A logo with a hand pointing at a circuit board

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**Consultancy Name: RevolEdge Solutions**

**Client Company: The Bank of Nova Scotia (Scotiabank)**

**Team:**

**Amaan Shaikh - Project Manager (Phase 1)**

**Reeny Susan Roy - Team Leader (Phase 1)**

**Bhavya Jain - Business Analyst**

**Jainam Shah - Business Analyst**

**Dinesh Kumar - Business Analyst**

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# Project Ideas

Here are some of the solution ideas our team at RevolEdge Solutions has come up with -

1. Biometric ATM Machines
2. Biometric Transaction Authorization
3. Insurance wing
4. Provide Goodies
5. Convert traditional branches to KIOSK & Digital Banking Machines
6. Add AI to predict the failure of Banking infrastructure.
7. Real Estate Wing
8. AI For Investment, Spending, Budgeting advice
9. Peer-to-peer lending program
10. Fraud Prevention and OTP
11. UPI apps
12. Alerts for Payment Reminders
13. Branch in countries from where the immigrant ratio is higher.
14. PAC country growth
15. Real Estate Investment Services
16. Healthcare Financing
17. Cross-Border Banking Solutions
18. Financial wellness app
19. Impact Investing Portfolios
20. Innovation Labs
21. Premium Credit Cards
22. E-commerce Banking Services
23. Blockchain-Based Financial Products
24. Educational Partnerships

# Project Scope

**Project: I**ntegration of Digital Kiosks with Biometric ATMs into traditional branches.

**Project Sponsor:** The Bank of Nova Scotia(Scotiabank)

**Project Manager:** Amaan Shaikh

**Date:** 21st September 2023

The project aims to digitize Scotiabank’s traditional branches by introducing modern kiosk technology. This project aims to reduce operational costs significantly, mainly by reducing the number of employees and automating processes. The project will use Adaptive and Predictive planning to manage the diverse requirements and ensure a smooth migration to digitalized banking.

## Objectives

* Improve operational efficiency by introducing kiosks to reduce manual processes and minimize errors.
* Achieve significant cost savings by reducing branch staff and overheads related to traditional banking operations.
* Enhance the customer experience by providing fast self-service and reduced wait times.
* Accelerate digital adoption among customers to keep up with the changing banking landscape.

## Project Deliverables

Installation of KIOSKS: Successful installation of the kiosks across the selected branches of Scotiabank.

Training and Support: Provide comprehensive training programs for employees and customers.

Process Automation: Ensure effective use of new kiosks. Integrate automated processes where possible.

Customer Feedback and Improvement: Collect customer feedback and continuously improve the kiosk functionality and user interface

Digital Adoption: Encourage digital adoption among customers, keeping pace with the changing banking landscape

# Project Charter

**Project Title:** Scotiabank Branch Digitalization with Kiosks

**Project Sponsor:** Scotiabank Executive Team

**Project Manager:** Amaan Shaikh

**Project Start Date:** 09/07/2023.

**Projected End Date:** 12/17/2023

**Budget Information:**

Initial Investment: CAD 7,500,000

Anticipated Annual Savings: CAD 60,000,000

Net Annual Savings in the First Year: CAD 52,500,000

**Business Case:**

With the rapid adoption of digital banking channels, there is a need to modernize Scotiabank branches with digital kiosks. The project aims to convert some of the traditional banking branches into digitalized branches, offering extended hours and more self-service options, ultimately improving customer experience and operational efficiency, and reducing costs.

**Project Objectives:**

* **Cost Savings:**
* Achieve staffing cost savings of CAD 150,000 per branch annually.
* Reduce operational errors and save CAD 10,000 per branch annually.
* Decrease branch overhead by CAD 40,000 per branch annually.
* **Revenue Enhancement:**
* Increase transaction volume and cross-selling through extended hours and personalized recommendations.
* Improve product offerings and marketing strategy using data collected from digital interactions.
* **Enhance Customer Experience:**
* Reduce wait times and offer 24/7 banking services.
* Provide secure and convenient transactions through biometric authentication.
* **Project Scope:**
* Procurement and installation of digital kiosks in 300 Scotiabank branches.
* Conversion of selected branches to optimize space and operations for digitalization.
* Training of branch staff for smooth transition and support.
* Compliance with all applicable regulations and data protection standards.
* Collection and analysis of customer data for continuous improvement.
* **Out of Scope:**
* Digitalization of all Scotiabank branches.
* Development of new banking products or services.
* **Milestones:**
* Project Kickoff: 09/07/2023
* First Branch Conversion
* 100th Branch Conversion
* 300th Branch Conversion and Project Closure
* **Stakeholders:**
* Scotiabank Executive Team: Project Sponsor
* Business Analysis Team: Project Manager, Business Analysts
* RevolEdge Solutions: Technology Supplier
* Scotiabank Customers: End Users
* Branch Employees: Frontline Staff
* Regulatory Bodies: Compliance Stakeholders
* Scotiabank IT Department: IT Support
* **Approvals:**

Project Sponsor: Scotiabank Executive Team, 09/22/2023

Project Manager: Amaan Shaikh, 09/22/2023

# Business Analysis Approach

## Selection of Planning Approach for Business Analysis Activities

There are two common approaches for planning the business analysis activities (Mata, 2020):

**Adaptive Approach**

The adaptive approach is iterative and flexible, changing the requirements as the project progresses (Comparably, 2023). This approach applies in cases where the organization develops new solutions or products. The adaptive approach is more interactive and makes use of agile methodologies.

**Predictive Approach**

The predictive approach is detailed, documented, and used in cases where the requirements are defined upfront. The method requires proper planning and in-depth analysis of potential risks (Mata, 2020). The predictive approach, or the 'waterfall' approach, involves early analysis and details of the development process.

The proposed project combines both Adaptive and Predictive approaches.

## Planning Process

### Project: Converting a few traditional banking branches to digitalized ones with kiosks.

**Current Scenario**

Scotiabank has approximately 1,200 branches for customers in Canada, most of which are run traditionally with the help of employees running these branches. Although, In the previous year, the restructuring charge was $93 million compared to $126 million in the current year, primarily related to International Banking as a result of the cost of downsizing branches and full-time employees as a result of faster adoption of digital channels by customers and process automation (Scotiabank, 2022). This digitalization didn't bring the state-of-the-art kiosks that can cut down employees in these branches and bring about cost-cutting to run banking branches.

More than 90% of Canadians say new technologies have made banking much more effortless. More than three-quarters (75%) of Canadians plan to continue the digital banking practices they've developed over the last two years. With the abundance of digital products and services available today, confidence in protecting personal and financial data has proven difficult to maintain across many industries. However, in the banking sector, the opposite appears to be true. 86% of Canadians believe their bank offers secure digital banking services, and 87% of customers believe their banks protect personal information. (CanadianBankersAssociation, 2022)

In summary, strategic decisions and investments in technology innovation and digital transformation are made in the business area.

**Plan**A digitalized bank branch will combine a physical bank branch and digital technology. A digital bank branch uses kiosks equipped with many more features. A digital bank kiosk will carry out various banking transactions, from simple cash withdrawals to complex loan applications, giving advice, opening a bank account, and many more.

The kiosk can process multiple transactions simultaneously, reducing wait times and improving operational efficiency. Over time, a kiosk's operating costs are lower than an entire branch's, resulting in potential savings.

The kiosk will offer extended hours so customers can access 24/7 banking services for various banking needs, including account opening, cheque deposit, and cash deposit. With easy-to-use user interfaces, digital branches can provide personalized experiences, product recommendations, and seamless integration with digital banking platforms.

The kiosk will also work as a web banking device for the customers, where customers can log in to their web banking by either existing credentials-based login or by an alternative method, which is just by using their fingerprint & and facial recognition together. The customer can enable this feature by registering for this feature and enabling them, and they can log in without any account information like customer ID, username, password, debit card details, mobile number, OTP, etc. Customers can log in with this alternative method and can do all web banking processes including but not limited to e-transactions, bill payments, paying credit cards, adding or removing beneficiaries, etc.

The kiosk will include regular and biometric ATM features. Fingerprint authentication and face recognition will protect the integrated biometric ATM transactions. The customer can authenticate the transactions using the fingerprint scanner, followed by facial recognition. This feature eliminates the need to carry physical cards or remember PINs.

Digital branches collect data on customer behaviors and preferences, which can be used to inform more targeted marketing efforts and product development.

Our state-of-the-art kiosks will include:

* Check deposit
* Cash deposit
* Stripe, chip, and contactless card reader
* ID reader
* Interactive, responsive display
* Two-way video capabilities
* USB and SD memory card input
* Digital document signing
* Document scanning
* Receipt printer
* Fingerprint reader
* Product catalogue
* Product demos (Healy, n.d.)

**Benefits:**

1. **Cost savings**

**Staffing costs**: A Digital kiosk's ability to process multiple customer transactions may reduce the number of frontline staff needed. This plan could lead to salary, benefits, and training cost savings.

Let's assume a digital kiosk can handle the tasks of 3 bank employees. The average annual salary per bank employee is roughly $50,000 (including benefits) (Comparably, 2023). So, potential savings per branch: 3 times $50,000 = $150,000.

**Operational efficiency**: Automation could reduce the number of errors that occur, resulting in cost savings due to fewer error corrections.

Branch overhead: Smaller, digitalized branches (or kiosk-only locations) could reduce the overhead of larger premises, such as rent, utilities, and maintenance costs.

**Paperless transactions:** Digital kiosk technology can eliminate the need for physical paper, eliminating the need for printing, paper, and storage.

1. **Revenue Enhancement:**

Kiosks with extended hours can attract more transactions and increase revenue. Advanced kiosks can provide personalized product recommendations, increasing cross-selling opportunities.

Digital interactions provide valuable data used to improve product offerings and marketing strategy, potentially increasing sales.

RevolEdge Solutions has a partner company that manufactures one of the best kiosk systems with preinstalled software. This approach will help Scotiabank procure these kiosks at a cheaper rate than the current market.

On average, the type of Kiosk that RevolEdge Solutions offers goes from about CAD8000 to CAD15000 in the market. Our company can provide the same kiosk for about CAD5000.

**Financial Impact of Implementing Digital Kiosks in Scotiabank Branches**

The digital kiosk is designed to improve the banking experience while saving Scotiabank money. In this analysis, we look at the hypothetical financial impact Scotiabank would face if it introduced three digital kiosks per branch across its 300 branches, as proposed by our company for the initial stage.

**Cost Saving for Scotiabank:**

**a. Staffing Costs:**:

Savings per branch: Automating tasks traditionally performed by bank employees can result in savings of CAD 150,000 annually per branch.

Cumulative savings: Over 300 branches, the expected annual staffing cost savings are CAD 45,000,000.

**b. Operational Efficiency:**

Savings per branch: By curtailing manual errors, each branch might save about CAD 10,000 annually.

Cumulative savings: For 300 branches, this leads to an annual savings of CAD 3,000,000.

**c. Branch Overhead:**

Smaller manual footprints can translate to reduced overheads:

Savings per branch: Downsizing or optimizing branch operations could save CAD 40,000 annually for each branch.

Cumulative savings: Spanning 300 branches, the bank could save CAD 12,000,000 annually.

**Initial Investment for Scotiabank:**

**a. Kiosk Purchase:**

Cost for 900 kiosks: The outlay for procuring 900 kiosks is CAD 4,500,000.

**b. Branch Conversion:**

Per branch cost: Estimated at CAD 10,000.

Total cost: For 300 branches, Scotiabank might expend CAD 3,000,000.

**c. Combined Initial Costs:**

The bank's aggregate initial investment is CAD 7,500,000 for kiosk acquisition and branch adaptation.

The bank expects to save CAD 60,000,000 annually by using this digital transformation. With an initial investment of CAD 7.5 million, the bank's net savings in its first year amount to CAD 52.5 million.

Financial Analysis for Introducing Digital Kiosks in 300 Scotiabank Branches

|  |  |  |
| --- | --- | --- |
| **Category** | **Description** | **Amount (CAD)** |
| **Anticipated Cost Saving for Scotiabank** |  |  |
|  | Annual savings per branch from reduced staff | 150,000 |
|  | Total annual savings from staffing for 300 branches | 45,000,000 |
|  | Annual savings per branch from operational efficiency | 10,000 |
|  | Total annual savings from operational efficiency for 300 branches | 3,000,000 |
|  | Annual savings per branch from reduced overhead | 40,000 |
|  | Total savings from reduced overhead for 300 branches | 12,000,000 |
| **Initial Investment for Scotiabanks** |  |  |
|  | Cost for 900 kiosks | 4,500,000 |
|  | Branch conversion cost per branch | 10,000 |
|  | Total conversion cost | 3,000,000 |
| **Summary** |  |  |
|  | Total annual savings | 60,000,000 |
|  | Total initial cost | 7,500,000 |
|  | Net annual savings in the first year | 52,500,000 |
|  |  |  |

## Project: Increase the market share of Scotiabank in the Pacific-Alliance Countries.

**Current Scenario**

**The Presence of Scotiabank**:

With an overall market share of 10.2%, Scotiabank continues to have a significant presence throughout the Pacific Alliance nations. The bank has the largest presence in Chile (14.5%) and Peru (16.1%), where it holds the third-largest market share. Their combined revenue from these territories totals $2.0 billion, with a net revenue after NCI of $479 million.

**Significance of the Pacific Alliance:**

With a combined GDP of almost US$1.9 trillion, the Pacific Alliance—which consists of Chile, the nation of Colombia, Mexico, and Peru—is the eighth-largest economic bloc in the world. It is getting a lot of foreign investment, mostly from infrastructure funds and private equity companies, among other sources. These growing economies do, however, encounter difficulties, such as currency volatility and possible policy changes.

**The Function of Scotiabank in Investment Banking:**

With over 100 years of local expertise, Scotiabank is a key player in the M&A activity in the area. The bank focuses on "middle-market" enterprises, which are frequently family-owned and looking for outside investment, and offers end-to-end services, through ideation to deal execution.

**Focus on The infrastructure, authority and Utilities:**

* Significant prospects for infrastructure development exist in the Pacific Alliance countries, particularly in the electricity and utility sectors. Because of favourable rules, nations like Mexico are experiencing substantial expansion in their electricity sector. Renewable energy sources are prioritized regionally, with nations like Chile emphasizing solar and wind power.
* There is a rising need for financing as infrastructure development picks up speed. Debt capital markets provide an alternative funding option to the usual bank loans. In the area, Scotiabank stands out as an essential bond underwriter that supports businesses, especially those that are unfamiliar with the nuances of Pacific Alliance. They help clients structure fixed-income products and offer advisory services.

**Legacy & Overview:**

Due to their significant experience—which spans over fifty years of existence in Latin America—Scotiabank is leading the development of the infrastructure for the Pacific Alliance. They are a key player in determining the future financial environment of the area due to their in-depth local knowledge and global skills.

Current Market of Scotiabank on Map:

A map of the north and south america

Description automatically generated

(Scotiabank, 2023)

**Scotiabank in the Pacific Alliance as of Q3, 2023**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Q3/23** | **Mexico** | **Peru** | **Chile** | **Colombia** | **Total/Average** |
| **Scotiabank Market Share** | 7.6% | 16.1% | 14.5% | 5.0% | 10.2% |
| **Market ShareRanking** | 5th | 3rd | 3rd | 6th | n.a. |
| **HDI Score Rank** | High (86) | High (84) | Very High (42) | High (88) | n.a. |
| **Average Total Loans($Bn)** | $45.1 | $23.2 | $57.2 | $12.4 | $137.9 |
| **Revenue($Bn)** | $0.7 | $0.4 | $0.6 | $0.3 | $2.0 |
| **Net Income after NCI($MM)** | $234 | $97 | $150 | ($2) | $479 |
| **ROE** | 25.0% | 15.2% | 9.7% | (0.7%) | 13.9% |
| **# of Employees** | 8,813 | 8,940 | 7,351 | 5,292 | 30,396 |

(Scotiabank, Q3 2023)

**Current Initiatives of Scotiabank in the Region-:**

**Investment banking in the Pacific Alliance**

**Overview:** Due to its expanding demands and appealing investment conditions in a low-interest rate global environment, Latin America, notably the Pacific Alliance countries (Chile, Colombia, Mexico, and Peru), has become a key focus for infrastructure investment.

**Pacific Alliance:** With a combined GDP of about US$1.9 trillion, the Pacific Alliance is the eighth-largest economic region in the world. Significant foreign investment is flowing into the member nations of this alliance, particularly from infrastructure funds, private equity firms, sovereign wealth funds, and pension funds.

**Emerging Market Dynamics**: Despite the region's economies being emerging markets, some dangers come with them, including currency volatility, policy changes, and geopolitical events. Investors are also closely monitoring the impact of US monetary policies, particularly those of the Federal Reserve Board, on market liquidity.

**Role of Scotiabank**: Scotiabank emphasizes the value of having local knowledge thanks to its long history in the area extending back to the 19th century. The bank has played a significant role in significant M&A activity by providing a wide array of services from idea development to deal implementation. They also concentrate on "middle market" businesses, frequently owned by families, that are looking for funding for expansion but do not have access to a lot of internal capital market resources.

**Infrastructure, Power, and Utilities**

**The potential of the Pacific Alliance**: As other established markets have reached saturation, the Pacific Alliance, which consists of the nations of Mexico, Peru, Chile, and Colombia, offers a promising investment environment. This trade group, which was established in 2011, aims to encourage commerce among its members and harmonize regulatory and taxation disparities.

**Infrastructure Opportunities**: Emerging economies, like those in the Pacific Alliance, have a lot of room to grow, especially in areas of infrastructure like power and utilities. The demand for investment spans from modernizing outdated systems to building new infrastructure, with a special emphasis on energy from renewable sources. With a strong regional presence, Scotiabank is well-positioned to assist both domestic and foreign clients with their investment decisions.

**Growth of the Power Sector**: Mexico's power sector is booming thanks to regulatory adjustments that encourage private investments. The market for renewable energy is heating up, and infrastructure development for effective energy distribution is being prioritized. While Peru is seeking to improve its electrical grid, Chile is concentrating on sources of clean energy like solar and wind. To broaden its energy resources and draw in foreign investment, Colombia is revising its regulatory structure.

**Debt capital markets funding**: As infrastructure development picks up, financing requirements are growing rapidly. While bank loans continue to be a popular way to finance capital projects, debt capital markets—which allow for the issuance of investment-grade and high-yield bonds—present an alternative. The unsecured capital markets team at Scotiabank has a focus on the power and utilities industry and helps clients navigate the complexities of the Pacific Alliance.

**Role of Scotiabank**: As a significant bond underwriter, Scotiabank supports firms, particularly those who are not familiar with the specific difficulties posed by the Pacific Alliance. They offer a variety of services, including advising responsibilities and helping clients structure fixed-income products. The Pacific Alliance is highlighted for its attractiveness for yield and diversity by Scotiabank, which unites issuers of bonds with interested investors through a global distribution network.

**The legacy of Scotiabank**: With more than 50 years of experience operating in Latin America, the bank's seasoned infrastructures power, and utilities division combines regional knowledge with international advice, funding, and capital markets capabilities. Their extensive local knowledge and wide range of finance capabilities place them in a leading position to support the expansion of the Pacific Alliance's infrastructure.

**Plans-:**

**GDP Growth-:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | PACs Total | Canada | PACs vs Canada |
| Projected GDP Growth | 2.5% | 1.8% | 1.2X |
| GDP Growth World Rank | 6th | 16th | 6th vs 16th |

So, considering this growth, it will be a growing market for the banking industry as well. In a growing economy, there are immense opportunities for business growth.

(Scotiabank, Q3 2023)

**Population Status-:**

|  |  |  |
| --- | --- | --- |
|  | PACs Total | Canada |
| Population | 233M | 39MM |
| Projected Growth | 0.7% | 0.8% |
| Median Age | 30 years old | 42 years old |

The population of PAC is approximately 6 times as compared to Canada, so we also have opportunities in the Retail Banking sector in the region. As well as the median age in the region is 30 years, so the major population is the youth, providing favourable demographics for the growth in the banking industry.

(Scotiabank, Q3 2023)

**A Strategic Plan for the Banking Industry for Mid-Sized Businesses in the Pacific Alliance**

**Introduction:**

The Pacific Alliance nations of Chile, Colombia, Mexico, and Peru provide attractive financial prospects for mid-sized businesses through corporate banking services. Mid-sized companies usually require specialist financial services, such as treasury management, foreign exchange services, and working capital loans.

**Opportunity Overview:**

With a market that is becoming more and more international, the Pacific Alliance presents a strong economic bloc. There is now a shortage of banking services that are specifically suited to the demands of mid-sized businesses, which are sometimes viewed as the foundation of these economies. Concentrating on these companies might open up a sizable revenue stream and provide essential funding to assist the area's economic expansion.

**Strategic Projects:**

1. **Financial Solutions That Are Specialized:**

* **Working Capital Financing**: Create specialized short-term financing options to help firms manage their operating expenditures and ensure they can operate effectively without experiencing liquidity issues.
* **Foreign exchange services**: Offer these companies competitive rates and advising services for foreign exchange so they may better navigate the challenges of global trade and currency volatility.
* **Treasury Management:** Assure effective management of the company's financial affairs by offering a full range of services, from managing cash to payment solutions.

1. **Corporate Digital Banking Platform:**

Establish a digital banking platform that is specifically designed for medium-sized enterprises that provide smooth online transactions, financial information, and business software connections.

1. **Managing Relationships:**

Assign specialized relationship managers to each company to ensure individualized service, comprehend their particular needs, and provide specialized financial guidance.

1. **Financial seminars and workshops**:

Organize workshops that offer information, efficient procedures, and networking opportunities on the financial difficulties faced by mid-sized businesses in the Pacific Alliance.

**Benefits:**

**Revenue Boosting:**

* **Loan Interest**: Earnings from interest on loans for working capital.
* **Foreign Exchange**: Income from the spread that exists in transactions involving foreign exchange.
* **Service fees:** Earnings from corporate banking services such as treasury management.

**Stronger Connections:**

* Enhanced enterprise loyalty as a result of relationship management and customized solutions.

**Positioning:**

* Create a reputation for the bank as a regional innovator and trusted financing partner for mid-sized businesses.

**Corporate Banking Expansion's Financial Impact:**

**Assumptions:**

* Let's imagine that in the first year, 10% of the mid-sized businesses in the Pacific Alliance are going to sign up for our suggested corporate banking services.
* The average loan size per business is CAD 500,000 with a 6% average interest rate.
* Each business generates an average of CAD 10,000 per year from foreign exchange and additional services.

**Financial Analysis by Expansion Corporate Banking for Mid-Sized Banking in the Pacific Alliance:**(Predictions for the next year)

| **Category** | **Description** |
| --- | --- |
| New Customers added | 10000 |
| Total loans($Bn) | $5 |
| Average Annual Interest per customer ($) | $30,000 |
| Total annual interest ($Mn) | $300 |
| Annual revenue from every new customer from Foreign Exchange services and annual Interest | $35,000 |
| Total annual revenue from FX and other services for all enterprises ($Mn) | $350 |
| Operational Costs |  |
| Operational cost per customer (Relationship managers, digital platform maintenance) ($) | $5,500 |
| Total operational costs ($Mn) | $55 |
| Summary |  |
| Total annual revenue | $350 |
| Total annual operational costs | $55 |
| Net annual extra earnings ($Mn) | $315 |

**Conclusion:**

Increasing the availability of corporate banking services to Pacific Alliance mid-sized businesses can be a successful endeavour. The bank can access a sizable revenue stream and improve its status as a crucial economic partner in the area by comprehending its particular wants and offering specialized solutions.

### Project: Next-Gen Secure Web Banking Access Authentication System - NGWAAS

**Current Scenario:**

More than 90% of Canadians say new technologies have made banking much more effortless. More than three-quarters (75%) of Canadians plan to continue the digital banking practices they've developed over the last two years. With the abundance of digital products and services available today, confidence in protecting personal and financial data has proven difficult to maintain across many industries. However, in the banking sector, the opposite appears to be true. 86% of Canadians believe their bank offers secure digital banking services, and 87% of customers believe their banks protect personal information (CanadianBankersAssociation, 2022).

In almost all banks worldwide, web banking is a credential-based system, which includes a username and password in the bank web banking portal. While there have been some upgrades to Mobile banking over the last half a decade, web banking is still lagging with just credentials-based logging and authentication. Some banks do not even require OTP as part of logging into their web banking.

This existing system can be vulnerable to hackers and is less secure. And most web banking customers have stored their credentials with their Google account, which can be risky. However, complications arise when customers want to change or forget their password. The steps required to reset the password might require the customer to access their Debit card details, customer ID, OTPs from their mobile and email, etc., which will exhaust the customer.

Most Customers prefer Mobile Banking for this reason. But what happens when a customer needs to access banking, but either their phone is switched off or unavailable, or when customers want to log in from a different computer? Most customers tend not to remember their username or password for their web banking, and they are heavily dependent on saving that data on their phone or their cloud accounts like Google.

There might also be situations when the customer is missing or having a medical emergency. During that critical time, the customer's family should be able to access their bank account funds.

To sum up, while the existing method of credentials-based logging in for Web Banking should be present, an alternative for the next-generation logging system, which is more secure, should be introduced. This solution would also be swift and easily accessible for customers.

**Plan:**

On top of this existing authentication option, customers may prefer to join the new '**Next Gen Secure Web banking Access Authentication System'** by providing their biometric thumbprint and facial recognition. So when customers join and enable this feature, they can log in using just their thumbprint and facial recognition using an existing webcam in the laptop or an external webcam attached to a desktop computer. The customer doesn't have to remember their customer ID, password, OTP, or any other mobile device authentication like Google / Microsoft / Mobile banking app authentication. The customers could log in from anywhere around the world, from any computer with a fingerprint scanner and camera (internal or external). This aspect would enable customer authentication from anywhere worldwide and from any computer.

This feature is not a replacement for the existing web authentication method (Username & password) but an alternative login method that the customers may use instead of the current plan. Suppose the customers choose to enable and use this method for their web banking; they can provide their authentication to the bank through fingerprint and facial recording. The bank will store this sensitive information with other sensitive information.

With these superior security protocols, customers can turn on notifications via text message or email. If there is a problem, the customer can flag the session, which will be investigated (very unlikely for Next Gen Web banking login, as It uses fingerprint and facial recognition). Also, if the customer wishes, they can allow their family member to access their account by adding their Biometric and facial recording.

The significant advantage of this login method is that the customers can easily access their web banking. The other benefits are that:

* Can access without storing their banking information on their Google account
* Can access without searching for login credentials every time they log in
* Can access without resetting the password every time they forget the password
* Can access without the need for a mobile device for OTP / any authentication application access
* Can access from any computer and from anywhere around the world
* It can allow access to a family member to log in to the same account. This would be especially useful when there is a medical or any other emergency, and the customer's family member can still access the funds.

**Benefits:**

1. **Ease of access for the customers:**

Customers would always be attracted to ease of access using technology. We can use previous technologies like NFC payment, mobile banking, QR payment, etc.

With this new feature and more security, customers would be happy to enable this feature. They can access it without worrying about remembering or storing username and password on their mobile phone or cloud account.

Customers don't have to log in to their cloud account to get their passwords, and customers can access their web banking from any computer in the world without worrying about logging-in complications or security.

The feature to allow the spouse of the customer to access the account will be a relief to know that they won't have to worry about funds in case there is an emergency.

**Impact**: The simplicity and speed of access will enhance the user experience, potentially reducing customer frustration and service inquiries related to account access.

1. **Higher Customer Satisfaction and retention:**

With the advent of this new feature, existing customers will be able to access the ease of access to the new login system. This ease of access will impress the existing customers and thus increase satisfaction rate and higher retention rates. Technology improvements have always shown higher customer satisfaction and retention rates.

The convenience of biometric login and added security features will likely enhance overall customer satisfaction. Satisfied customers are likelier to stay loyal to the bank and maintain long-term relationships.

**Impact**: Higher customer satisfaction leads to increased retention rates, which can positively affect the bank's bottom line, as retaining existing customers is generally more cost-effective than acquiring new ones.

1. **Attraction of new Customers via marketing of this feature**

Marketing is a powerful tool when used right. Promoting this innovative and secure feature can attract tech-savvy customers seeking modern and convenient banking solutions. It differentiates Scotiabank from competitors not offering similar technology. Customers prefer the ease of access and will most likely switch when innovation provides modern ease of access.

**Impact**: Drawing in new customers through innovative features contributes to market expansion and diversification. As the customer base grows, so does the potential for increased revenue, particularly if these new customers utilize a wider array of the bank's products and services.

1. **Technical edge over the competitors**

In a rapidly evolving digital landscape, having a technological edge is a significant differentiator. Offering advanced features like biometric login showcases Scotiabank's commitment to innovation, setting it apart from competitors who may be slower to adapt. Investment in technology is very crucial for a Company like Scotiabank.

**Impact**: Establishing a reputation as a tech-savvy bank can attract a broader demographic, including younger, digitally-native consumers. This reputation can also facilitate partnerships with fintech companies and startups, opening up avenues for further innovation and collaboration.

1. **Investment in technology**

Scotiabank's investment in biometric technology is a strategic move to align with the digital transformation trends in the banking industry. This investment reflects a commitment to staying ahead of the curve and meeting current and prospective customers' evolving needs and expectations.

**Impact**: Proactive investment in technology positions Scotiabank for long-term success by enhancing operational efficiency, reducing the risk of technological obsolescence, and enabling new services and features to be developed. This approach signals to stakeholders—customers, employees, and investors alike—that the bank is future-focused and adaptable to change.

**Financial Impact of Implementing Next-Gen Secure Web Banking Access Authentication System**

**Revenue Growth:** Enhanced user experience and increased security can attract more customers, leading to growth in deposit bases and usage of fee-based services.

**Customer Retention:** Higher customer satisfaction can reduce churn rates, ensuring stable revenue streams from existing customers.

**Cost Reduction:** Savings in operational costs, such as reduced staffing for password resets and lowered branch overhead, contribute to overall financial efficiency.

**Brand Value Enhancement:** Being a forerunner in technology can enhance Scotiabank's brand value, potentially driving more business through a positive reputation.

**Cost Saving for Scotiabank:**

**a. Reduced Customer Support Load:**

**Description:** The introduction of biometric login can drastically decrease the number of login-related customer support inquiries, such as password resets, thereby reducing the workload on customer support teams.

**Impact:** Lowering the support load allows customer service representatives to focus on resolving more complex issues, enhancing overall customer satisfaction and potentially reducing the need for additional staffing, resulting in significant cost savings.

**b. Enhanced Fraud Prevention:**

**Description:** Biometric authentication offers higher security than traditional methods, reducing the risk of unauthorized access and fraudulent activities on customer accounts.

**Impact:** By minimizing the instances of fraud, the bank can avoid the associated financial losses and reputational damage, as well as reduce the resources spent on investigating and resolving fraud cases, leading to further cost savings.

**c. Operational Efficiency and Automation:**

**Description:** The biometric system automates the authentication process, making it more efficient and reducing reliance on manual verification methods.

**Impact:** Increased operational efficiency through automation leads to time savings and allows employees to focus on value-added activities, thus optimizing workforce productivity and contributing to cost-effectiveness.

**d. Decreased Branch Dependency:**

**Description:** With the convenience and security of biometric login, customers may be more inclined to use online banking services, reducing the necessity for branch visits for routine transactions.

**Impact:** A reduction in branch visits can lead to decreased overhead costs associated with maintaining and staffing physical branch locations, allowing for resource reallocation to other strategic areas.

**e. Legal and Regulatory Compliance:**

**Description:** Implementing a secure and compliant biometric system can help adhere to stringent data protection regulations and avoid potential fines and legal issues.

**Impact:** Staying compliant helps avoid financial penalties and protect the bank's reputation, which could have indirect cost-saving implications by maintaining customer trust and loyalty.

**Initial Investment for Scotiabank:**

**a. Technology Acquisition:**

* **Hardware and Software:** Significant investment will be required to acquire the necessary biometric hardware and develop/integrate software solutions.
* **Licensing and Compliance:** Costs associated with obtaining the necessary licenses for using biometric technology and ensuring compliance with data protection regulations.

**b. Development and Integration:**

* **Customization and Testing:** Expenses related to customizing the biometric system to align with Scotiabank's existing infrastructure and conducting extensive testing to ensure reliability and security.
* **Employee Training:** Investment in training programs to familiarize employees with the new system and equip them to address customer inquiries.

**c. Marketing and Communication:**

* **Promotional Activities:** We will allocate a budget for marketing campaigns to promote the new feature and educate customers on its benefits and usage.
* **Customer Education:** Developing educational materials and conducting workshops/webinars to familiarize customers with the new login method and address concerns.

# Stakeholder Engagement Plan



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