about investment initiatives is the ability to track trends of mobile application usage over an extended period of time (Figure 1).



**Figure 1 — Mobile Banking Application Usage (Trend)**

Figure 1 shows the amount of users that are logging on and using the application on a daily basis, allowing one to identify and track mobile usage trends. In this example, the CFI’s daily mobile application users increased from 150 (Apple-iOS users) on November 24<sup>th</sup> 2013 to over 300 on February 28<sup>th</sup> 2014. An increase of over 100% in just three months. This signifies the mobile application has been gaining traction and there is an increased demand for alternative member interaction channels. Allowing one to see that the initiative is paying off.

Switching the daily usage data to a monthly trend allows for an easier visualization of member usage. (Figure 2).



**Figure 2 — Trend of Mobile Application Usage.**

The value of this data is its ability to show the effectiveness of the mobile banking initiative. Should the investment in mobile activity be continued, increased, decreased or terminated? In other words, the data provides a quick view of the mobile application initiative’s ROI that may otherwise be too difficult to visualize in nominal terms.

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Narrowing to an hourly trend provides a more powerful view that will assist all areas of the CFI to add the most value from their initiative (Figure 3).

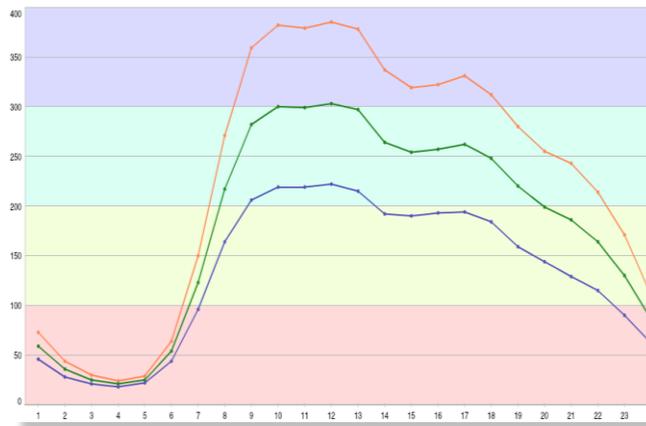


Figure 3 – Mobile App Usage by Hour.

Monitoring the usage by hour will provide valuable information that can be utilized to make several key decisions. Knowing the hours with the highest and lowest volumes will enable the IT department to plan for regular maintenance and updates at a time that is most convenient for the CFI's members. In figure 3, the IT department would be able to see that time is 3 a.m. and 5 a.m.

CFI's can visualize their member data by the day of week to plan even more precisely (Figure 4).

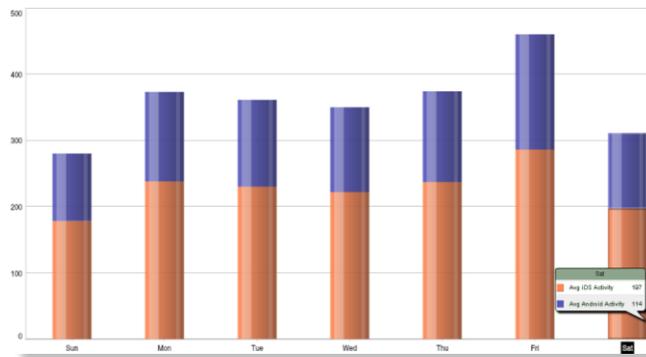


Figure 4 – Mobile App Usage by Day of the Week.

Figure 4 tracks the average application usage by day of the week. Providing CFI's powerful insight into how their members interact with mobile channels. Allowing the IT department to see that an even better and precise time to do maintenance and updates is Sunday between the hours of 3 a.m. and 5 a.m. Combining data from figures 3 and 4 shows the application has the least amount of traffic during that time frame.

The same data will provide the marketing department with the most effective times to send alerts and launch new marketing campaigns at hours that reach the largest member audience. Also, presenting an opportunity to profit off hosting advertisements on the mobile app. Mobile applications provide advertising space much like billboards do. With daily and hourly usage data, a CFI could provide an advertiser with an exact

Make the most profitable decisions resulting in increased earnings and more accurate cost cutting strategies that add the most value.

hourly member interaction report in order to price the advertising space accordingly. The marketing team can effortlessly observe their data and see that marketing and advertising is most effective on Fridays between 10 a.m. and 1 p.m.

### Tracking Investments and New Initiatives

The CFI in this example implemented Remote Deposit Capture (RDC) in late October 2013. A mobile application addition that allows members to make a deposit by simply taking a picture of a check and uploading it to their app. RDC is a powerful feature that enhances the significance of mobile banking and allows CFI's to serve a greater member base without the need for more brick-and-mortar branches. Instead of driving to a branch that could be many miles away, a member can now deposit a check from the comfort of their home or immediately after they're paid. Using its own data, the CFI is capable of tracking the success of its RDC initiative and as a result the initiatives ROI (Figure 5).

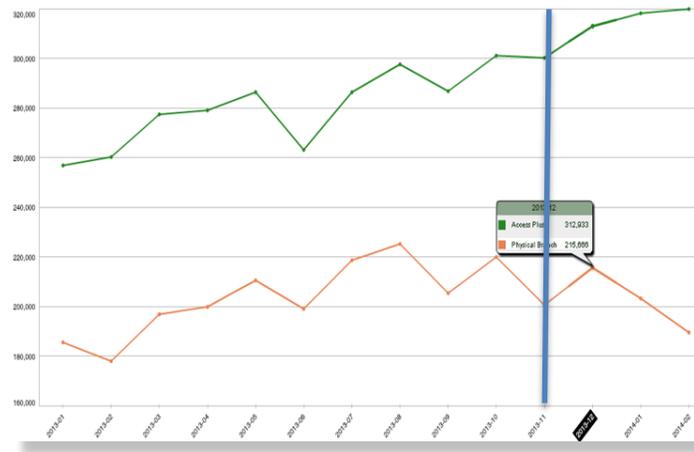


Figure 5 — Correlation between Mobile Banking and Brick-and-Mortar Branches before and after RDC.

The correlation between brick-and-mortar branch activity and mobile application activity begins to change at the end of October when RDC was introduced (indicated by the vertical line in figure 5). The two activities were highly correlated before the RDC initiative was introduced, but quickly switched to an inverse correlation that continued for several months. It appears that after RDC was implemented, members found the mobile application channel to be more convenient. As a result, less members visited their physical branch and instead used the handheld branch found on their mobile device.

Data related to new investment initiatives is becoming increasingly important as the industry continues to change at an accelerating rate. The ability to track an investment initiative allows CFI leaders to make important investment decisions in a timely fashion. Allowing them to make the most profitable decisions resulting in increased earnings and more accurate cost cutting strategies that add the most value. Should the investment be maintained or increased, downsized or eliminated? Being able to visualize data efficiently allows CFI leaders to stay ahead of the curve when it comes to making capital expenditure and investment related decisions that ultimately affect their bottom line.

**Drive  
decisions  
to ensure  
the most  
optimal  
ROI on  
investments.**

Reporting and analytics on investment activity is possible without a data warehouse but it is a difficult, time intensive and human error prone process that will continue to become more and more complex as the volume of data inflows increase over time. With a data warehouse, reporting analytics can be achieved effortlessly and with little to no man hours needed. Allowing CFI leaders to leverage data and increase ROI by tracking and acting on their investment activity more precisely while cutting down on salary expenses.

It is time for CFI's to think about their future survival in the industry. By adopting a data warehouse solution and capitalizing on the power of their data, CFI's will acquire a competitive advantage, which allows them to "leapfrog" their competitors. Whether investing in a new mobile banking initiative or a more tangible asset, the power of data can be leveraged to strategically manage, analyze, and drive decisions to ensure the most optimal ROI. Furthermore, with a data warehouse solution CFI leaders can be forward thinking. They can effortlessly review and analyze data on the financial aspects, member/customer services, employee performance, and strategic investment initiatives of their company to guarantee continued success in the future. Will your CFI be one that adopts a Big Data solution to enhance decision-making in 2014 or risk survival by letting the competition do it first?

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## **About OnApproach**

*OnApproach is a CUSO that is focused on giving credit unions the power to use data as a competitive advantage through the use of a revolutionary data warehouse solution, called M360™. M360™, designed specifically for credit unions, is a system agnostic platform product which enables credit unions to take full advantage of the data warehouse through a series of "out of the box" and customizable analytic applications that provide unlimited information about their members and analytics on all of the other operational and risk aspects of their business. Currently, OnApproach is building a Big Data Analytics Eco-System for credit unions that will allow them to gain efficiencies and leverage the full potential of their data. A key foundational element of this eco-system is M360™, which provides the standard data platform from which credit unions can then collectively share reports, dashboards and applications with other credit unions. OnApproach is building an Applications Store enabling credit unions to streamline all facets of their business. With the M360™ platform, credit unions can take their big data analysis one step further as they are able to connect with an industry data pool. This industry data pool contains a magnitude of data enabling users to identify patterns and behaviors and gain valuable insights to tailor products and services. OnApproach is dedicated to helping forward thinking credit unions align themselves for a successful future.*