

Sense Making Methodology:
A Study of the Impact of a New Technology on Banking Culture

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Abstract

The purpose of this paper is to explore the possibility that Remote Deposit Capture technology has enhanced productivity and culture at ABC Credit Union. This study used relevant literature as well as qualitative research methodology to investigate how this new technology has changed relationships between financial institution employees and members of the financial institution. More specifically, this qualitative study used a grounded theory concept developed by Glaser and Strauss (Merriam, 2009, pp. 199) to “constantly compare” employees and their productivity and workflow at ABC Credit Union in Upstate, NY. Using interviews, field notes and documents from employees has determined if ABC Credit Union has benefited from the implementation of Remote Deposit Capture. I also performed a coding analysis defined by Corbin & Strauss (Merriam, 2009, pp. 180) as “coding that comes from interpreting and reflection on meaning” to evaluate the responses provided to me by my participants regarding the implementation of Remote Deposit Capture at ABC Credit Union. Remote Deposit Capture technology is the ability to deposit checks directly into your ABC Credit Union account via mobile devices such as an iPhone or Android device. Based on the interviews I have been able to answer the research question: *Does the implementation of Remote Deposit Capture enhance the culture at Financial Institutions? If so, how?*

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Introduction

"We expect consumers to significantly embrace mobile Remote Deposit Capture and it will be the 'killer app'. With consumers placing a premium on convenience, mobile RDC has the potential to significantly change retail banking's business model by providing a way for people to do basic banking without branches. Retail financial service companies have the game changing opportunity to provide both increased convenience and lower costs. Mobile RDC definitely levels the playing field across competitors (Hedges, 2009, pp. 3)."

Over the last thirty years Project Management has been recognized as an efficient tool to handle novel or complex activities (Munns, 1996, pp. 81). "Project Managers play a key role in developing and implementing successful IT projects. Yet such projects continue to fail (Wateridge, 1997, pp. 283)." Project Manager performance is crucial on projects where the impact of the new technology is immense. Normally, there are a large number of stakeholders to manage and all parties interested in the project success need to be satisfied. In some cases it doesn't take much for the project to be perceived as a failure.

Currently, Project Managers at ABC Credit Union and more specifically in the Information Technology department are faced with a lot of projects each year because of the advancement in technology. Every year they are adding new services to their Online and Mobile Banking products to compete with other Banks and Credit Unions. It is very important that these projects are successful because a large array of services is what attracts people to ABC Credit Union each and every year.

With that being said, the main goal of this assessment is to develop an understanding of the impact of Remote Deposit Capture post implementation at ABC Credit Union. I want to know how this new technology has changed the culture and productivity at ABC Credit Union. Also, I want to know if this technology post

implementation has changed the way that employees and members interact with each other or how employees interact with other employees. In traditional check deposits any discrepancies or returned checks would be handled by accounting but after implementation which department will be answering such questions? This new technology is software based; will another department handle questions based on transactions? These are all the types of questions that my qualitative study will show.

In this qualitative study, using a grounded theory approach developed by Glaser and Strauss in 1967, I held recorded interviews with five employees from ABC Credit Union. There was a series of questions asked to each of these employees during the allotted time frame for each interview. The answers were recorded as well as notes taken by me during each. Number differentiated the employees that I interviewed, the numbers that I chose were: 1, 2, 3, 4 and 5. Since I was the researcher of this qualitative study only I will know what number each employee was referred as.

My primary research question was:

1. *Does the implementation of Remote Deposit Capture enhance the culture at Financial Institutions? If so, how?*

My secondary research questions were:

2. *Will Remote Deposit Capture change the way transactions are handled? If so, How? Will this change affect the interactions between employees and account holders? If so, how?*

3. *Does the implementation of Remote Deposit Capture enhance the productivity of employees at Financial Institutions?*
4. *Does Remote Deposit Capture improve the process of check cashing? If so, how?*

The questions that I asked post implementation of Remote Deposit Capture were:

Culture/Productivity:

1. Define your position at the bank. Give a job description.
2. Tell me about a typical day at work. Explain.
3. Tell me what yesterday was like at work starting when you first came in. Explain.
4. Do you get performance feedback from your managers regularly? (Y/N)
5. When was the last time you were given feedback?
6. What are the Banks' expectations of you?
7. How many transactions do you perform on a daily basis?
8. How many of these transactions are check deposits?

Check Cashing:

9. Explain the current check cashing process. Take me through a few example situations.

- a. During each example situation, take me step by step being as specific as possible (time taken, staff, technology used).
- b. Choose a range of examples (simple, medium difficulty, complex).
- c. Explain how each problem was handled.
- d. Define each Bank term used in explaining your situation.
- e. Describe interactions among staff during the problems that arose.
- f. Describe interactions between customer and staff as well as between staff and technology during the problems that arose.
- g. What is important about this situation?
10. What do you do with a check that you get from a customer?
11. How long does it take for a check to process? Take me through each step of the check cashing process.
12. Are the funds immediately available to customers once the check is deposited? If not, when are they available to customers?

Remote Deposit Capture

13. Explain how you use technology during a typical day.
14. How was Remote Deposit Capture implemented?
15. Were you involved with the check depositing change? How so? What was your role?
16. How did the bank announce the change?

17. Why did they decide to implement Remote Deposit Capture? How much cost, how much time saved?
18. How did you get involved in the change?
19. Were there meetings held to discuss the implementation? Where were they held? How long did they take? Who attended? What was the format of the meetings?
20. Can you define each aspect of the implementation? Which departments are responsible for what?
21. Will your role change by this product? How so?
22. What has been your experience with this transformation?
23. What do you think of the change and how has it been handled?
24. What new processes came from this implementation?
25. Have you seen an influx of members join ABC Credit Union as a result of Remote Deposit Capture?

The purpose of these interviews was to see the benefits of Remote Deposit Capture when it comes to check cashing. The purpose of Remote Deposit Capture is to reduce cost for Financial Institutions as well as reduce overhead from employees handling all check deposits in Branch. The purpose of my qualitative study was to see if these benefits do occur at ABC Credit Union. The benefits to this study were that the research will show how Remote Deposit Capture technology has changed the culture at ABC Credit Union. It also determined if employees have had to change their daily routines because of a lower number of in branch deposits taking place.

Literature Review

New Technology Implementation

Before you can begin to understand Project Management it is important to define a project. Verzuh defines a project as “all the work we do at one time (Verzuh, 2005, pg. 3).” No matter what the project is, there is always a beginning and an end. Each project is unique in that they product different results. An example of a project is building a sports car. Building a single sports car is a project but as soon as you start to manufacture thousands it no longer is a project anymore and becomes an “ongoing operation”.

Project Managers are everywhere; they are people that manage projects. There are many different occupations that are faced with the challenges of being the leader of a project (Laslo, 2008, pp. 780). Different organizations might classify their project managers differently; it could be an informal or highly defined role. As advancement in technology grows there will be an ongoing need for individuals to take on projects. “People and companies that innovate, create and lead change tend to enjoy higher incomes and profit margins than those based on economies of scale and efficiency (Verzuh, 2005, pg. 3).” There is nothing new about the concept of Project Management, but it was only within the past century that the term Project Management was developed. “Project Management can be a profession, a job, a role, or an activity (Berkun, 2008, pg. 8).” If you stop and think about everything that has been build in the history of human civilization, “there are thousands of years of project experience to learn from. A dotted line can be drawn from the software developers of today back through time to the

builders of the Egyptian pyramids or the architects of the Roman aqueducts (Berkun, 2008, pg. 2).” To be a successful Project Manager it is essential that you are able to turn a vision into a project or service that will stand out. As the world changes and technology keeps advancing there will be more and more projects that will need to be managed.

Since current technologies are being replaced with bigger and better things within a couple of years there is a demand for Project Managers. The current pace of change of products will make individuals become more effective in how they manage their projects. There is no argument that the best Project Managers are great leaders, they both go hand in hand. These types of people “have vision, they motivate, they bring people together and they accomplish great things (Verzuh, 2005, pg. 7).”

There are many different interpersonal skills that any project manager possesses. They are: “leadership, team building, motivation, communication, influencing, decision making, political and cultural awareness, and negotiation (New Horizons, 2009, pg. 28).” Leadership is a skill that a person has that will allow them to guide and inspire others for maximum results. Team building is a process of team collaboration instead of working individually. Motivation is a necessity to get team members motivated to get the work done in a timely manner. Communication is where the project manager keeps the team informed on their task and tells them when they need to get their parts of the project done. Influencing members of the team through persuasion is the best way to get things done in a timely matter. A single individual cannot make decisions so the project manager needs to establish credibility to try to get their opinion across. Finally, the

political and cultural awareness of a project manager is important to build trust throughout the organization (New Horizons, 2009, pg. 31).

There are five basic concepts that you need to take into consideration to run a successful project. They are:

1. Agreement among the project team, customers and management on the goals of the project.
2. A plan that shows an overall path and clear responsibilities and will be used to measure progress during the project.
3. Constant or effective communication amongst everyone involved in the project.
4. A controlled scope.
5. Management support.

“The art of leadership embodies skills that are gained through experience, sensitivity, and a thorough knowledge of the basic science of management (Verzuh, 2005, pg. 9).”

Since projects are unique they will all have different challenges. Project Managers will need to determine through experience which management disciplines their project will need. “Personnel, estimating, authority, and controls (Verzuh, 2005, pg. 14)” are difficulties that Project Managers are faced with. Personnel refers to the amount of people needed in the project. Estimating refers to the estimated cost of the project. Authority refers to the organizational chart of the specific company. Finally, controls refer to controlling the amount of money that is budgeted for the product and making sure that the actual cost doesn’t exceed the budget. All of these challenges need to be

addressed before the project should start. It is important that the right people are involved in the project from the beginning to the end.

The Project Manager expects certain things from each member of the team. They are: each member being committed to the project, provide accurate and truthful status, follow the project plan and defined processes, take direction, propose things that make sense, and communicate. Similarly, the team members expect certain things from the Project Manager. They are: the Project Manager “must stimulate group interaction, define performance expectations, manage conflict in a constructive manner, remove obstacles, insulate team from unproductive pressures, and resist unnecessary changes (Heerkens, 2002, pg. 94).”

There are no like projects for a project manager in that the number of people involved differs, as well as the size and nature of the project differs. With that being said, “Cost and staffing levels reach the peak once the work is carried out and drop rapidly upon project completion. Likewise, the influences, uncertainties and risks involved with stakeholders are high at the project start and diminish over the life of the project (New Horizons, 2009, pg. 12).”

Project Managers need to be able to measure risks associated with their projects. Small projects that seem to have a clear objective even have possibility that something will go wrong. A project manager needs to be able to make sure that the project will be successful. A risk assessment can be a project in its own for a very large project that has a lot of risk associated with it. The risk analysis “is to establish the feasibility of the project within the economy, politics, laws, and organizational structure that limit your business (Campbell, 2007, pg. 79).”

There are various risks that may happen from project to project but there are basically three types of risks. They are: known risks, predictable risks, and unpredictable risks. The known risks are known at the project start based on a review of the scope of the project. The predictable risks are risks that anticipated based on similar projects. The unpredictable risks are things that you stumble upon throughout the project that may cause a delay in the project. Some common risks that happen during the project life cycle are “unavailable subject matter experts, no risk management plan, inexperienced team, changes in scope, lack of control systems, and budget problems (Campbell, 2007, pg. 80).”

The project manager will need to determine how much risk your organization is willing to take on in the initial phase of the project. You may be willing to take some more risks in one area than in another or just because your organization wants the product that much. To reduce risk you must practice risk management and follow these steps:

1. Identify the risks by listing them and describing their potential impact on the project.
2. Analyze the probability that the risk will occur and the potential impact of the risk.
3. Determine the overall severity or importance of the risk.
4. Determine which risks are most important for further action.
5. Document a response plan for the risks.

Risk management is an ongoing process. Once you develop the risk assessment you must reevaluate the risks on an ongoing basis. There are no such projects that do not

encounter risks. It is the Project Managers' job to get these risks resolved so that the project can continue (Campbell, 2007, pg. 86).

Remote Deposit Capture

There has been a major transformation from the physical deposit of checks through a financial center institution branch to the electronic capture of checks through kiosks, ATM machines and mobile phones. With this electronic means of depositing checks comes a set of new risks from outright fraud to unintended errors. The way that financial institutions are battling for members is through the acquisition of new products and services. Although these types of services might have some level of risk associated with them they will ensure a positive customer experience as well as set their financial center above all the rest. In a rapidly evolving society with new technologies being introduced daily, financial institutions “need to balance service delivery and risk management in a winning combination (Ballagh, 2011, pp. 5).”

In the past few years checks have seen drastic changes in check payment infrastructure. The transportation and processing of paper checks has led to electronic capture, validation, and clearings of check images. New scanning and image transmission technologies have paved the way for products like Remote Deposit Capture to exist. Remote Deposit Capture is defined as a deposit transaction delivery system, allowing a financial institution to receive digital information from deposit documents captured via mobile phone. This transformation has resulted in convenience for

members, and tremendous efficiency gains for financial institutions. The downfall to a product like Remote Deposit Capture is the risk that goes along with it.

The main source of risk of Remote Deposit Capture is fraud by technologically inclined individuals. According to Ballagh, the annual loss of check fraud in the United States is over one billion dollars. Some of this loss is the result of a member error or a financial institution error. The key motivator for Institutions to offer such products is the acquiring and retaining of deposits is how a financial institution measures their assets. The more deposits that they have from members the more assets they will have. According to Ballagh, the most loyal members of a financial institution are more concerned about having an array of services available to them than about rates and fees. A successful financial institution will ensure positive customer experience while mitigating as much risk as possible (Ballagh, 2011, pp. 7).

In traditional check processing workflow there is some level of error checking done on day one, the day of item capture. On day two and beyond there will be an examining of select items for potential fraud. In Remote Deposit Capture check processing workflow days one and two do not exist. All fraud and unintended errors can be caught at the time of check image capture through the Remote Deposit Capture software. Since this is possible, customer satisfaction will increase and financial institution cost will decrease (Ballagh, 2011, pp. 11).

To contain risk the most common practice is to hold checks for manual review. Through the use of Remote Deposit Capture you can assign different hold lengths as well as reject checks for certain reasons. The Remote Deposit Capture technology checks over one hundred different risk factors when processing the check images. If any of these

risk factors are tripped it will flag employees of the Credit Union that the check needs review. If there aren't any risk factors tripped for the deposit then the check will deposit directly into the members' account. Remote Deposit Capture mitigates risk by offering a blend of human interaction with automated review (Ballagh, 2011, pp. 11).

When managing risk the need to maintain positive customer experience is often sacrificed. Accelerating the time for funds to be deposited into a members account can help a financial institution win the business of a member. Through the use of Remote Deposit Capture technology, financial institutions will be able to eliminate check fraud through multiple review layers, extensive real time analytics, over one hundred risk factors, and web based risk administration (Ballagh, 2011, pp. 17).

Measuring Employee Culture and Productivity

Assessing and improving employee performance is always a challenge. The field of Human Performance Technology is one way that you can assess human performance in their working environments. This model provides a method of evaluating human performance as well as a way to fix these issues once identified. An example method for fixing struggles with employee performance using HPT is through Training. There are many other models that help guide evaluation process and change human performance (Pemberton, 2011, pp. 206).

Human Performance Technology is a technology used to evaluate human performance, the creators, International Society for Performance Improvement, used this technology for evaluating human performance in academic libraries. In their study the

HPT model helped guide librarians in obtaining measurable indicators to set standards of performance for employees. This model is most useful when there is a mixture of employees in one service area, in this case a learning center (Pemberton, 2011, pp. 207).

“HPT is the process of identifying and analyzing the gap between current performance and ideal performance using various tools such as models. Closing the gap can be done through a recommended solution called an intervention (Pemberton, 2011, pp. 207).” In this case, intervention refers to a “course of action taken to improve performance” and in the qualitative study that I will be using I am going to use the term “bridge” instead of “intervention”. HPT seeks to align goals of an organization with the behaviors on the individuals who can help achieve these goals. HPT examines multiple areas of an organization to determine performance gaps. To do this, HPT analyzes the following: values, norms, culture, structure, performance, and environment (Pemberton, 2011, pp. 207).

According to Pemberton, HPT is defined as:

“a systematic approach to improving productivity and competence, using a set of methods and procedures and a strategy for solving problems, for realizing opportunities related to the performance of people. More specific, it is a process of selection, analysis, design, development, implementation, and evaluation of programs to most cost effectively influence human behavior and accomplishment. It is a systematic combination of three fundamental processes: performance analysis, cause analysis, and intervention selection, and can be applied to individuals, small groups, and large organizations (Pemberton, 2011, pp. 207).”

Using the HPT model, you will be able to determine performance issues through an organizational analysis, gap analysis and cause analysis. Without careful analysis you may come to an inappropriate intervention.

An intervention or bridge can be placed into the following categories: performance support, job analysis, personal development, organizational design and development, and financial systems (Pemberton, 2011, pp. 208).

According to Pemberton, a Performance Analysis is the first stage of the HPT model. This is done to see if a performance problem exists. This stage also includes an organizational analysis, an environmental analysis, and a gap analysis. To do an organizational analysis one would need to examine the organizations' vision, mission, values, goals, and strategies. Analyzing the organizations documents such as mission statements, vision statements, goals, strategic plans, and organizational charts performs an organizational analysis. These documents are usually public so this is not an issue (Pemberton, 2011, pp. 210).

The second stage of the HPT model is the environmental analysis. It examines the organizational environment, work environment, work and the worker. Interviews are usually used to complete the environmental analysis. Interviewing employees of the organization is most common in analyzing the organizational environment. Sometimes in the HPT model, you will see interviews of the actual users of the organization, but most of the time this strategy is not practical. To analyze the work environment, you would need to analyze resources, tools, human resources, and policies of the organization. Work is referred to most commonly as the workflow, productivity, procedure, responsibilities, and ergonomics of the individual employees of the organization. Worker refers to the knowledge, skill, motivation, expectations, and capacity of an individual employee (Pemberton, 2011, pp. 213).

The third stage of the HPT model is Gap Analysis. Through this analysis, the actual performance vs. the optimal performance is examined. The data collected from the previous two stages are used in performing this analysis. It is extremely detrimental that you identify the gaps, prioritize the gaps and analyze the cause of the gaps found (Pemberton, 2011, pp. 214).

Once a performance gap is found, the fourth stage of the HPT model needs to be completed. The Cause Analysis determines the reason why the gap exists. Causes can root from the organizational environment, from the individual employee or from both. The use of an intervention or bridge will close this performance gap. There are many different cause indicators from performance gaps, they are:

1. Data, information, and feedback
2. Environment support, resources, and tools.
3. Consequences, incentives, and rewards.
4. Individual capacity.
5. Motivation and expectations.

To close any of these indicators you would need to close the performance gap through interventions or bridges. According to Pemberton, “an intervention is a course of action taken to improve performance.” For example: if an employee is not motivated to perform the duties of their position, an incentive based program would get the employee more motivated to perform certain duties. In this case the incentive would be the intervention or bridge and the specific duty would be the performance gap (Pemberton, 2011, pp. 217).

According to Pemberton, the following interventions or bridges were deemed critical for all employee performance gaps:

1. Job description intervention – clearly define each position’s duties, responsibilities, working conditions, and job activities.
2. Document and standards intervention – create a manual that would include job descriptions, expectations, policies, guidelines, and procedures for each position.
3. Training intervention – training would set expectations for each position and set the stage for feedback.
4. Performance appraisal intervention – performance appraisal should be done regularly as to show staff of consequences for poor performance or reward for outstanding performance.
5. Organizational communication – allowing staff input is critical to improve areas of the organization.
6. Feedback – feedback should always be given by organizations to keep employee spirits high.
7. Intervention implementation, change and evaluation – evaluation should not be a one time process; it should be a continuous process.

Optical employee performance is crucial for any organization. In order to stand out from other organizations a positive culture and productivity at your organization is detrimental to your success. The Human Performance Technology (HPT) model will help you accomplish this (Pemberton, 2011, pp. 221).

Sense Making Methodology

Brenda Dervin goes into detail about the history of information design. She also presents an approach called Sense Making, which looks at information design as a dialogic circling of reality. This reality can be reached for, but never touched. This approach focuses on metadesign, which is defined as design about design. It transfers information from here to there and also to assist human beings with their information design (Jacobson, 2000, p. 54). Jacobson argues that information design is not much different now using newer technologies than it once was using older technologies. The driving force is the fact that information has always been designed, whether it is called “data, knowledge, or fact, song, story, or metaphor” (Jacobson, 2000, p.36).

To simplify the complex history of information it is more easily understood by tracing through eight chronological narratives.

1. “Information describes an ordered reality.
2. Only those with proper observing skills can find information.
3. Information varies across time and space.
4. Information varies from culture to culture.
5. Information varies from person to person.
6. Information is an instrument of power.
7. Information imposes order on a chaotic reality.
8. Information is a tool designed by human beings to make sense of a reality assumed to be both chaotic and orderly (Jacobson, 2000, p.39).”

There are three themes when talking about the chronology of narratives. The first focuses on “the nature of reality, the second focuses on human observing, and finally the third focuses on the involvement of power of in information (Jacobson, 2000, p.38).” Narratives two through seven are merely struggles with the idea inherent in narrative 1. Building on narrative 1, information describes an ordered reality. A fact is what Jacobson says an information design is when it seems ordered such as a consensus with an outcome that seems reliable. “A fact describes a reality that is. On the other hand, factizing, as a verb, suggests that among the many ways in which people make their worlds is a proceduring, a designing called making facts (Jacobson, 2000, p.41).”

With that being said, the Sense Making approach is “a set of assumptions, a theoretic perspective, a methodological approach, a set of research methods, and a set of communication practices (Jacobson, 2000, p.44).” This approach basically assesses how people make sense of other people, places, or things. They then need to apply their results in designing communication systems.

The way that the Sense Making approach is implemented is through the Sense Making triangle. Each point in the triangle represent something, they are situation, gap/bridge, and outcome. Another way this approach is implemented is through brief or in depth interviews, which can last from twenty to thirty minutes or up to six hours. The interviewing approach most used with the Sense Making approach is called micro moment timeline interview. In this approach the interviewer asks the respondent to describe one or more critical situations in detail (Wurman, 2001).

“Understanding the theoretical and methodological stance of Sense Making Methodology (SMM) is very important (Reinhard, 2010).” The way that SMM

interviews study human activity is by being: “situated/contextual, empowering the subjective, understanding of the struggle between agency/structure, and triangulating, circling, redundant, repetitive, digging (Reinhard, 2010).” The fundamental way to interview is by “minimal researcher intrusion, empowering informant to speak their mind by allowing them time and space, and seeking to build trust with informant (Reinhard, 2010).”

Sense Making Methodology interviews are very structured and by that I mean that the interviews are set up in a way so that the interviewer can gain as much information from the interviewee as possible in the time allotted. The interviews are also structured to study “human activity as being situated, as empowering the informant’s experience, as understanding the informant’s struggle between agency and structure, and as always moving deeper into their experience under scrutiny (Reinhard, 2010).”

The interviewer of any Sense Making Methodology needs to be a really good listener. These types of interviews test the listening skills of any individual that tries to take on this role. The interviewer needs to have minimal intrusion into informants experience and needs to build trust through empowering and digging deeper.

There are a couple of different intents that you can have in your interviewing process. The first is to look at one sense making or unmaking moment. This type of interview would focus on one situation, gap, bridge and outcome. The other is to look at a series of related or unrelated moments. These types take on a circling effect with repetitive questions, which create redundancy to give time for answering (Reinhard, 2010).

A Sense Making interview is structured to try to gain more insight on a phenomenon of interest. They also focus on situations, events, and moments of sense making. Depending on your phenomenon of interest it may be more relevant to look into one situation or a series of situations that may or may not be related to each other.

Whichever interview type makes more sense for the interest that you have, it will be a “repertoire of queries” that for the Sense Making Methodology interview. These queries have been “designed and tested over the years to reflect the SMM concept of gaps and bridging (Reinhard, 2010).”

Any SMM interview will use questions similar to the ones below as a template in developing their own.

1. What was going on at that time?
2. What questions, confusions, and muddles were you facing?
3. What ideas, conclusions, and thoughts did you have?
4. What emotions, feelings did you have?
5. What helped or facilitated you at that time, and how so?
6. What hindered or hurt you at that time, and how so?
7. How did what was happening relate to your sense of self?
8. How did what was happening relate to your sense of power?
9. If you could wave a magic wand and change any aspect of this situation, what would you change?

All of these questions are constructed to target one of the aspects of the sense making triangle. If the interview were more concerned with targeting situations then they would construct their questions accordingly. Likewise, if they were more concerned with

bridging then they would adjust their questions to focus on how the informant handled their situations.

Once the interviewer has developed questions to ask their informants it is time to set up the interviews. During these interviews there are two types of triangulation methods, they are called level 1 and level 2 triangulation. Level 1 triangulation is the set of questions that the interviewer initially set up for the informant to respond to. Level 2 triangulation is when the interviewer will ask another question based on the response given by the informant from the level 1 triangulation. These types of questions can be formed ahead of time but most often are asked on the fly to dig deeper into a certain situation (Reinhard, 2010).

Before beginning the SMM interview you must determine where you will enter the interview. The entry point is a very important part of the interview and should be started at the point where you want to focus all of your attention. With that being said, if you want to focus on gaps, you would enter the interview with a question that focuses on a gap. After you have determined your primary focus you can begin the interview process.

The most widely used interview type is called the micro moment timeline interview. In this type of interview the informant “is asked to recall a time when something happened, and to recount that something as if telling step by step how it happened. At each step the triangulation of queries is done to surround that sense making moment (Reinhard, 2010).” The micro moment timeline interview is often very lengthy.

The next interview type is called the life line interview. In the life line interview the interviewee is asked to recall events that happened throughout their lifetime. The

interviewer then asked the informant to recall certain events and a series of questions will begin based on each event.

The third interview type is called the microelement interview. This type of interview “is not broken into steps or listed chronologically but instead are treated as holistic moments on sense making (Reinhard, 2010).”

The last interview type is called structured focus group interview. This type of interview is similar to a focus group where you would have an interview with a large group of people and it would be like a discussion. The way that this type of interview differs is that in a structured focus group each informant is asked a series of questions without interruptions from other informants. Any responses that other informants make during the interview process are recorded down in a journal. This journal can spark another interview if the findings deem necessary (Reinhard, 2010).

Interviews are a big part of Sense Making Methodology. SMM is a methodology while interviews and experiments are methods. SMM interviews are a way to collect data and experiments are a way to organize the data collected from the interviews. It is very important with SMM interviews to get a full understanding of your informants so that you will be able to analyze the data collected qualitatively or quantitatively.

Methodology

Remote Deposit Capture Methodology

To determine if the implementation of Remote Deposit Capture enhanced productivity, changed the culture, and improved the check cashing process, qualitative methods were used. Using a Qualitative Study or a “Qualitative approach in which the investigator explores a bounded system over time, through detailed, in depth data collection involving multiple sources of information and reports a case description and case based themes” (Merriam, 2009, pp. 43), I was the primary instrument for data collection and research. Since I am a Computer Programmer for a Financial Institution and am part of new services being rolled out to our members on a regular basis, I was inspired to do a qualitative study about Remote Deposit Capture to study the following research questions: Does the implementation of Remote Deposit Capture enhance the culture at Financial Institutions? Will Remote Deposit Capture change the way transactions are handled? If so, how will this change affect the interactions between employees and account holders? Does the implementation of Remote Deposit Capture enhance the productivity of employees at Financial Institutions? Does Remote Deposit Capture improve the process of check cashing for Financial Institutions?

For my Qualitative Study I conducted an interview with five employees from ABC Credit Union. Grounded Theory is the type of Qualitative Study that I conducted. “The overall object of this analysis was to identify patterns in the data” (Merriam, 2009, pp. 30) received from my interviews. Qualitative Research person to person interviews defined as a “process in which a researcher and participant engage in a conversation

focused on questions related to a research study” (Merriam, 2009, pp. 87) are the most common form of interviews for qualitative studies. All of these interviews were held in the First Floor Conference Room of ABC Credit Union in Upstate NY. This location was chosen based on the appointment from the Branch Manager of ABC Credit Union. Each person to person interview was allotted a forty five minute time period with the interviewee. All interviews were tape recorded. I also took notes during the interviews and transcribed as much information as possible directly after each interview. The positions that the interviewees held at ABC Credit Union were Tellers, Sales Representatives, and Managers.

I used Sense Making Methodology defined by Dervin as the “a set of data collection methods designed to study how people make sense of their world,” to determine the bridges that were used by employees at ABC Credit Union to overcome any gaps in implementation of Remote Deposit Capture. The outcomes of these gaps are the main purpose of my qualitative study.

Rationale for Population

I interviewed five employees from ABC Credit Union. Of these five employees, two were male and three were female. Their ages ranged from 30-50.

The positions I interviewed were sales representatives, tellers, and managers. I did not refer to the employees by position at all in my thesis; I only referred to the group of employees as a whole. The rationale for this population is because these employees

are the ones most familiar with check cashing. I only kept a running note of all responses so that identity remains confidential.

Since this new technology deals with check cashing, I want to ensure you that my study did not review actual live transactional data from individual members. This sort of information is kept privileged and was not used in this study. I did not ask any financial information that would identify individual members of the ABC Credit Union. I did not discuss detailed financial transaction information performed on any specific accounts.

The identity of the employees that participated in this study was not told to other employees. Their identity remained confidential. The correspondence between an employee and their responses to the interview questions was not disclosed to the managers of ABC Credit Union.

IRB and Confidentiality

I got approval from the SUNY IT Institutional Review Board for my thesis. The road to getting approval from the Institutional Review Board took longer than expected but was a very good experience to go through. They had many very good suggestions as far as confidentiality of participants in my qualitative study. Getting this approval was necessary because my research methods included interviews with employees from ABC Credit Union and asked questions pertaining to their daily job duties as well as some personal information.

For my interviews with employees from ABC Credit Union I had to have them sign consent forms and store these signed consent forms in a locked filing cabinet in my

home. Any tape recordings and any other confidential material also needed to be kept in the same place. During interviews I explained to each interviewee that any questions that they did not feel comfortable answering was not necessary and that they could opt out of the interview at any time if they felt uncomfortable. Upon completion of this thesis all material will be properly disposed of.

Role of Researcher

My qualitative study was inspired by my recent roles as Project Manager of projects at my current job as a Computer Programmer. I have been employed as a Computer Programmer for a year and a half and have been in charge of two projects thus far. This experience has made me really interested in finding out the outcomes of newly released technologies.

I wanted to use my thesis as a way to find out struggles that Financial Institutions have when they try to implement new technologies and find out how they deal with those struggles. I also wanted to see if these struggles enhanced the productivity or changed the culture of employees working at Financial Institutions but more specifically ABC Credit Union.

Data Analysis

During the data analysis process I searched for repetitive patterns among the different interviewees. “Findings are these recurring patterns or themes supported by the data from which they were derived. The overall interpretation will be the researcher’s understanding of the participants’ understanding of the phenomenon of interest” (Merriam, 2009, pp. 23). Since I was the sole instrument for data collection and analysis, I myself tried to make sense of the data through consolidating, reducing and interpreting the data. To interpret the data I individually coded all transcripts acquired during data collection. The type of coding that I used is called open coding and I followed that with analytical coding. Open coding is organizing the coded data into loosely related categories. Analytical coding is “coding that comes from interpreting and reflecting on meaning” (Merriam, 2009, pp. 180). When coding my data I used Microsoft software to make a spreadsheet of all the data. Each question I asked the interviewees made up the first cell of each row. Each interviewee made up the column header. I filled in each answer in the corresponding cell. This made my data easier to look at and compare findings. Any consistency in the answers from the interviewees was what I was really looking for. I also coded words that kept coming up in the interviews. If multiple interviewees said the same words as a response to multiple questions I was interested to see which words they were so I coded these as well. I also performed self evaluations during each interview and transcribed my own feelings or bias on any of the information that was provided to me.

Anticipated Findings

Based upon existing research and my existing knowledge of Remote Deposit Capture, I expected to find that post implementation the culture and productivity of employees at ABC Credit Union would change. I expect that employees at this Financial Institution will be able to focus more on things such as closing loans that will allow for greater returns than having to do so many in branch deposits. I believe that there will be better employee interaction with clients, and employee interaction with other employees. Technology based positions such as programmers will also have a more involved role because they will be the ones who will be troubleshooting issues with deposits due to the nature of the software. I also believe that post implementation of this new technology will draw more people to become members of this Financial Institution because it will make ABC Credit Union stand out from other institutions. Members will also be able to deposit checks anywhere via smart phone so it will serve as a better member experience so they will be more liable to do more banking with ABC Credit Union. However, there may be a slight downside to this new technology because members will no longer be coming into the branches to deposit checks so they will not be able to experience the true member experience face to face with a representative any longer.

Potential Benefits and Risks

The benefits to this research will be that the research will show how Remote Deposit Capture technology has changed the productivity of employees at ABC Credit Union. It will also show us if employees have had to change their daily routines because of a lower number of in branch deposits taking place.

A potential risk is if the employees' disclose information that is critical about the credit unions' use of remote deposit technology. To mitigate this risk I will select a subset of employees from the Branch of ABC Credit Union without disclosing to the Bank Manager about who has participated in the interviews. Another risk to this is that after research there may be able to be less tellers working on a shift because of a booming success of this technology. I provided the bank manager up front with a copy of the interview protocol. I will not at any time release the answers provided to me by the employees to the bank managers for confidentiality reasons. I want the employees to be able to provide honest responses to the questions and not feel that they should hold back any responses for any reasons. The identity of the employees that will be participating will not be told to other employees. Their identity will remain confidential. This information will be told to all five employees so that they are aware that their identity will be confidential. The correspondence between an employee's name and number will not at any time be disclosed to the senior managers of ABC Credit Union. The key risk in this qualitative study is that the sample size is so small that the data may not be very meaningful.

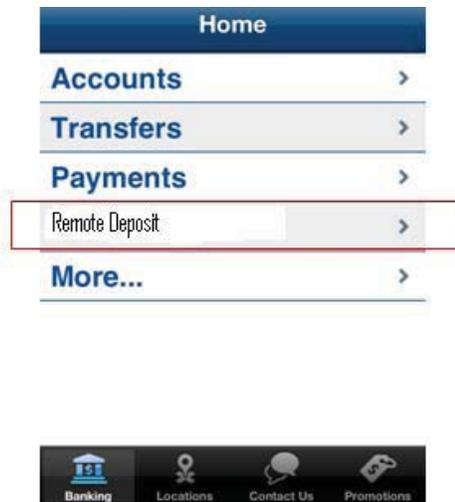
Findings

Background of Remote Deposit Capture

ABC Credit Union's Remote Deposit Capture software has a lot of functionality to it. Before I go into my findings of my qualitative study, I would like you to understand exactly how Remote Deposit Capture looks and functions. So I am going to show a bunch of screenshots of an iPhone display of ABC Credit Union's Remote Deposit Capture. When you open up the ABC Credit Union mobile app from your smart phone you will need to log into your mobile banking account. Once you do that you will be able to click on Remote Deposit Capture. Follow these screenshots below:



Login using your Online Banking username and password.



Click on Remote Deposit

When you click on Remote Deposit your eligibility for this product will be checked.

There are many different criteria that could disqualify you from being eligible for Remote

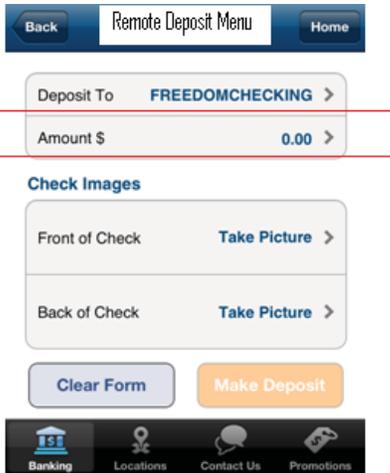
Deposit. Once your account is accepted you will see the following screen where you will be able to make a remote deposit or view remote deposit history.



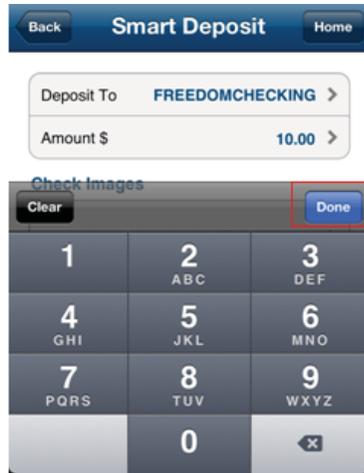
Select an Account that you want to deposit to.

You will see a list of Accounts that you can deposit to so you just need to select one of them.

If you select to make a Remote Deposit you will be prompted with the next screen that will need to select the account that you would like to deposit the check into, as well as enter the amount of the check.

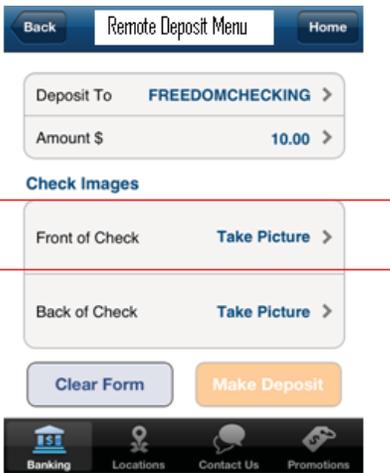


Then you will be prompted to type in the amount of the check to deposit.



Type in the amount and then click "Done".

You then will need to take a picture of the front and back of the check. The check images need to be legible in order to be processed correctly.



You will then have to take a picture of the front of the check.



Once you capture the image of the front of the check you will have to select "Keep Image" if the image looks clear. If you need to retake the picture just select "Retake Photo".

Once you take the picture of the front of the check you will be immediately prompted to take the picture of the back of the check.

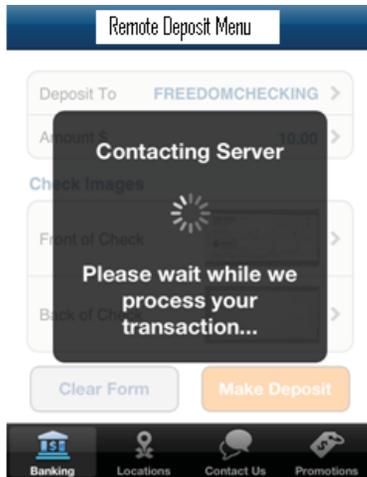


You will now be prompted to take a picture of the back of the check. This process is the same as before so select "Keep Image" if the image is clear. Select "Retake Photo" if the image is not legible.

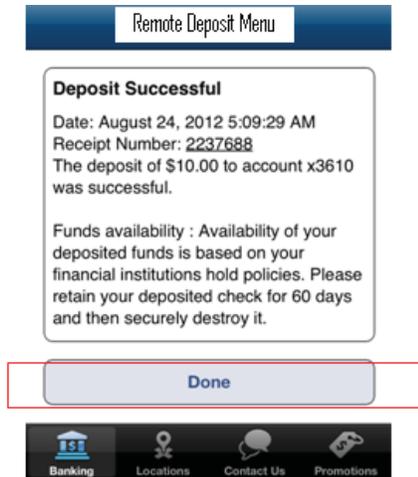


Once you have all the necessary information for the deposit you will have to select "Make Deposit".

Once you click the Make Deposit button on the bottom right hand corner of the screen it will take a few seconds to process, during this time it will be checking over one hundred risk factors to make sure that the check is a real check. It will be checking things such as routing number, account number, date, signature, amount, payee, etc.



Once you say "Make Deposit" the check is being processed. This may take a little while depending on your connection.

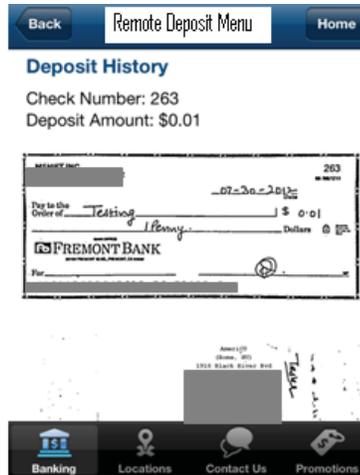


You should see the screen above when complete. Just click "Done" to finish the deposit.

When the Deposit Successful message appears on your screen you know that the deposit was made successfully to your account. This process from start to finish takes minutes and can be done from anywhere with a strong cell phone signal. These deposits are “real time” so there is no waiting for the funds to show on your account, going to the deposit history section of Remote Deposit Capture will see them immediately.



Select the transaction that you want to view.



You will be able to see the front and back of the check that you deposited.

Here you will see the successful deposits that were made to your account. You will be able to select a deposit and actually see the check image. With the implementation of a product like this there will be no more rushing to get to the bank before it closes, you will be able to deposit a check anytime, anywhere. With this convenience it is very likely to change the culture and enhance the productivity of employees at financial institutions.

Organizational Review

After doing the interviews with the employees at ABC Credit Union I found out that there were organizational changes that took place post implementation. Post Implementation there was a few other areas of the Financial Institution that needed to perform daily duties due to Remote Deposit Capture.

I asked to receive an organizational chart so that I could see the different departments that would need to take on some additional work due to implementation. Based on the organizational chart provided, I created two charts that would show the different areas that are involved in check deposit duties pre implementation as well as post implementation.

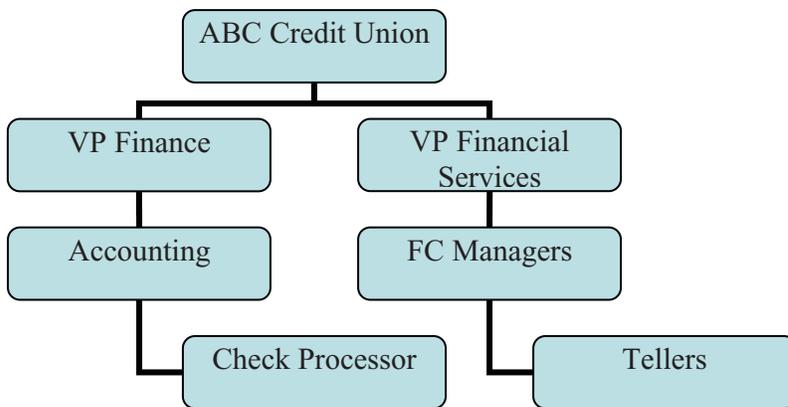


Figure 1.1 – Organizational Chart – Pre Implementation

As you can see in Figure 1.1 there are only two areas that were involved in check deposits pre implementation of Remote Deposit capture. The only duties that employees had via traditional check deposits were when a member came into the financial institution and deposited a check through the Teller. If the check were returned the Check Processor position would take the funds out of the members account and send them a returned

check notification in the mail. These duties were split between the VP of Finance and the VP of Financial Services so that the workload was relatively light of each position.

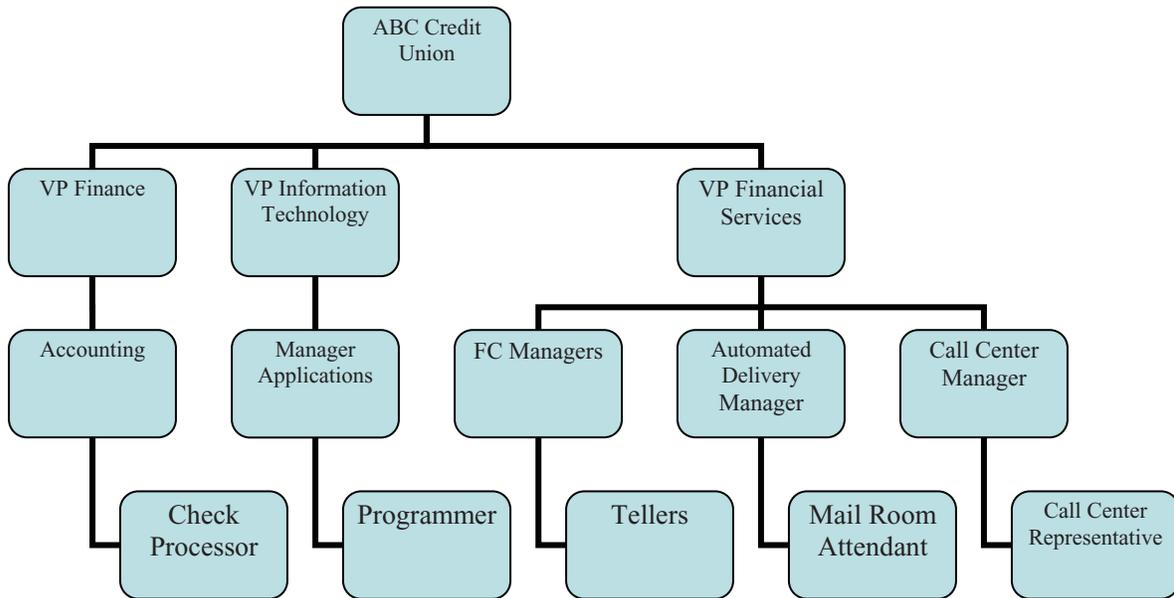


Figure 1.2 – Organizational chart – Post Implementation

As you can see there are three main areas affected by the Remote Deposit Capture implementation at ABC Credit Union. There are five main positions that are affected, they are: Check Processor, Programmer, Tellers, Mail Room Attendant, and Call Center Representative. In figure 1.2 you can see which departments these positions fall under. The Check Processor position for example is under the Accounting department and reports to the VP of Finance. The Programmer position reports to the Manager of Applications who in turn reports to the VP of Information Technology.

The Check Processor doesn't have a bigger role post implementation, they are only involved with return checks via any channel whether it be through Remote Deposit Capture or through a check deposited through the Teller window. The Programmer has a larger role because there are daily files that need to be uploaded twice a day in regards to eligibility of members who can access Remote Deposit Capture. This process adds up to 20 minutes of daily duties to the Programmer position. The Tellers have seen a slight drop in transactions being deposited through the teller line but have seen an influx in questions being asked at the teller line in regards to Remote Deposit Capture. The number of transactions being done through Remote Deposit Capture per week is roughly 50 transactions. So there are 50 less transactions per week being done through the teller line. Some people wonder why they are not eligible for the product while others who have deposited checks are wondering why there is a limit to the amount of money you can deposit each month. Of all positions, the Mail Room Attendant has been given the most amount of work post implementation. The Mail Room Attendant is responsible for accepting or rejecting all check deposits through Remote Deposit Capture. Each morning and multiple times throughout the day their duties are to open up a website and click on each check deposited. They need to verify multiple things on each check, such as the routing number, account number, written amount, payee and signatures on the front and back. With roughly fifty checks thus far being deposited daily, this task has been an additional workload for this position. Finally, the Call Center Representative that has been assigned the responsibility for answering member calls regarding Remote Deposit Capture has also seen an influx in calls from this service. Many members are calling because they are not eligible for this service. Other things that they have asked have to

do with depositing the check through Remote Deposit Capture and instead of getting a deposit successful message it is giving them an error message. These errors are due to a low cell phone signal and are giving the Call Center Representative on average five extra calls a week.

So with that being said, the area of ABC Credit Union that has seen the most impact post implementation of Remote Deposit Capture is the VP of Financial Services. This position has to deal with the pressure of getting these duties fulfilled on a daily basis and he said it has been a challenge to get this done. Most of the questions that need to be answered for Remote Deposit Capture need to be answered by the Programmer position. If a member has a question that the Call Center Representative or Teller cannot answer then the Programmer is the one who responds to the question. The Programmer is the key component to the success of Remote Deposit Capture because this position is the only one that can allow members to have access to this service. They must respond if the service is not working properly because it is a software driven technology.

Remote Deposit Capture Workflow

To give you a sense of the workflow at ABC Credit Union pre implementation I put together a flow chart as you can see in Figure 1.3 below.

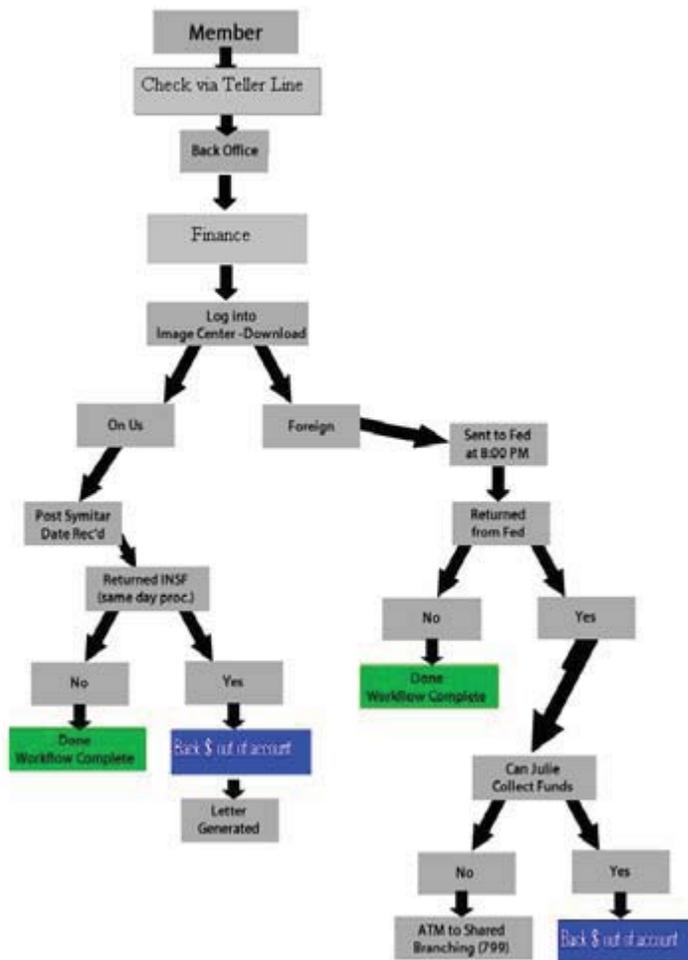


Figure 1.3 – Pre Implementation Remote Deposit Capture Workflow

According to this figure you can see that the only department that really had any responsibilities regarding check cashing was the Finance department.

After interviewing all employees at ABC Credit Union I put together a flow chart to show how the complete process will work and how the ATM and Finance Departments have handled the new service. These two departments have to perform the majority of the work for this new service so I only included these two departments in Figure 1.4

below. This flow chart starts once the member successfully deposits the check via Remote Deposit Capture.

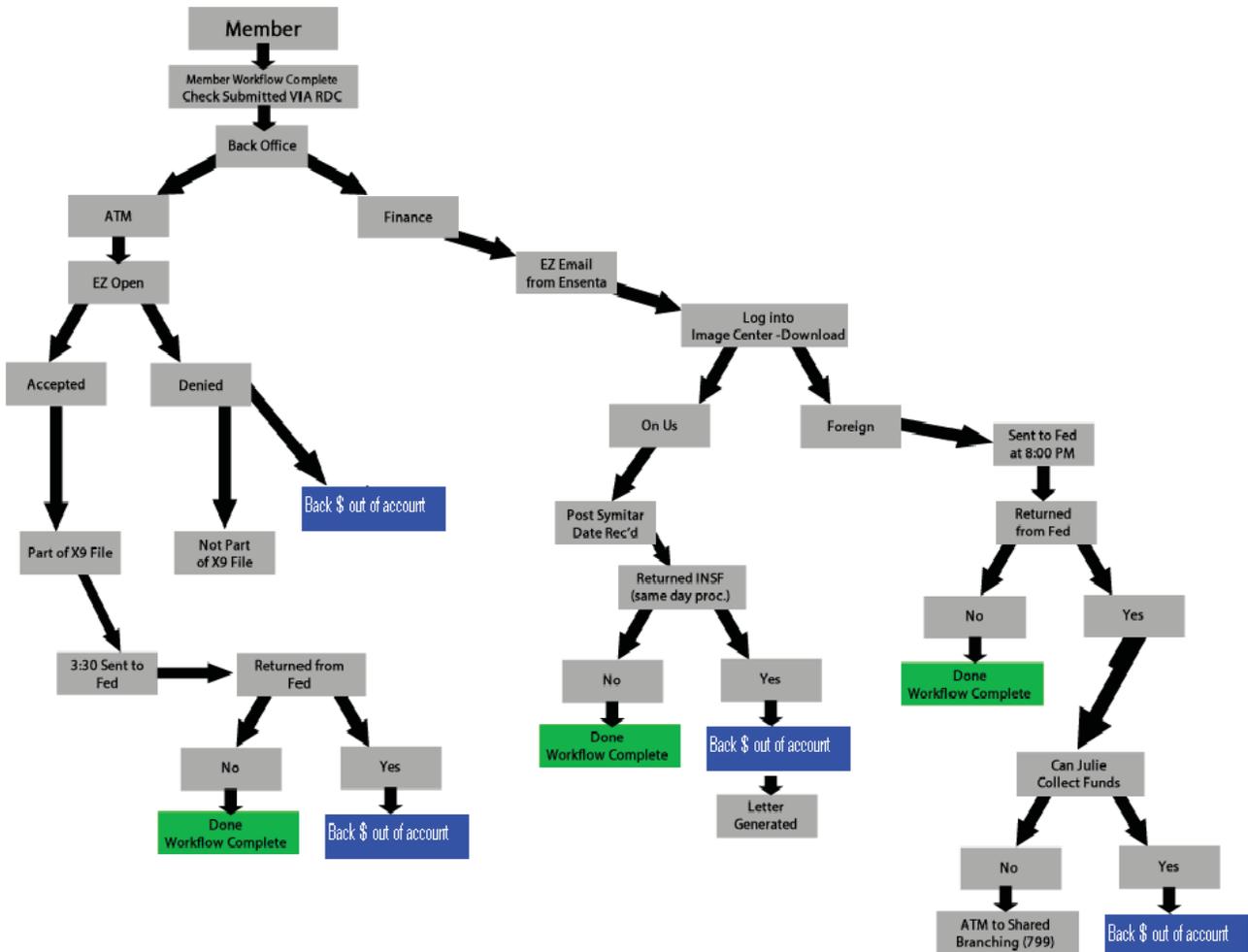


Figure 1.4 – Remote Deposit Capture Workflow

Starting with the ATM department the Mail Room Attendant has to either accept or reject the check through the website that they will be logging into on a daily basis. If this check is accepted it becomes part of a file called an X9 file that gets sent to the Federal Reserve for processing. If there are sufficient funds to pull from the person who wrote the check then the deposit is complete. If there are insufficient funds then the check amount is reversed from the members account. Likewise if the Mail Room Attendant rejects the check then the amount of the deposit is also reversed out of the members account.

The Finance department has similar daily responsibilities. The Check Processor is the person responsible for downloading these X9 files into their core system. There are two types of checks that they deal with, checks that are written where both the payee and payer are members of ABC Credit Union and the other where the payer is a non ABC Credit Union member. These instances are handled differently because the ones that both individuals are members of ABC Credit Union are known to be good or bad because the Check Processor can manually go into each account to see their balances. The checks deposited from other institutions verified by the Check Processor who has to wait to hear back from the Federal Reserve to see if the check clears. Sometimes this takes a couple of days but is handled the same as the Mail Room Attendant, if the check is bad then the funds are reversed out of the members account. If the check is good then the transaction is complete.

The key part of this process that differs between traditional check deposits at the teller line and deposits via Remote Deposit Capture are the ATM department responsibilities. In traditional check deposits, the Mail Room Attendant is not part of this

process at all. Traditional check deposits do not need to be accepted or rejected through a website nor would the funds need to be reversed out of the members account via the Mail Room Attendant.

Sense Making Findings

There were a couple of situations that the interviewees told me about during my interview sessions. The first situation was when a member came in because they could not deposit a check via their iPhone device. They kept getting an error message on their phone when they were trying to deposit the check into their account. The member presented the check to the teller at the financial center and told them that they tried to deposit the check through Remote Deposit Capture and they kept getting an error message. The member sent a screen shot of the error message to the teller and the teller then sent the error message in an email to the technology department. The member also sent a picture of the check front and back to the teller who also emailed these images to the technology department to do research. A few days later the technology department got back to the teller to tell the teller that there was an issue with the type of check that the member was trying to deposit. The layout of the lettering on the check was not allowing the check to deposit successfully because the software kept rejecting it because it could not fully and accurately read it. The vendor who is involved with developing the software had to change the software to correct this issue from happening in the future. After the teller found out the cause of this they in turn let the member know that it should be corrected for the future. This type of incident reflects the VP of Information

Technology because his department had to figure out the issue of why the check kept returning an error message on the screen. So in this example the situation is the error message, the bridge was the software being redeveloped, and the outcome was a successful check deposit.

Another situation where the teller was presented with an issue was with the eligibility. The member's account looked as though it should have been eligible to use this service but each time the member tried to click on the Remote Deposit Capture option via their smart phone it kept saying that he was not eligible for this service and for him to contact the credit union. The member came into the branch to ask the teller and the teller could not find an issue with the members account. The eligibility is based on several different factors, such as warning codes, and has to be a member in good standing. The teller again had to contact the technology department to investigate this matter. After a day of investigation the programmer got back to the teller and told the teller that his program was not sending over the members account properly. There was an issue in his coding that was blocking this member from being allowed access. The programmer fixed this issue and now the member can deposit checks remotely. In this instance, the situation is the member could not access Remote Deposit Capture, the bridge was the fix to the coding, and the outcome was the member being allowed access to this service. This also reflects the VP of Information Technology because the fix was related to the programs created for this product. In traditional check cashing procedures each of these instances would not have been an issue because the Technology department is not involved in traditional check cashing at all.

Terminology

There were many different terms used by the interviewees during the interview process. Some of the terms that kept coming up a lot were the following:

- Cross Selling Skills – Getting a member to sign up for another product or service at the Credit Union.
- Member Service – Providing a great member experience to the member.
- Self Assessment – Employees having to perform an evaluation on themselves quarterly and annually.
- Products – The credit union offers many different loan and share products to their members.
- Services – The credit union offers many different services such as Remote Deposit Capture and Online Banking to their members.

Key Outcomes

- Overwhelmed – The credit union employees seem overwhelmed with the new Remote Deposit Capture implementation.
- Transaction Growth – The transaction growth keeps getting larger each year and the financial institution keeps growing but there aren't any attempts to hire more employees.

- Workload – The workload keeps getting large without hiring more employees.
- Burden – Remote Deposit Capture has become a lot of work for employees.
- Eligibility – There are not that many members qualified for Remote Deposit Capture to take much of the workload.

These terms were all used multiple times in each of the interviews that I performed on the employees of ABC Credit Union. Most of the terms used reflected on the work life of employees.

Conclusion

Once again the research questions that I wanted answers to in my qualitative study were the following:

1. *Does the implementation of Remote Deposit Capture enhance the culture at Financial Institutions? If so, how?*
2. *Will Remote Deposit Capture change the way transactions are handled? If so, How? Will this change affect the interactions between employees and account holders? If so, how?*
3. *Does the implementation of Remote Deposit Capture enhance the productivity of employees at Financial Institutions?*
4. *Does Remote Deposit Capture improve the process of check cashing? If so, how?*

Looking back on these questions after my qualitative study it is easy to answer these questions. Based upon the answers from the interviewees it is same to assume that the implementation of Remote Deposit Capture does not enhance the productivity of employees at Financial Institutions rather it just spreads the workload throughout many different departments. Remote Deposit Capture does change the culture of employees at Financial Institutions because we saw a shift of the workload post implementation so departments that did not associate with other departments now needed to in order to make this product successful. They needed to interact with each other to perform the different

tasks. The way that transactions are handled has changed as a result of Remote Deposit Capture because the Information Technology department now handles all issues with checks deposited. Also, the Mail Room Attendant is the position that is in charge of accepting all check deposits so this is a dramatic change in how check transactions are handled. The interaction because employee and member will change slightly because most calls will be taken by the call center rather than speaking directly to a financial center employee the member will speak with the call center employee about issues. Overall, Remote Deposit Capture will improve check cashing because instead of paper transactions they will all be electronic so all data sent back and forth will be electronic instead of paper copies of checks. This way of check cashing is more secure for the Financial Institution members.

The main goal of the implementation of Remote Deposit Capture was to make the jobs of the employees of ABC Credit Union less stressful in trying to steer check deposits to electronic channels while providing a new service to customers. While it has given less work to one area of the credit union it has added work for three other areas of the credit union. It has also involved many more VP's of the Credit Union in having to use their resources in this product. After conducting interviews with five employees from ABC Credit Union I have come to the conclusion that this product has not lived up to its hype as regards employee workload. It was expected to save the credit union employees work but all it has done is shift the workload into multiple areas of the credit union. Although, some of this may be due to Remote Deposit capture being a new service. A quote from one of the interviews that I performed was "We were notified through our intranet when it was going to be available for members to use. We were sent FAQ's on

how to handle certain situations and questions that a member may have when they come in to set up or have any issues using the service.” Since Remote Deposit Capture is a new service, some of the extra work may be due to the lack of training.

There has however been a boost in member satisfaction for this product. The members really enjoy being able to deposit their checks at their home via their smart phone. The real question here is: Is it more beneficial for a financial institution to give great member experience or to spread the workload throughout the financial institution? All interviewees were in agreement with the following quote “I have seen an influx of members ask about the product. I have not seen any people join the credit union because of offering this product but have seen many current members ask about the product. They ask how it works and if they are eligible and if I can give them any material on it.” With that being said at this stage of implementation it is not more beneficial to provide this service to members while spreading workload throughout the organization.

Limitations

There are some limitations associated with my qualitative study. The fact that there are only a few Financial Institutions that have implemented Remote Deposit Capture in Upstate NY has made it difficult to interview multiple Financial Institutions. Since I needed to get IRB approval to do my research it has given me time restraints on data collection and evaluation. Another limitation is that there are not many individuals that work at each Financial Institution so my study was limited to five employees. The final limitation is that the product has only been rolled out at ABC Credit Union for four months so the product itself may not have reached its full potential yet.

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Appendix A: IRB Approval

**SUNY Institute of Technology
Institutional Review Board
I R B**

Daniel Smith, Student
SUNY Institute of Technology
100 Seymour Dr.
Utica, NY 13502
315-868-1240

27 November 2012

RE: *Sense Making Methodology: Enhancing Workflow with Remote Deposit Capture-11/26/12*

Dear Mr. Smith,

The SUNY Institute of Technology Institutional Review Board (IRB) is pleased to inform you that your study (entitled above) was approved in accordance with expedited review procedures outlined in 45 CFR 46.110 and Category 7 of 63 FR 60364-60367, November 9, 1998 on 11/27/12. This final approval is based upon initial review beginning 11/14/12 in which changes were requested, and subsequent review of the appropriately revised protocol and consent document in accordance with recommendations of the IRB. This approval satisfies requirements of 46.111.

Approval for this study is valid for one year and will expire on 11/26/13.

The IRB will need to review this study on an ongoing basis, but in no case, less than once per year in compliance with 46.109(e). You will be required to submit a *Continuing Review* application for approval to continue the study beyond the approval period.

You are required to notify the IRB of any changes or modifications to the study prior to implementation. You are also required to promptly notify the IRB of any unanticipated problems or adverse events that occur as a result of participation in this research.

Please notify the IRB if your study is completed or terminated prior to the approval expiration date so we may close the file.

If you have any questions about this certification letter, please contact the Office of the IRB at 315-792-7343 or by email at jonesh1@sunyt.edu.

This Institutional Review Board subscribes to and functions within the requirements of Title 45 Code of Federal Regulations, Part 46 "Protection of Human Subjects".

Sincerely,
//Signed//
Holly Jones, MS, RHIA, CTR
SUNYIT IRB Coordinator

CC:
William Thistleton, Ph.D., IRB Chair

100 Seymour Dr.
Utica, NY 13502
315-792-7343

Appendix B: Interview Transcripts

Interview Questions – Most popular responses from the five employees

Note to Interviewee: Do not discuss any detailed financial transactions that could identify any individual account holders when giving interview responses.

Culture/Workflow:

1. Define your position at the bank. Give a job description.
 - a. I open, close, and maintain different types of accounts that include but are not limited to, personal accounts, business accounts, health savings accounts, and individual retirement accounts. I cross sell the products and services that we offer. I input and underwrite loans and perform loan maintenance. I am a notary public. I am in charge of safe deposit boxes, so I am responsible for the balancing, mailings, and maintenance of them. I am in charge of the daily account imaging, so each morning I receive a report of all of the accounts that were opened the day before and I must make sure that we have the necessary information for those members to maintain our compliance (for example: a signed account card, an ID on file, and a chexsystems report pulled). I take part in as many teams as I have the opportunity to. I would like to help the credit

union in anyway that I can. I stay updated in order to adhere to the variety of rules and regulations that we have.

2. Tell me about a typical day at work. Explain.

a. A typical day at work involves waiting on members that either walk in or have previously made an appointment with me to carry out their financial needs.

3. Tell me what yesterday was like at work starting when you first came in. Explain.

a. Yesterday, when I first got to the financial center, I retrieved my safe deposit box and imaged reports off of the printer to complete them before we open. It was a rather slow day yesterday, so after we opened; I only waited on a handful of members. I opened an account for a new member; I closed an account (the member had passed away and his executor moved the funds to his estate account). I did a stop payment on a range of checks, I completed a check order, I performed a fee refund request, and I opened another new account and performed a kiosk demo.

4. Do you get performance feedback from your managers regularly? (Y/N)

a. No, we have quarterly reviews and annual reviews but we fill out a survey on how we feel we rank and our manager also fills out a survey about how they feel we rank and then we discuss the rankings.

5. When was the last time you were given feedback?

a. My last quarterly review was in October. I just completed my self assessment for my annual review as that will be coming up in January.

6. What are the Banks' expectations of you?

a. Their expectations of me are specifically outlined in our job descriptions. Our main focus is to help our members make us their primary financial institution. I do this with my member service and cross selling skills.

7. How many transactions do you perform on a daily basis?

a. On a daily basis, I can wait on anywhere from 1-25 members depending on staffing and member flow.

8. How many of these transactions are check deposits?
 - a. I would say if it were a day where I took 25 members that twenty percent would be check deposits or 5 members.

Check Cashing:

9. Explain the current check cashing process. Take me through an example situation.
 - a. When a member comes in to cash a check, we have different regulations that we have to follow. For example, Regulation CC is for our check holds. Any check over \$200 is subject to a hold. We can have the check hold waived by a manager or if it is a payroll check and it is on our approved payroll list. We can also hold any funds that are in a members account in order to cash the check. An example situation was yesterday when a member came in to deposit a check. He wanted to deposit a \$500 check into his checking account so the first \$200 was immediately available and the remainder was on a two business day hold because of Regulation CC. He was not real happy about the hold but because he was such a new member I could not give a manager override for this hold. He was furious and stormed out of the financial institution.

10. What do you do with a check that you get from a customer?

- a. Once we get the check we verify the signature on the front and back of the check. We verify that the date is correct, not in the future and not stale dated. We manually enter the transaction into our system and it gets entered into our teller totals for the day, and then it will be run through a machine that images the check for our proofing department to handle. Once we have completed the deposit the check gets sent to the Federal Reserve for processing.

11. How long does it take for a check to process? Take me through each step of the check cashing process.

- a. At the teller line it takes just a couple minutes for a check to be cashed or deposited into the members account.

12. Are the funds immediately available to customers once the check is deposited? If not, when are they available to customers?

- a. Once deposited a check may or may not be immediately available to a member. It depends on the length of membership (if a brand new member, checks are held for nine business days), the amount of the check (any check or aggregate balance of checks over \$200 is subject to a hold, furthermore there may be extended holds on checks), the collectability of a check (if there is a question about a check being good, we will place an extended hold on it).

Remote Deposit Capture

13. Explain how you use technology during a typical day.

- a. I use technology all day long in a typical day. I use our core system, Microsoft Office, receipt printers, check printers, regular printers, copy machines, and signature pads.

14. How was Remote Deposit Capture implemented?

- a. Remote Deposit Capture was implemented through our mobile banking app via Smart Phone (android, iPhone devices). We were notified through our intranet when it was going to be available for members to use. We were sent FAQ's on

how to handle certain situations and questions that a member may have when they come in to set up or have any issues using the service.

15. Were you involved with the check depositing change? How so? What was your role?

- a. I was involved with the change because I am the sole person responsible for approving/denying the checks on the backend of this product. When a member uses Remote Deposit Capture and they click Make Deposit, I log into a website to view the check and can either, accept or reject the deposit for any reason I wish. If I accept the deposit my process is complete. If I reject the deposit I must reverse the deposit out of the members account because when they make the deposit it actually hits their account in real time meaning that the funds are seen in their account immediately.

16. How did the bank announce the change?

- a. The credit union made the announcement on our intranet for employees to view as well as on our Internet page. They sent out FAQ's and material regarding the product and have marketed the product through banners and different material in the branches about the product.

17. Why did they decide to implement Remote Deposit Capture? How much cost, how much time saved?

- a. The main reasons the VP's of the credit union decided to implement this product were for convenience for the members, to stand out from other credit unions, to take the burden off the tellers and to keep up with technology. I cannot imagine their being as much time and cost saved because I spend at least an hour each day logging into the website to approve or reject checks deposited through this channel. There are still checks being deposited through the branches so the time that is saved there is spent accepting or rejecting them on the back end.

18. How did you get involved in the change?

- a. I was pulled aside by our VP of Financial Services to get trained on what I had to do on the back end of this service. There are two employees here that are trained on the back end and I am the main one that handles it. The other employee is the back up for when I am on vacation.

19. Were there meetings held to discuss the implementation? Where were they held?

How long did they take? Who attended? What was the format of the meetings?

- a. Yes, there were many meetings in regards to how the process would be handled in the different departments. They were held in a conference room in our main financial center and they ran roughly an hour each time. The people who attended were a representative from each of the following departments: IT, Accounting, Auditing, Process and Improvement, Branch Manager, Teller, and VP. The format of the meetings were that there was an Agenda for each meeting that we would go over and then there was action items at the end of each meeting for each department to have completed for the next meeting.

20. Can you define each aspect of the implementation? Which departments are responsible for what?

- a. IT – uploaded daily files for eligibility of this product.
Accounting – transfer x9 files into their system daily.
Mail Room Attendant– accept/reject checks on back end.
Process Improvement – develop FAQ’s and training material for employees.
Tellers/Call Center – answer questions in regards to errors when depositing checks via smart phone.

21. Will your role change by this product? How so?

- a. Yes, I am involved in the back end of this product. Right now there are roughly 50 deposits daily so it takes me roughly an hour to process all the checks on the back end. If this product keeps growing at the rate that it has been, this service will take a majority of my time up each day.

22. What has been your experience with this transformation?

- a. This product has made my position overwhelming. The credit union has the same resources that they have always had and adding this workload has not been very easy to completing the things that need to be completed each day. I feel like the service is great for the members but if it continues to grow then the back end support will need to be addressed.

23. What do you think of the change and how has it been handled?

- a. The change has is great. For now it is being handled to the best of our ability. I designated person in charge of the back end would make it less stressful for the employees on the back end. The point of this product was to take the burden off

the tellers in depositing checks but it has added a burden to the mailroom attendant position.

24. What new processes came from this implementation?

a. New Daily Processes:

Back end support for check deposits.

File uploads for eligibility.

Training for staff.

Transfer of x9 file to the Federal Reserve.

25. Have you seen an influx of members join ABC Credit Union as a result of Remote Deposit Capture?

a. I have seen an influx of members ask about the product. I have not seen any people join the credit union because of offering this product but have seen many current members ask about the product. They ask how it works and if they are eligible and if I can give them any material on it.