

# **Enhancing Customer Experience through Interactive Teller Machines (ITMs)**

Stonier Graduate School of Banking

Capstone Project

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## Executive Summary

Adapting to the ever-changing environment has been the foundation of success for Ridgewood Savings Bank (the “Bank”). Since 1921, the management of the Bank dealt with many economic and non-economic challenges while always centering the focus on serving our local community with the best financial services available. Through its goal to “multiply the good,” the Bank remains focused on what has made the Bank successful – its customers.

The Bank is always exploring innovative ways to serve the diverse needs of its customers in a personal manner, and therefore continues to explore ways to grow and attract the Generation Z (“Gen Z”) demographic as banking customers. A more interactive Automated Teller Machine offering to the Gen Z demographic can be effective in achieving that goal.

This project is an opportunity for Ridgewood Savings Bank to convert its four brand recognition Automated Teller Machines (“ATMs”) currently located on the campuses of St. John’s University, St. Thomas Aquinas College and St. Joseph’s College (both Suffolk and Brooklyn campus) into Interactive Teller Machines (“ITMs”). The ITMs provide all the benefits of the ATMs, and can additionally provide access to a financial advisor or counselor via video link.

The ITM rollout can be implemented in a manner that satisfies the Gen Z preferences for digital utilization and social awareness, while also addressing their concerns to accumulate greater savings and enhance their financial knowledge.

ITMs provide a wonderful opportunity to both modernize traditional banking activities, as well as personalize the financial consultation with customers. They also provide an advanced and more diverse method for the Bank to serve customers within and outside of its branch network areas. ITMs can handle up to 85-90 percent of the bank transactions at a lower cost per transaction than the traditional in-branch method. These connected machines can offer personalized banking services featuring live video with trained and knowledgeable bank staff.

In addition, the Bank has a proud tradition of offering its customers valuable financial education and literacy, and can utilize ITMs to further this mission. This pilot ITM project can help solidify its standing as a trusted financial partner and consultant.

The ITMs placed on campuses of these three colleges offer the Bank exposure to over twenty two thousand potential customers, as well as the ability to enhance brand recognition, and cost-effective promote personalized products and services for the Gen Z consumers. They can also greatly assist students seeking to improve their savings and budgeting activities.

By using ITMs, the customers will be able to access most of the bank's products and services from their campus location (without the need to visit an existing branch). The ITMs will provide access to a live person via video even pass the standard branch operating hours, providing these customers flexibility, full access, convenience, and secure communication in conducting their banking transaction.

The proposal to install four ITMs on the campuses of the three colleges has an initial estimated cost of \$500,000, which includes the purchase and installation of units and implementation consulting fees. This \$500,000 will likely be depreciated evenly over a 5-year period. While there will be subsequent annual costs for software licensing and maintenance for each ITM unit, these costs would largely be offset by the cancellation of existing maintenance agreements of the ATMs. Training of employees that will interact with the customers via camera is included in the one-time implementation cost.

College students utilizing an ITM would have a great likelihood of maintaining a low interest cost checking account relationship. Assuming a net interest spread of 3.6 percent on the deposits, average total deposit balances of approximately \$736,568 would cover the costs of the initial 5-year period.

Based on the estimated enrollment data (2023-2024) of undergraduate and graduate students (excluding online) for each of these colleges, and assuming the modest average deposit balance of \$1,000, the number of accounts needed to support a breakeven would be achievable at St. John's University. The lower enrollment levels at St. Joseph's and St. Thomas Aquinas colleges make breakeven nearly impossible to achieve. However, if an ITM has the potential to be profitable at least at one of the colleges, the Bank believes it will be beneficial to install them at all three colleges.

Beyond profitability, achievement of each of the following three activities on a monthly basis would be deemed as successful implementation: 1) three non-traditional ATM interactions; 2) two financial literacy interactions; and 3) one checking account opening.

There are also several non-monetary elements that are deemed critical to the project's success. For example, a clear communication to customers must emphasize the enhancements and benefits of the ITM compared to standard ATMs. Promotional items should be designed to spark curiosity for the ITM experience, while also emphasizing the Bank as a trusted financial resource. A live product demonstration should be performed to help provide customers greater comfort. As needed, promotions can be utilized to effectively incent ITM utilization.

Ensuring the right employees are placed behind the screens and well trained in advance is equally crucial. In that regard, the Bank will need to build a script to ensure that assistance to customers is consistent across all Interactive Teller user-facing resources. The ITM channel also ultimately needs to be successfully integrated into the Bank's core system and online banking services to further its omnichannel retail strategy. Currently, an obstacle to it is lack of integration between the ITMs and the Bank's online banking platform. NCR (the Bank's service provider for ATM and online banking) is currently working on completing the critical/highly beneficial integration.

Should the installation of ITMs at these colleges prove to be successful, the Bank can consider expansion throughout its marketplace, particularly in locations where opening a traditional brick and mortar branch is not feasible.

In summary, after reviewing all considerations, the recommendation is to implement the installation of ITMs on the campuses of St. John's University, St. Thomas Aquinas College and St. Joseph's University. This implementation will be a pilot project for the Bank to

better target Gen Z consumers by providing them with the products and services they desire. By installing ITMs, Ridgewood Savings Bank will have an opportunity to deepen its customer relationship with Gen Z consumers, offer more personalized and interactive financial advice, and ultimately enhance its brand loyalty among the students. With this additional service, Ridgewood Savings Bank will better position itself for the future, successfully migrate banking activities away from its traditional (and more expensive) brick and mortar branches, and still maintain its standing as a champion of both customer service and financial literacy.

## About Ridgewood Savings Bank

Ridgewood Savings Bank was established in 1921 in Ridgewood, New York by 14 local businessmen whose mission was to create a better financial institution that would be actively involved in its surrounding community. One hundred years later, Ridgewood Savings Bank is the largest mutual savings bank in New York State with over \$6 billion in assets. The Bank presently has 36 branches throughout the NYC boroughs of Manhattan, Brooklyn, Bronx and Queens, as well as in Long Island, Westchester and Yonkers.

Since inception, Ridgewood Savings Bank has remained true to its community bank roots and its ongoing mission to be a premier community bank that provides its customers the best possible service and banking experience based on the following core values:

### OUR CORE VALUES

How We Multiply the Good. Every Day.



#### Relationships

We deepen our relationships and treat every customer with dignity and respect.



#### Competitive Rates

We show our customers how our competitive rates can help them reach their goals.



#### Financial Solutions

We know our products and services and strive to provide the right solutions for each customer.



#### Giving Back

We seek out opportunities to give back to the community we share.



#### Strength & Stability

We make decisions that will strengthen our reputation and financial position.



#### Convenience

We value our customers' time and look for ways to simplify and enhance their experience.



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Driven by the goal to “multiply the good,” Ridgewood remains focused on what has made the bank successful – its customers. Besides numerous deposit products, the bank offers a wide variety of competitive lending and wealth management services. As the Bank



continues to refine and enhance its services and delivery channels, Ridgewood Savings Bank continuously strives to be the bank that offers “Traditional Values with Modern solutions.”

For three consecutive years (2020-2022), Ridgewood Savings Bank was included in the prestigious annual list of America’s Best-in-State Banks published by Forbes. In addition, in 2022, Bankrate named Ridgewood Savings Bank the Top Regional Bank in the nation.

During the year ended December 31, 2022, the Bank achieved its highest levels of operating income (\$32.5M), as well as year-end total assets (\$6,848M), real estate loans (\$4,285M), deposits (\$5,391M), and regulatory capital (\$775M).

Ridgewood Savings Bank is proud to give back to local communities that it serves. In 2022, the Bank donated:

\$910,247 – in corporate Giving, Donations and Community Outreach

\$177,540 - in Community Reinvestment

\$68,832 – Bank-Matched Donations

\$58,556 – Employee Charitable Giving

1,121 – Employee Volunteer Hours. [\[1\]](#)

All these donations underscore the Bank’s Culture of Giving Back. As a part of the Giving Back to the Community, the Bank regularly holds free seminars and workshops in neighborhood branches and schools. In the first half of 2023, the Bank held over 160

events reaching over 10,000 people. “With the dollar only going so far in busy households nowadays, parents and students both are in need of essential money management skills,” shared Leonard Stekol, Chairman, President and CEO of Ridgewood Savings Bank in a press release issued on July 24, 2023. [\[2\]](#)

## Strategy and Implementation

### Changes in Customers Banking Preferences

In order for Ridgewood Savings Bank to ensure its continued longevity and best serve the diverse needs of its communities, it must continue to adjust to ongoing changes in its marketplace (as it has done for over 100 years). This includes looking for innovative ways to serve its customers in a personal manner, while maintaining sound financial performance and remaining relevant in the highly competitive New York City Metro Area marketplace.

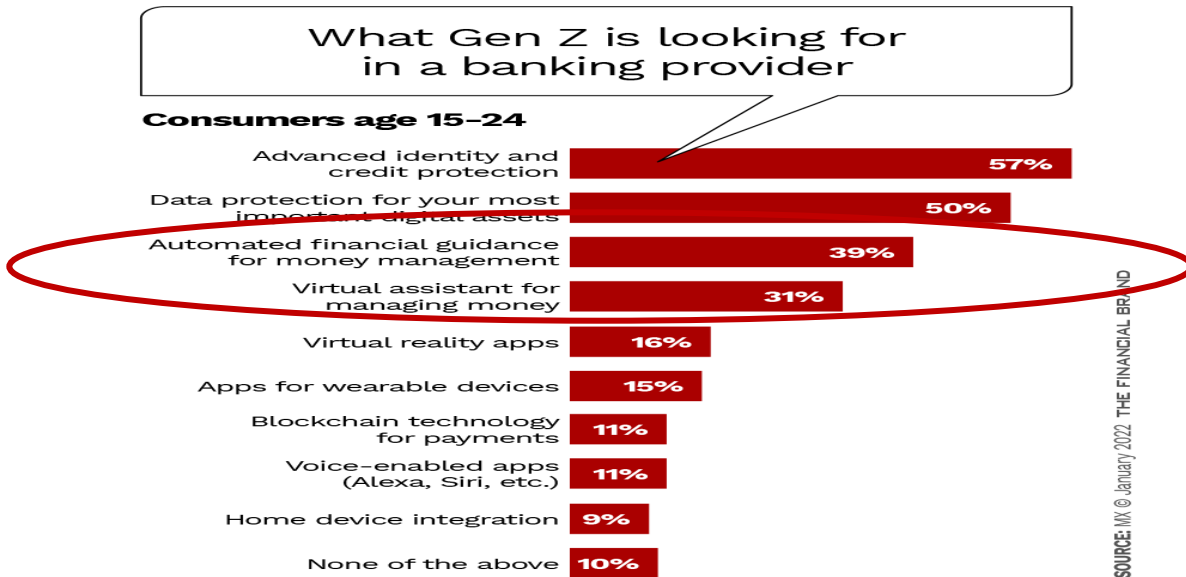
The average age of the Bank’s customers presently approximates to be 53 years old. It is therefore essential for the Bank to create ways to attract a younger generation of banking customers. The success of these growth efforts will require a connection to the varied needs of “Generation Z” (born between about 1996 and 2010) consumers. The article titled “Top Gen Z Trends Impacting Banking,” published in January 2022 by The Financial Brand” [\[3\]](#), summarizes results of miscellaneous studies and surveys performed by various companies such as Student Bean, MX Technologies Inc., Goldman Sachs' Marcus Bank (the “Marcus Survey”), and JP Morgan Chase. The article also includes commentary made by

various panelists at a webinar named Gen Z & Millennial Banking Perspectives and 2022 Predictions on Gen Z hosted by MX in late 2021 (the “MX Webinar”).

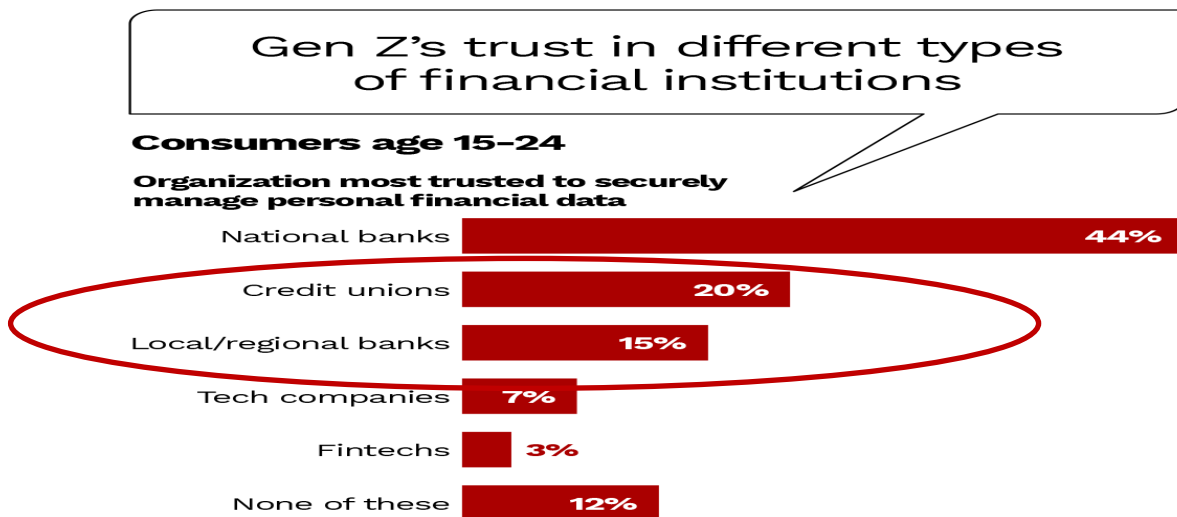
The following are some highlights of the article that largely references the following items related to Gen Z consumers:

1. The Gen Z’s age demographic is comprised of digital natives with an affinity for socially aware brands. The Gen Z demographic relies upon their social media presence unlike any previous generation. Gen Z consumers are usually devoted to brands that they “identify with.” As per Student Beans, these brand loyalties persist long after Gen Zers graduate from college. This characteristic is a potential tool that the financial institutions who win over their hearts can use to their advantage.
2. The Gen Z consumer have their own unique banking/financial concerns. Members of Gen Z are extremely worried about their savings; as the majority of them have not yet been able to effectively accumulate meaningful savings. The majority of Gen Z consumers surveyed indicated that they “earn it and spend it,” and currently believe they are “spending more than they earn,” a pattern they greatly desire to reverse. In light of these concerns and fears, the banking industry could reap the rewards of adapting business practices to adhere to the Gen Z lifestyle.
3. A generational survey conducted by MX Technologies, Inc. (“MX”), highlighted critical items the banking industry needs to acknowledge about Gen Z — and how to respond to their needs. Although the youngest Gen Zers are still about 12 years old, the MX study concentrated on the members of the Gen Z cohort ranging in age from 15 to 24.

The graph below from MX study indicates what this generation wants — and needs — the most from banking providers.



- Gen Z still turn more often to legacy banks and credit unions than they do the new non-bank players in the space. This is due to a fundamental trust that still seems weaved into the traditional banking industry.



5. Data from the 2021 Marcus Survey demonstrated that Gen Zers want more personalized financial help. In the survey, two thirds of Gen Zers stated that they presently prioritize their financial fitness over their physical fitness. About 68 percent indicated they would rather hire a financial advisor over a personal trainer at the gym if the cost was the same. Additionally, 63 percent of Gen Z surveyed indicated that they want to focus on improving their savings in the near future, 47 percent said they were looking to improve their credit score, and another 46 percent stated they are looking to focus on sticking to a budget.

At the MX Webinar, Ms. Cunningham also noted the following with regard to Gen Zers, “For a lot of (Gen Z) people, a very common theme was that they just don’t feel they have enough financial education to make the right financial decisions in their life. Because of this, the financial institutions that are going to be successful are the ones providing tools and services to educate their base and improve their financial literacy,”

While Ridgewood Savings Bank currently utilizes numerous tools to offer its customers valuable financial education and literacy, it has not yet attempted to utilize ITMs to further its strategic goal. By converting the brand recognition ATMs currently located on the campuses of St. John’s University, St. Thomas Aquinas College and St. Joseph’s College, into ITMs with access to a financial advisor or counselor, can significantly assist the Bank in meeting the current financial service needs of the Gen Zers presently attending these schools.

## Interactive Teller machines. Benefits of Using ITMs for the Bank and Customers

As the world gets more and more comfortable with technologies like Zoom meeting, video chat, Alexa etc. and continues to prioritize speed over more traditional processes (where the pandemic of 2019-2022 had a huge contribution to those preferences), it is normal for the banking industry to adapt to those preferences. Interactive Teller Machines (“ITMs”) are a good example of modernization in personal financing. ITMs are a natural evolution of Automated Teller Machines (“ATMs”), and they are providing an interesting option for financial institutions to serve customers within and outside of the bank’s branch network areas.

An ITM is the next stage in technology for financial institutions, the technology that can become the heart of the branch automation process. ITM is like an ATM but with video chat and ability to provide a wider range of services and deliver a “branch in a box” experience to customers. Advanced terminals are pretty much a branch itself, but can operate from a variety of locations, including hotel lobbies, department stores, college campuses, and as standalone islands of their own. In ATM mode, these ITM machines operate just like traditional ATMs. In ITM mode, the customer not only can get cash, but also can open an account, apply for a loan, ask a question about a mortgage or almost anything else a customer would usually need to go into a bank branch to talk to the bank personnel. These connected machines



have the capability to offer personalized banking services featuring live video with bank staff.

According to industry experts, approximately 85-90 percent of transactions typically completed by live teller can be completed by an ITM. Common and more complex transactions that can be performed by an ITM include:

- Get Cash
- Deposits into checking and savings accounts
- Cash Checks to the penny
- Cardless transactions
- Bill and Loan Payments
- New account opening and funding
- Transfer funds to any account
- Order replacement cards
- Process savings bonds and redemptions
- Process customer CD renewals and inquiries
- Issue bank checks or money orders
- Investment account transactions
- Access to all accounts (Consumer and Business)
- Credit Card Payments

These machines are easy to use with most common transactions taking less than 2-3 minutes. *An example of a systematic process is shown in [Appendix 1](#).* With the popularity

of ATMs and the fact that almost everyone of legal age has used one, these machines could be a natural progression for the customers.

By purchasing ITMs Ridgewood Savings Bank is looking to deepen customer relationships with Gen Z consumers through a partnership with three local colleges/universities. Ridgewood Savings Bank currently has four traditional ATMs placed on the campuses of St. John's University, St. Thomas Aquinas College and St. Joseph's University. By replacing these ATMs with ITMs, Ridgewood Savings Bank can offer these college students more personalized and interactive financial advice, without the need to have a bank representative physically present at the college or university.

Since college students typically maintain a different time clock, having an ITM that gives the ability to service these customers beyond typical business hours is highly beneficial. The content and service offered can also be tailored on these machines to meet the specific needs of college age customers.

St. Thomas Aquinas College is an independent 4-year Liberal Arts College located on 76 acres in Sparkill in Rockland County, NY, that provides education at the undergraduate and graduate levels. The college's total enrollment for academic year 2021-2022 was over 2,000 full and part-time students. The students can choose from more than 100 different majors, minors, specializations, and dual degree programs across four Schools: Arts & Sciences, Business, Education, and STEM. [\[4\]](#)

St. Joseph's University has been dedicated to providing a diverse population of students in New York metropolitan area with an affordable education rooted in the liberal arts tradition since 1916. The University provides a strong academic and value-oriented



education at the graduate and the undergraduate levels. The college's total enrollment for academic year 2021-2022 was close to 5,000 full- and part-time students enrolled into its Brooklyn and Long Island campuses. The University offers degrees in 60 major, special course offerings and certificates, affiliated and pre-professional programs [\[5\]](#).

St. John's University is a private Roman Catholic university nestled on 102-acres in the heart of Queens, New York City. It was founded in 1870 by the Congregation of the Mission with a mission to provide the youth of New York with a Catholic university education. The college offers over 100 programs of study in Business, Education, Health Science, Liberal Arts and Science, and Professional Studies. St. John's University Queens campus enrolls approximately 15,500 students each year. In addition to the Queens campus, St. John's has locations on Staten Island, Manhattan, Rome (Italy), Paris (France) and Limerick (Ireland). [\[6\]](#)

By having ITM's in the NY campuses of these three colleges, the Bank will have:

- Exposure to over twenty two thousand potential customers (not including the numerous faculty staff);
- Ability to provide financial advice and personal experience for students utilizing the ITM video services. If a student has a question, he/she can connect to the live person in real time, and the customer service representative can answer the question, guide the person through the transactions, or can point the person to the right sources of the information if needed;
- An opportunity to enhance its brand loyalty among the students that will be exposed to the Bank's services through use of ITM;

- Ability to perform many advertising functions while the customer is using ITM. The bank could display advertisement about a new products and services as well as promote personalized services and products that specific to Gen Z customers or Faculty Staff, in a low-cost manner;
- Help to increase financial literacy among students who are looking to learn how to budget their expenses, increase their savings etc.; and
- Effectively transition these machines, which offer awareness and branding of the bank at these colleges, to functions other than traditional cash dispenser ATMs, as colleges increasingly are migrating to a cashless environment and the younger demographics migrate to electronic vs. cash payments.

ITMs are still a relatively recent innovation, which will make them interesting and memorable for the customers. Currently other financial institutions such as Bank of America and Teachers Federal Credit Union also have ATMs on the college campuses. Deploying ITMs can be the key differentiator between our financial institution and competitors, especially for market segment as Gen Z, who is attracted to innovation.

By using ITM, the customers will have the following benefits:

- Have access to full bank capabilities right at the campus without need to go to an actual branch that for some students (or faculty staff) can be very difficult or inconvenient to do so during regular business hours;
- Have access to live video beyond a branch's standard operating hours. This will give students/customers a choice, access and convenience beyond regular banking

hours (Ridgewood Savings Bank's Customer Contact Center is open, Monday – to Friday: 7 a.m. – 7 p.m. and Saturday-Sunday: 8 a.m.-2p.m.);

- Have secure communication by using phone headsets at the ITMs that will provide customers with a private way of conducting their transaction at the branch. Customers can either use the headsets that ITM is equipped with or use their own by utilizing blue tooth ability to ensure the transaction is private and only the video teller can hear their conversation. This is even more private than transactions taking place in regular branch setting;
- Have the ability to engage in deeper, more personalized banking activities with remote teller or universal banker;
- Get assistance and receive cash even when the customer has lost or forgotten his/her ATM card. By showing the teller a valid ID, customer can still verify his/her identity and complete a transaction;
- Ability to cash check and/or receive bills in different increments. The customer can request and receive bills not only in regular ATM increments such as \$100s, \$20s and \$10s, but also \$5s, \$1s, and coins right up to a penny – just as she/he would when interacting with a regular teller inside the bank;
- Ability to complete multiple transactions in one session;
- Make a personal loan or credit card payment (if the loan/credit card is held with the Bank); and
- Research additional banking products.

### Future Opportunities

If the installation of ITMs in the colleges prove to be successful, the Bank can also expand the installation of ITMs to other existing branches. The first two most visible options are:

- Option I. The bank is in need of an additional ATM in Breezy Point location where the community is very secluded and located at the western end of Rockaway peninsula. The community is run by the Breezy Point Cooperative. Ridgewood Savings Bank is the only bank who has branch in the Breezy Point Community and due to high demand, the ATM at the Breezy Point branch occasionally runs out of cash or has technical issues. Adding an ITM (instead of regular ATM) to this location will not just alleviate that pressure but also create a better customer experience and provide additional bank services available to customers after regular bank hours (the time when most of the community residents arrive home after work).
- Option II. The Bank's Drive up System at Hicksville Branch location is almost 20 years old and in need of replacement. This can provide a good opportunity to install drive-up ITM at the location. The Drive up window is located in a separate building from the branch around a quarter mile away. This always requires having one person to be away from the branch's main location even during a staff shortage. ITM will eliminate the need for an employee to be away from the branch and will maximize the efficiency of staff. In addition, the drive up window is open at the same time as the branch; the ITM will provide services after hours and create a better customer experience.

Once the ITMs are positively accepted by customers, the Bank can choose to expand use of the ITMs to other bank's locations. That in return will maximize bank's earning by lowering the costs per transaction, potential reduction of Bank's complement and/or need for overtime due to staff shortage.

#### Implementation Planning

The average implementation time to install ITMs from start to finish is about 180 days and depends on configuration, location and availability. The process will include the following steps: 1) Choosing the vendor and negotiating contract; 2) Purchase of equipment; 3) Site preparation at each location; 4) Equipment delivery, installation and configuration; 5) Training of the Bank's Customer Contact Center personnel; and 6) Testing before going live.

During the installation phase leading up to the Go Live date, the Bank will begin ongoing communication with the college students and faculty personnel about the new changes to ensure they are aware of this change and learn how it will affect them. The Bank will implement the promotions through the college website, email, radio-station, and TV displays located throughout the three college campuses. After the installation of ITMs, the Bank will conduct two to three community forums in-person to encourage students/faculty members to witness the new features and convenience of the ITMs during a live demo. This will provide an opportunity to discuss the ITMs with the customers and answer any questions or concerns they may have. To encourage students to visit and

use the ITMs the Bank can offer a one-time \$10 promotional deposit when the person utilizes a live video chat to perform a transaction.

In addition to the ITM installation, training of customer center personnel will begin to ensure adequate knowledge of additional tasks that will be required while serving the customers utilizing ITMs. Currently the Customer Contact Center has thirteen employees and no additional employees will be hired. A minimum of three employees will be trained for the video universal banker position to ensure daily availability during vacation or sick times.

Simultaneously with installation of hardware, all necessary procedures and policies will be developed, approved and implemented to fulfill any regulatory requirements. In order to address any potential issues at the onset, compliance communications with the Bank's regulators will likely commence prior to any management (ALCO) review and/or approval.

A team comprised of representatives from various departments will be created to ensure that all-important aspects of the project are covered. Personnel involved in the implementation process will include myself - AVP Accounting and the Project Manager, Mirsada Tagani – First VP & Director of Digital Channels (and Customer Contact Center), Peter Kassal – AVP & Network Manager, Julie Perezaj - AVP and Digital Marketing Officer, and Kathryn Zeppieri – AVP & Compliance Officer. This assignment will give the project manager an opportunity to expand her knowledge of Retail and Digital area of Banking. It would provide an invaluable experience that would help to grow on a personal and professional level. By increasing understanding of other aspects of the Bank's operations,

the project manager will become a more dynamic employee. In addition, leading a team of high-level professionals will enhance her leadership and management skills and enable her to take on broader responsibilities to become an even more valuable asset to Ridgewood Savings Bank.

The estimated time line of the project is eight months. Exhibit 1 shows the details and estimated timeframe of the project.

## Exhibit I

### Interactive Teller Machines (ITMs)

| Action  | Time Period      | Est Due Date          | Personnel Responsible for the Task            |
|---|------------------|-----------------------|---|
| <b><u>PHASE I - ITM Analysis</u></b>  |                  |                       |   |
| 1 Research of types of ITMs   | 3 Months         | 7/1/2024              | Project Manager, Mirsada Tagani               |
| 2 Financial Analysis  |                  | 8/1/2024              |   |
| 3 Choosing potential Vendors  |                  | 9/15/2024             |   |
| 4 Initial meeting with the Bank's Team to discuss the results of the research.  |                  | 9/30/2024             | Project Manager                               |
| 5 Preparation of the project summary to be included in the 2025 Capital Budget for approval.  |                  | 10/15/2024            | Project Manager                               |
| <b><u>PHASE II - Management Approval</u></b>  |                  |                       |   |
| 1 ALCO review and approval as a part of 2025 Budget presentation (Including recommendations and updates)  | 1 month          | 10/30/2024            | Project Manager                               |
| 2 Board Review and Authorization (as a part of the 2025 Budget approval)  |                  | 12/20/2024            | Project Manager                               |
| <b><u>PHASE III - Implementation</u></b>  |                  |                       |   |
| 1 Onsite Consultation with vendor (Seller)  | 1 month          | 11/30/2024            | Project Manager, Mirsada Tagani               |
| 2 Sign Contract and Purchase of Equipment   |                  |                       |   |
| 3 Site Preparation (arrangement with IT, Facilities Management and Security to prepare site for networking, power, cameras, lighting and alarm) | 1 month          | 12/30/2024            | Project Manager, Mirsada Tagani, Peter Cassal |
| 4 Equipment Installation and connection to the Core System  |                  | 1/15/2025             | Mirsada Tagani, Peter Kassal                  |
| 6 Testing of Equipment.   |                  | 1/30/2025             | Mirsada Tagani, Peter Kassal                  |
| <b><u>Additional Tasks</u></b>  |                  |                       |   |
| <b><u>Marketing:</u></b>  |                  |                       | Julie Perezaj                                 |
| - Development and production of material  | 2 months         | 12/30/2025            |   |
| - Marketing Campaign at the Colleges  | 3 months         | 1/1/2025 to 3/31/2025 |   |
| <b><u>Contact Center:</u></b>   |                  |                       |   |
| - Assigning of Staff who will be working with the ITM customers   |                  | 11/5/2025             | Mirsada Tagani                                |
| - Staff Training - Use of Equipment and additional products and services  | 2 months         | 12/30/2024            |   |
| (Includes Customer Service Contact center employees & Digital Banking personnel)  |                  |                       |   |
| <b>ITM GO LIVE at the Colleges locations</b>  |                  | 2/1/2025              | Mirsada Tagani                                |
| Staff on-site of each location to help customers  | Community Forums | 2/1/2025 to 3/31/2025 |   |



## Financial Impact

### Background

A major component of the decision whether or not to install and operate ITMs is the number of machines being considered, since the greater number of units provide some ability to spread certain fixed cost elements.

In general, the significant cost components associated with the ITM deployment are as follows:

- *Hardware and software costs.* Hardware costs vary based upon the model type selected (Island Drive-up, Through the Wall Walk-Up, Through the Wall Drive-up, or Lobby Stand-Alone), and typically range between \$60,000-\$85,000 for the hardware and local software [\[7\]](#).
- *ATM Functionality.* If the Bank is planning to run ITMs as ATM machines (in which standard ATM transactions can be processed, the ITM will need to be equipped with ATMOn, which permits transactions to flow through normal ATM processing channels. ATMOn typically ranges between \$7,500-\$15,000.
- *Initial setup and configuration.* Professional services for ITM with set up, configuration and training can run another \$100,000 or so.
- *Other licenses.* Should the institution need a license to connect to CORE, it could cost an additional \$50,000 to \$60,000. In addition, if the ITM is to be configured to permit ATM transactions for non-clients or with client authentication via the switch

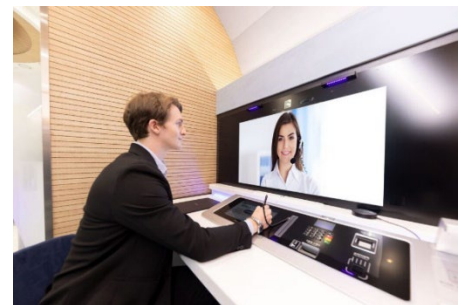
to the CORE, then an ATM Switch Integration will be needed, which typically runs anywhere between \$30,000 and \$40,000.

- *Hardware maintenance.* In addition to implementation, the Bank can expect to pay approximately \$5,000-\$7,500 a year per unit for hardware maintenance.

#### Leading ITM Providers in the Current Marketplace

Two manufactures have emerged as the market leaders in ITM technology: Hyosung and NCR:

- Taxes-based Nautilus Hyosung America (Hyosung) entered the North American market in 1998, and currently is one of the largest ATM provider in the U.S. Hyosung's go-to-market strategy for ITM technology – which is branded as New Branch Solution (NBS) can be summarized as “self-service transactions with assistance as needed”. Their approach is to utilize core integration and ATM rail integration to allow a much richer transaction set to be accomplished by the customer without the interaction of a teller [\[8\]](#). The latest BlueVerse Teller Automation System design to give Banks the tools and technology they need to expedite transactions throughout the day while maintaining the brand bank's visitors expectations [\[9\]](#).



- From its start as The National Cash Register Company (“NCR”) in the late 1880s, Atlanta-based NCR has become a global leader in omni-channel solutions, enabling

nearly 700 million transactions daily across the retail, financial, travel, hospitality, and technology industries. From an ITM perspective, NCR's focus has primarily been on the face-to-face client-teller interaction and centralization of that function. NCR's Interactive Video Teller solution is integrated to the core through its Business Interactive Services. ATMon platform drives the ATM transactions in addition to Interactive Teller transactions [\[10\]](#).

#### Capital & Operating Expenditures

For the purpose of this project, the plan under consideration is to purchase four ITMS. The prices shown below are just estimates and the actual costs will be based on the vendor chosen and actual number of ITMs purchased (if the Bank decide to purchase additional number of ITMs).

Because all four current ATMs that will be replaced with new ITMs are already positioned inside of buildings, the Bank will be looking to purchase In-Lobby ITMs that contain the ATMon functionality. Given its favorable long-term business relationship, the Bank anticipates it would purchase the ITM units from NCR. NCR has a lobby mode ATM/ITM referred to as a



6682 lobby model. More specifically, the NCR Self Serv TM82 [\[11\]](#), an interior freestanding multi-function ATM & ITM, is the closest match to the Bank's needs. The estimated cost to purchase and install four NCR Self Serv TM82 ITMs will be approximately 500,000 (or \$125,000 per unit). The aggregate \$125,000 per unit cost includes \$50,000 for the physical

machine plus the one-time installation/ implementation expenses for professional Services/Customization/Core Integration fee (approximating \$75,000 per unit). This cost will be depreciated over 5-year period. The annual maintenance cost per unit is estimated at \$3,000 for software licenses (as the Bank is already utilizing the Software Subscription for Activate Enterprise (AE)) and \$7,000 for hardware maintenance for each unit. These expenses will be partially offset by replacing the current ATM expenses, as new ITMs will be replacement of the existing ATMs at each selected location. In addition, the initial purchase costs of an ITM can be lowered through a trade-in of the existing ATMs if the Bank elected to do so. Purchase of any additional units will also contribute to the reduced costs per unit (as the one-time Professional Service fee covers an unlimited number of units).

Training of the Customer Contact Center employees is also included in the one-time implementation cost.

Below is a table showing the costs of an ITM versus an ATM with the estimated net expenses of the new technology.

|   | Depreciation Expenses |          | Annual Maintenance<br>(including Software<br>Licensing) |        | Net Annual<br>Maintenance |  |
|---|-----------------------|----------|---|--------|---------------------------|--|
|   | ITM                   | ATM      | ITM   | ATM    | (ITM-ATM)                 |  |
| <i>Purchase price</i>   | <i>125,000</i>        | <i>0</i> | <i>est 3% annual increase</i>                           |        |                           |  |
| Year 1*   | 50,000                | 0        | 10,000  | 8,572  | 1,428                     |  |
| Year 2  | 25,000                | 0        | 10,300  | 8,829  | 1,471                     |  |
| Year 3  | 25,000                | 0        | 10,609  | 9,094  | 1,515                     |  |
| Year 4  | 25,000                | 0        | 10,927  | 9,367  | 1,561                     |  |
| Year 5  | -                     | 0        | 11,255  | 9,648  | 1,607                     |  |
| Total Cost of New<br>Technology   | 125,000               | 0        | 53,091  | 45,509 | 7,582                     |  |
| *Based on the \$40% of Bonus Depreciation that Bank allows to take on Qualified Property in 2025. |                       |          |   |        |                           |  |

Based upon the data in the above table, in the initial year of implementation, each ITM unit would create an additional net expense to the Bank of \$51,428. In years two through four, the incremental expense of the ITM vs. ATM would average approximately \$20,289.

#### To Be or Not to Be

The Bank's average yield on all interest-earning assets, which continues to rise steadily during the current elevated interest rate cycle, currently approximates 3.6 percent. College students utilizing an ITM would have a great likelihood of maintaining a checking account relationship. The Bank's current checking offering to college age customers is named the Student Advantage checking, an account that does not pay any interest; however, it has little to no assessed fees or minimum balance requirements.

Earning a net interest spread of 3.60 percent computes to breakeven deposit balances of approximately \$1,429,000 to cover the initial year costs of \$51,428 and approximately \$737,000 in years two through four. In the fifth year, the required balances to break even will drop to \$45,000.

| <b>Annual Cost</b> | <b>Average yield</b>    | <b>Balance required to cover the initial cost</b> |
|--------------------|-------------------------|---|
|                    |                         |   |
| <b>51,428</b>      | <b>3.60%</b>            | <b>1,428,559</b>                                  |
| <b>26,471</b>      | <b>3.60%</b>            | <b>735,305</b>                                    |
| <b>26,515</b>      | <b>3.60%</b>            | <b>736,531</b>                                    |
| <b>26,561</b>      | <b>3.60%</b>            | <b>737,793</b>                                    |
| <b>1,607</b>       | <b>3.60%</b>            | <b>44,650</b>                                     |
|                    | <b>Average year 2-4</b> | <b>736,543</b>                                    |

Assuming an average deposit account balance of \$1,000 (typical average account balance for a college age student), implies a breakeven number of accounts of 1,429 for the initial year costs, 737 for the years two through four, and only 45 for the fifth year.

The following table presents the recently published enrollment data [\[12, 13, 14\]](#) for academic year 2023-24 (combined undergraduate & graduate and excluding online) for each of the colleges at which installation is being considered:

| College/University             | Total Enrollment | 1,429 Divided by Total Enrollment | 737 Divided by Total Enrollment | 45 Divided by Total Enrollment |
|--------------------------------|------------------|-----------------------------------|---------------------------------|--------------------------------|
| St. Joseph's (Brooklyn campus) | 1,046            | 136.6%                            | 70.5%                           | 4.3%                           |
| St. Joseph's (Suffolk campus)  | 2,873            | 49.7%                             | 25.7%                           | 1.6%                           |
| St. John's (Queens campus)     | 15,469           | 9.2%                              | 4.8%                            | 0.3%                           |
| St. Thomas Aquinas             | 1,859            | 76.9%                             | 39.6%                           | 2.4%                           |

Below is the historical usage of the ATMs in the period of October 2022 through September 2023:

| ATM Location  | ATM #    | Number of transactions |        |        |        |        |        |        |        |        |        |        |        | Monthly |
|---|----------|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
|   |          | Oct-22                 | Nov-22 | Dec-22 | Jan-23 | Feb-23 | Mar-23 | Apr-23 | May-23 | Jun-23 | Jul-23 | Aug-23 | Sep-23 | Average |
| St John's University  | NY002361 | 65                     | 70     | 61     | 57     | 52     | 93     | 118    | 57     | 37     | 50     | 105    | 118    | 74      |
| St Joseph's College   | NY002634 | 43                     | 41     | 48     | 52     | 51     | 63     | 50     | 54     | 45     | 29     | 36     | 62     | 48      |
| St Thomas Aquinas College   | NY002632 | 35                     | 28     | 50     | 31     | 72     | 64     | 106    | 51     | 36     | 37     | 31     | 108    | 54      |
| Note. The college ATMs don't get too many transactions during summer months |          |                        |        |        |        |        |        |        |        |        |        |        |        |         |

Using the modest average deposit size assumption of \$1,000 and the Bank's blended yield on assets of 3.6 percent (the Bank's yield on assets has traditionally lagged its peers), the number of accounts needed to support a breakeven would be anywhere from very

challenging to impossible to achieve at the four locations with the exception of the Queens campus of St. John's University.

That said, as noted above, if the Bank felt an ITM had the potential to be profitable at one of the locations, it will see there are benefits to installing it at all four locations being considered (as costs can be leveraged). In addition, making the most of the investment in ITMs requires looking at the technology not only as an efficiency driver, but also as part of the overall branch network and retail delivery strategies. As part of a growth strategy, ITMs represent a critical component for how Ridgewood Savings Bank plan to increase its influence.

Even though money is a significant element, it should not be the only deciding factor when the main objective of this project is to create an additional way to attract a younger generation of banking customers (in particular Generation Z) while staying true to the Bank's culture of giving back to the community. Improving customer experience and increasing market presence are the main goals of this endeavor.

For Ridgewood Savings, a \$6 billion in assets Bank, purchase of these four ITMs should be seen from the point of its core values in particular as an opportunity of Giving Back to Community it serves and Convenience (as a way to simplify and enhance customers experience).

Because the Bank is looking to help students with financial literacy, the following items will be viewed as success of this project:

- Three non-traditional ATM interactions per month
- Two Financial Literacy interactions monthly
- One checking account opening monthly.

## Non-Financial Impact

While the financial impact to the Bank is crucial, there are a few non-financial impacts that must be considered. As we examine the implementation of ITMs more closely, it is important to assess the strategic and cultural implications for the Bank, its customers and community.

### Community

ITMs are a major step in banking technology and the correct introduction to the market is very important. An issue can be created by providing the customers with too many choices while failing to spend time with customers teaching them the ITM. If given a choice, the customer will default to a live teller if the wait is perceived to be less than ten minutes [\[15\]](#) (in the New York metropolitan area, the maximum waiting time would most likely be three minutes). The Bank will need to make the customers aware of and be comfortable using the new technology. The Bank cannot assume that customers would just use new technology because it is available. The Bank will need to make a clear case for the ITM channel, particularly how it delivers value to the target customers. Marketing and promotion of the ITM needs to emphasize the value proposition to the customer. For success to be achieved in implementation of the ITMs, the Bank must consider what will motivate the customers to use this new channel. If feasible, positioning a Bank employee



beside the ITM to assist them and ensure a positive initial experience could be highly beneficial in achieving a smooth, effective migration to this delivery channel, as it will alleviate any potential intimidation that often arises from utilizing something new.

It is also important to learn the dynamics of the community where the Bank is planning to install its ITMs. For example, if The Bank is serving a community where significant banking is often transacted via drive-thru channels, a drive-thru ITM could have greater benefit than an in-lobby ITM. In the case study of this project, the ITMs will be installed on the college campuses where the majority of students are walking through the campus or taking the campus bus. In this case, in-lobby ITMs located in the Student Activity Center will be preferable and more convenient for the students to use. While a bank representative may be permitted to be onsite for small portions of time, it is unrealistic to believe the campus will permit banking personnel to maintain a significant, ongoing presence on campus. In order to increase the chances of usability of the ITMs, the Bank will need to ensure that students and faculty personnel is well aware of the upcoming changes. This communication must emphasize the enhancements and benefits of the ITM compared to the existing ATM format machine. Promotions through the various college websites, email, radio-station advertisements, and TV displays located throughout the campus should spread the message and make both existing customers and potential customers aware of this enhancement. These promotional items should be designed to spark curiosity for the students and faculty to seek out the new ITM experience. After the ITM installation, the Bank should conduct 2 to 3 community in-person forums to encourage students/faculty members to witness the new features and convenience of the ITM. A live

product demonstration should be included in these forums. The forum should provide an opportunity for interested customers and bank personnel to discuss the ITM and answer any questions or concerns they may have.

In an effort to encourage students to visit and use ITMs, the Bank should also consider incentives such as, but not limited to, a raffle or a one-time \$10 promotional bonus deposit into the account of a customer that utilizes a live video chat to perform a transaction. The Bank should explore with the ITM vendor the capability of an ITM to dispense a promotional deposit slip within the bills that the customer would show to the virtual teller who will then place the \$10 into the customer's account. This will help to drive behavior to use ITM and the virtual teller function.

#### Staffing

The Bank will have to train its staff on how to function in a virtual teller role, and how to use the ITM technology. Management will also need to be cognizant that ITM adoption could adversely affect the morale of employees directly involved in the success of the initiative. In general, change can be scary for many people. In the case of ITM deployment, an extra layer of concern must be considered as many employees may see this technology as an initial step in the plan to replace humans with a technological service solution. Management will need to keep a close eye on the staff to ensure negativity regarding this change does not affect the results. Resistance is normal by human nature, so the key for managers' success of the ITM experience will begin with the Bank putting the right employees behind those screens. The representatives of the Bank's Customer Contact

Center are anticipated to be the primary employees facing the customers and assisting them with their needs. They are an important part to the customer's positive experience. People selected to work as the ITM's video teller will be tasked with making the customers feel that they are face-to face with a live human. Hands on training is crucial. From the organizational point of view, the Bank should ensure assistance to customers is consistent across all Interactive Teller user-facing resources. With implementation of the new technology, it will be beneficial for the Bank to build a script that will create consistency among video teller resources. The script will provide the following:

- consistency with how employees engage consumers
- assistance with consumers guidance in using the technology and incorporating instruction
- consistent scripting for new transaction procedures and other customer messaging, and
- ability to be used as a training tool

In addition, the Bank will need to provide its employees with enough practice working with ITM before they go live so they become accustomed to the equipment and know how to operate it so they can focus on helping the customer. The Bank likely will need to train more than just the three employees of the Customer Contact Center on the ITM technology to ensure that Universal Banker services are seamlessly available throughout the entire desired extended service period. The Contact Center representatives are currently available Monday through Friday, from 7 a.m. to 7 p.m., and Saturday and

Sunday, from 8 a.m. to 2 p.m. Those hours serve as the most logical starting point for the ITM service period (other than the 24-hour standard ATM availability).

#### Regulatory Compliance

Depending on the service the Interactive Teller Machine provides, different regulatory requirements may come into play:

1. Regulation E [\[16\]](#) - provides certain protections to consumers who conduct electronic funds transfer (EFT). This includes point-of-sale terminals, ATM and cash dispensing machines. That creates a question, is an ITM considered to be an electronic terminal? The definition of an electronic terminal is not really helpful in making this determination. As per Interactive Bureau Regulations, 12 CFR Part 1005 “3. Teller-operated terminals. A terminal or other computer equipment operated by an employee of a financial institution is not an electronic terminal for purposes of the regulation. However, transfers initiated at such terminals by means of a consumer's access device (using the consumer's PIN, for example) are EFTs and are subject to other requirements of the regulation. If an access device is used only for identification purposes or for determining the account balance, the transfers are not EFTs for purposes of the regulation.” To determine whether a Bank's ITM is considered an electronic terminal, the Bank may need to determine if the customer is using their access device (e.g. debit card, pin) to conduct a transaction or if the customer's access device is used by the machine solely for identification purposes or for account balance information. In addition, the Bank's ITM will have

access to live remote person only during certain business hours. At the time when the teller is not available to assist the customer and the customer utilizes an access device to conduct the transaction, the ITM most closely resembles an ATM and as mentioned previously are consider to be electronic terminals when used by a customer; the customer therefore receives Regulation E protection [\[17\]](#).

2. *Regulatory Notices.* Other obligations the Bank may face when installing or using an ITM may be the requirement to have certain notices on the machine. For example, section 740.4 of NCUA rules and regulations [\[18\]](#) sets the requirement to display the NCUA official sign at each station or window where insured account funds or deposits are normally received such as all the branches. The rule states this requirement excludes ATMs or point-of-sale terminals. (See, 12 C.F.R. § 740.4(e)). The rule does not indicate whether an interactive teller machine is considered an ATM or a teller station/branch. If the Bank allows customers to deposit insured account funds through the interactive teller machine, this may be an area where NCUA's official sign may need to be displayed if this machine is considered a teller station. For those reasons, the Bank may need to seek legal advice with regards to the requirement to place this notice on the ITMs.
3. *Accessibility Considerations.* There may be other considerations that the Bank might need to discuss with the seller of the machines. For example, the Americans with Disabilities Act (ADA) standards could apply to ITMs either as ATMs or as a physical location similar to accessibility expectations for teller stations and branches. For those reasons, it is important to understand general accessibility

requirements and the software/operational limitations of these machines to meet ADA standards [\[19\]](#). Given that these machines will initially be placed in a general access location on a college campus, the Bank should be able to leverage the reasonable expectation that the college/university has complied with all standards ensuring accessibility to the room in which the ITM is located.

### Technology Needs

The need for strong network infrastructure with the necessary bandwidth for high-resolution video integration will be another critical element to the success of this project. The technology utilized must permit the ITMs to successfully and quickly connect to the live tellers in their remote location, and must have the ability to process transactions in real time. A poor connectivity experience at one ITM can tarnish the reputation of the entire Bank's ITM network and the Bank's overall brand. A high-availability, high-speed network is essential in ensuring that ITM can deliver services as intended. The Bank will need an internet/ telephone provider that can enable highly secure, real-time connectivity between people, devices, data and the Bank's computer resources so that ITMs can deliver branch-like service from a location that is well removed from its branches.

The ITM channel also needs to be successfully integrated into the Bank's omnichannel retail strategy. Therefore, it will be important to ensure that the ITM network is seamlessly integrated into the Bank's core system and online banking services so that customers can switch back and forth between touchpoints without having to restart their transactions. Currently, an obstacle to success is the lack of integration between the ITMs and the Bank's

online banking platform. NCR (the Bank's service provider for online banking) is currently working on completing this critical/highly beneficial integration.

Another technology related aspect to address will be to determine if and how the Bank's core processor, FISERV will interact with the ITM machines to ensure seamless integration. Full integration to Fiserv DNA (which is what Ridgewood uses); it will allow more transactions to be completed via an ITM remote teller. A smooth interface between the Bank's core processor and ITMs will make daily settlement/balancing for the tellers much easier. In making its decision on which ITM vendor to utilize, the Bank should consider the inherent advantage of NCR in that it has already developed core integration to the Fiserv DNA platform. NCR has already worked with Fiserv to complete an integration to Fiserv DNA and certified the interface, so there is far less for the Bank to do. It will be imperative to work closely with both vendors to ensure this process works efficiently. It is also critical that the ITM fully integrate into the DNA online platform (as noted previously), a process in which two NCR products seamlessly communicate.

In addition, the Bank will need to look into the ability of virtual tellers to have remote capabilities in a case of inclement weather. When the Bank's personnel is unable or it is too dangerous to travel in to their regular work location, the Bank will still have virtual teller capabilities so the customer experience is always there.

## Conclusion

In conclusion, after reviewing all considerations, the recommendation is to implement the Interactive Teller Machines on the campuses of St. John's University, St. Thomas Aquinas College and St. Joseph's University. The introduction of ITM is one of the ways to get the Gen Z crowd introduced to a new product that will be beneficial to the Bank as well as to the customers base. By installing ITMs, Ridgewood Saving Bank will have an opportunity to deepen its customer relationship with Gen Z consumers, offer these college students more personalized and interactive financial advice, and ultimately enhance its brand loyalty among the students that will have enhanced access to the Bank's services. Deploying these ITMs will be an additional differentiator between our financial institution and competitors, especially for the Gen Z market segment, who is attracted to innovation and will gain far greater overall benefit from the ITM format vs. a standard ATM format.

As today's consumer is looking for more convenient and efficient ways to get their banking done, employment of the four ITMs into the three colleges will be a pilot project for the Bank to meet those customer's needs. As one of the main core values of Ridgewood Savings Bank is a relationship with its customers through personal touch while providing convenience and ways to simplify and enhance their experience, the ITM will be a new way to fulfill the customers' needs. Implementation of additional ITM's in the future into the Bank's network can be the optimal way to keep Ridgewood Bank's branches while reducing expenses related to their operations and maintaining its presence within communities currently served. Through implementation of targeted marketing and proper introduction of the new technology to the customer base will drive ITM usage that in return will



positively impact the bank's profitability by allowing people access to their money without the build out of a branch, which is usually costly, as well as lower the cost per transaction in the existing locations. It would help to meet customers' needs and keep the cost minimal. Overall, with this change, Ridgewood Savings Bank will be better prepared for the next century of operations and it will maintain its position in the marketplace.

## Appendix 1: How to use an Interactive Teller Machine (ITM)

Interactive Teller Machines, or ITMs, allows you to interact with a live, personal teller on-screen face-to-face. Using a video camera and microphone in the ITM, your video and audio is transmitted to the Bank's Customer Contact Center in Ridgewood, NY. Cameras and microphones at the Customer Contact Center transmit the interactive teller's image and voice back to you. It is just like FaceTime or Zoom, except you can deposit money, check your balances, or, better yet, get money!

Below is an example of a common transaction and the steps to perform this transaction using an Interactive Teller Machine (ITM):

1. Walk, or drive, to the ITM. Touch "...begin speaking with a teller now."
2. Please wait while you are connected to a teller.
3. The teller will ask for your account number on the keypad and may request identification (ID). If so, place driver's license or photo ID face down onto the ID scanner.
4. Let the teller know what you would like to do. You can make deposits, withdrawals, transfers, loan payments, cash checks and more. You can speak directly through the ITM or use the telephone. Signing is easy using the touch-screen.
5. Make deposits using the Cash/Check deposit slot (insert up to 30 bills at a time, insert multiple checks at a time). Get your cash via the Cash Dispense slot and Coin Dispenser.

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