**FEASIBILITY STUDY OF TAP AND GO**

**SYSTEM FOR ID SCHOOL ENTRANCE AND EXIT CONTROL**

**IN THE PROVINCE OF ORIENTAL MINDORO**

A Feasibility Study

Presented to

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**Chapter I**

**INTRODUCTION**

In the modern era, the integration of Information Technology (IT) systems into various sectors has revolutionized operational efficiencies and security measures. Educational institutions have significantly benefited from the deployment of advanced IT systems to manage and monitor various activities. Among these technological advancements, the "Tap and Go" system has emerged as a pivotal innovation, leveraging RFID (Radio-Frequency Identification) and NFC (Near Field Communication) technologies. This system facilitates secure and efficient monitoring of entry and exit points within educational settings, thereby enhancing security and operational management.

The "Tap and Go" system exemplifies the application of IT solutions in creating streamlined processes for tracking the movements of students, faculty, and staff. By employing RFID and NFC technologies, this system ensures real-time monitoring and recording of entrance and exit activities, reducing the likelihood of unauthorized access and improving overall campus safety. This study aims to explore the feasibility of implementing such a system in educational institutions, focusing on its potential benefits and challenges.

Globally, educational institutions have increasingly adopted the "Tap and Go" system to enhance security and operational efficiency. In countries with advanced technological infrastructures, such as the United States, the United Kingdom, and various European nations, this system has been integrated successfully into universities and schools. These implementations have demonstrated significant improvements in security management, attendance tracking, and overall campus administration, providing valuable insights and best practices for other regions considering similar technologies.

Nationally, within the Philippines, there has been a growing interest in adopting advanced IT solutions to modernize educational infrastructure. Some leading universities and colleges have begun to implement the "Tap and Go" system to upgrade their campus operations and enhance security measures. These local implementations provide a framework for understanding the practical applications and potential challenges of deploying such systems in a context similar to that of Oriental Mindoro.

Focusing on the province of Oriental Mindoro, this feasibility study aims to assess the specific requirements and potential impact of implementing the "Tap and Go" system across its educational institutions. By targeting a broad range of stakeholders, including students, faculty, and administrative staff from various universities and schools within the province, the study will gather comprehensive data to evaluate the system's viability. This localized focus will consider the unique infrastructural, operational, and security needs of educational institutions in Oriental Mindoro, ensuring that the proposed solution is both practical and beneficial.

This study seeks to provide a strategic implementation plan tailored to the needs of province Oriental Mindoro's educational institutions. By leveraging the capabilities of the "Tap and Go" system, these institutions can significantly enhance their security measures, operational efficiency, and overall campus experience, thereby setting a benchmark for technological advancement in the region.

**Chapter II**

**MARKET STUDY**

In this section, the company name and mission statement are introduced, along with information on direct distribution services, how to locate densely inhabited areas as well as the creation of new technologies that will enable us to meet client expectations.

**2.1 Name and Description of the Product**

The "Tap and Go" system brings a transformative approach to campus security and management for educational institutions throughout Oriental Mindoro. This innovative system uses RFID/NFC technology embedded in student and staff ID cards to create a seamless and secure method for monitoring entry and exit points. It simplifies the process of tracking movements on campus, ensuring that security is enhanced without causing any inconvenience to users. Designed with an intuitive interface and robust security features, the "Tap and Go" system not only provides real-time monitoring but also offers peace of mind for students, faculty, and administrators. By adopting this system, educational institutions can significantly improve their security protocols and campus management, making everyday campus life safer and more efficient for everyone.

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**2.2 Uses of the Product**

The "Tap and Go" system, a revolutionary advancement in campus security solutions, offers seamless, secure, and user-friendly monitoring of entry and exit points for educational institutions in Oriental Mindoro. By integrating state-of-the-art RFID/NFC technology into student ID cards, the system enables quick and convenient tracking of campus facilities access. Real-time monitoring capabilities enhance security response times and overall safety management. The system streamlines campus services by consolidating various monitoring functions into a single ID card, eliminating the need for multiple access cards or manual logging systems. Overall, the "Tap and Go" system sets a new standard for campus security systems, ensuring a safer and more efficient campus environment for students, faculty, and staff.

**2.3 User of the Product**

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The "Tap and Go" system caters to a diverse user base, including admin, students, faculty, staff and visitors from various academic disciplines and socio-economic backgrounds in universities and schools across Oriental Mindoro. Designed to be universally appealing, the system transcends gender distinctions and is suitable for individuals of all ages and backgrounds. Users appreciate the convenience and enhanced security provided by the system, which streamlines access to campus facilities. Additionally, campus administrators and security personnel benefit from the system's streamlined operations and improved monitoring capabilities, ensuring a safer and more efficient campus environment overall. The "Tap and Go" system is tailored to meet the unique needs of educational institutions in Oriental Mindoro, ensuring that all stakeholders can enjoy its benefits.

**2.4 Demand & Supply Analysis**

The feasibility study will conduct a thorough analysis of the demand for the "Tap and Go" system among educational institutions in Oriental Mindoro. Through surveys, focus groups, and observational studies, the research will gauge the preferences, usage patterns, and readiness of students, faculty, administrative staff, and visitors to adopt this new entry and exit monitoring technology. Additionally, the study will examine market trends, the competitive landscape, and regulatory considerations to understand the supply-side dynamics. By identifying potential opportunities and challenges, this analysis aims to ensure that the "Tap and Go" system meets the specific needs of educational institutions in the region, facilitating its successful implementation and widespread adoption.

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**2.5 Marketing Program**

**2.5.1 Target Market**

The target market for the "Tap and Go" system encompasses all educational institutions within the province of Oriental Mindoro, including Schools, Universities, and Colleges (SUCs). This diverse target market includes a wide range of students, faculty, and administrative staff from various academic disciplines and socio-economic backgrounds. The study will conduct a detailed demographic and psychographic analysis to understand the unique needs and preferences of different segments within these institutions. By examining factors such as age, gender, technology adoption behavior, and campus engagement, the study aims to develop a comprehensive profile of the target market, ensuring that the "Tap and Go" system is tailored to enhance security, operational efficiency, and overall campus management across all educational settings in Oriental Mindoro.

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**2.5.2 Channel Distribution**

These entities specialize in providing technology solutions to educational institutions and have established networks and relationships within the region. Collaborating with resellers or system integrators offers several advantages, including reaching a wider network of universities and leveraging their expertise in integrating the system into existing infrastructure. Resellers and system integrators possess an in-depth understanding of the unique needs and requirements of educational institutions, along with established relationships and familiarity with administrative processes. By partnering with them, the system provider can tap into their network of university clients and benefit from their expertise in addressing specific institutional needs. Resellers and system integrators act as intermediaries, facilitating sales, implementation, and providing valuable support, including hardware installation, software configuration, training, and ongoing technical assistance. Collaborating with reputable entities in the educational technology space enhances the credibility and reputation of the "Tap and Go" system, building trust and confidence among universities. Additionally, resellers and system integrators can offer value-added services such as maintenance, upgrades, and future enhancements to the system.

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**2.5.3 Marketing Strategy/Promotion**

A comprehensive marketing strategy will be crafted to effectively promote the "Tap and Go" system and encourage its adoption among educational institutions in Oriental Mindoro. This strategy will employ a blend of digital and traditional marketing channels, including targeted online advertising, social media campaigns, campus events, and collaborations with local media. Strategic partnerships with campus organizations, endorsements from faculty, and the involvement of student ambassadors will be pivotal in enhancing the system's credibility and driving engagement. Additionally, innovative approaches such as interactive demonstrations, loyalty programs, and special promotions will be used to incentivize adoption. By fostering a sense of community and highlighting the benefits of the "Tap and Go" system, this marketing strategy aims to ensure widespread acceptance and integration across all educational institutions in the province.

**2.5.4 Competition**

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In addition to technological innovation, competitive pricing models and flexible payment options play a crucial role in the success of the "Tap and Go" system. Market research is essential to ensure that pricing aligns with customer expectations and the value proposition of the system. Offering options such as subscription-based models or bundled packages can enhance attractiveness to customers and provide a competitive advantage. Continuous research and development efforts are vital to staying ahead in the market. This includes monitoring industry trends, technological advancements, and gathering customer feedback to identify areas for improvement and innovation. Regular updates and enhancements to the system ensure its relevance and maintain a competitive edge. Moreover, fostering strong customer relationships through excellent support and after-sales services is a key differentiator. Providing training programs, technical assistance, and swift resolution of any issues or concerns contribute to customer satisfaction and loyalty.

**2.5.5 Pricing**

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Determining the pricing strategy for the "Tap and Go" system for ID school entrance and exit control in Oriental Mindoro requires a comprehensive approach that balances value and competitiveness. Market analysis, including an assessment of competitors' pricing, is essential to ensure the system's pricing remains competitive while reflecting its value proposition. Moreover, consideration of the development, implementation, and maintenance costs associated with the system is crucial. This encompasses research and development expenses, hardware/software costs, ongoing technical support, and any customization options provided. Understanding the budget constraints and preferences of the target market through market research or surveys informs the pricing strategy. Flexibility in pricing options, such as subscription-based models or tiered packages, enhances affordability and broadens the system's appeal. Emphasizing the long-term benefits, including cost savings, efficiency improvements, enhanced security, and reduced administrative burden, helps justify the pricing and communicates the system's value to educational institutions.

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|  |  |  |
| --- | --- | --- |
| **Product** | **Manufacturing Cost** | **Market Price** |
| Student ID | **₱** 90.00 | **₱** 100.00 |
| Administrative Staff ID | 90.00 | 100.00 |
| Visitor ID | 90.00 | 100.00 |

and **Table 1: Pricing**

**2.6 Terms of Sale**

Establishing clear and equitable terms of sale for the "Tap and Go" system for ID school entrance and exit control in Oriental Mindoro is crucial for fostering a transparent and mutually beneficial relationship between the system provider and educational institutions. Key aspects of the terms of sale include payment terms, specifying pricing structures, accepted payment methods, and payment timelines. Additionally, clear delineation of the delivery and implementation process, including installation, configuration, and training timelines, ensures accountability and quality assurance. Warranties and service level agreements detailing the system provider's commitments to maintenance and support are integral to the terms of sale. Addressing potential usage restrictions, licensing requirements, and data protection measures safeguards the interests of both parties. Provisions for dispute resolution mechanisms termination conditions ensure clarity and fairness in the event of disagreements. By establishing comprehensive terms of sale covering payment, delivery, warranties, service levels, usage restrictions, data protection, dispute resolution, and termination, the system provider and educational institutions can cultivate a trusted and sustainable partnership in implementing the "Tap and Go" system in Oriental Mindoro.

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**Chapter III**

**TECHNICAL STUDY**

This study discusses about the products of the proposed "Tap and Go” system for ID school entrance and exit control in province of Oriental Mindoro and its process as well as the machineries and equipment to be used in the product system and other aspect that will bring the materials into finished system. Product system location and layout are also presented with perspective views to identify the business operation.

**3.1 The Product**

The proposed "Tap and Go" system for ID school entrance and exit control in the province of Oriental Mindoro is a comprehensive solution designed to enhance security and efficiency in and exit. This system integrates advanced RFID/NFC technology into student, faculty, and administrative staff ID cards, allowing for quick and convenient access control on campus. Below is a visual representation of the system components.

Several metal gates with a clear screen

Description automatically generated

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**Figure 3.1 Turnstiles with RFID/NFC Readers**

Turnstiles equipped with RFID/NFC readers will be installed at the main entrances and exits of educational institutions across Oriental Mindoro to control and monitor access. These turnstiles work with RFID/NFC-enabled ID cards, ensuring that only authorized individuals can pass through, thereby enhancing campus security. By preventing unauthorized access, reducing congestion at entry points, and providing real-time data on the movement of individuals, these turnstiles significantly improve the overall safety and efficiency of campus operations.

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A close-up of a identification card

Description automatically generated

**Figure 3.2 RFID/NFC Enabled ID Cards**

RFID/NFC-enabled ID cards will be issued to all students, visitors, faculty, and administrative staff embedded with RFID/NFC chips for secure and quick identification. These cards facilitate access to buildings and other secure areas on campus with a simple tap on the turnstile or RFID reader, providing a contactless and efficient way to manage access while reducing the risk of lost or stolen cards being misused.



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**Figure 3.3 Dual-Monitor Setup**

Dual-monitor setups will be used at security and administrative stations, with one monitor displaying real-time footage from surveillance cameras and the other showing data from RFID/NFC readers and turnstiles. This setup allows security personnel and administrators to simultaneously oversee live video feeds and system analytics, enhancing the ability to monitor and respond to security events in real-time, improving data analysis, and supporting efficient campus security management.

**3.2 Manufacturing Process**

The production process for the "Tap and Go" system is meticulously designed to ensure the seamless assembly and integration of its components, guaranteeing optimal functionality and reliability. Each step in the process is carefully orchestrated to meet stringent quality standards and deliver a high-quality product.

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1. **Component Acquisition:** This initial phase involves sourcing all the necessary components and materials required for the "Tap and Go" system. Components such as RFID/NFC modules, electronic readers, ID card blanks, and other hardware components are meticulously selected to meet the system's specifications and performance requirements. Suppliers are carefully vetted to ensure consistent quality and reliability of the components.
2. **Assembly:** Once the components are acquired, the assembly process begins. Skilled technicians carefully assemble the hardware components of the "Tap and Go" system according to detailed schematics and assembly instructions. Precision tools and equipment are utilized to ensure accurate assembly, with a keen focus on quality control at every step.
3. **Integration:** After the hardware components are assembled, we are integrated with the software and firmware necessary for the operation of the "Tap and Go" system. This integration process involves programming microcontrollers, configuring communication protocols, and conducting thorough testing to ensure seamless compatibility between hardware and software components.

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1. **Testing and Quality Control:** Rigorous testing and quality control procedures are implemented throughout the manufacturing process to identify and rectify any defects or inconsistencies. Comprehensive functional testing, stress testing, and performance testing are conducted to verify the reliability and functionality of the "Tap and Go" system. Any components that do not meet the specified quality standards are replaced or reworked to ensure optimal performance.
2. **Packaging:** Once the "Tap and Go” systems have passed all quality control checks; we are carefully packaged to protect them from damage during shipping and handling. Packaging materials are selected for their durability and environmental sustainability, with a focus on minimizing waste and reducing environmental impact.
3. **Distribution:** The packaged "Tap and Go” systems are distributed to educational institutions and other customers according to their order specifications and delivery schedules. Logistics partners are engaged to facilitate timely delivery and efficient distribution of the systems, ensuring that customers receive their orders promptly and in good condition.

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1. **Installation and Setup:** Upon receipt of the "Tap and Go" systems, customers are provided with comprehensive installation support and guidance to assist them in setting up the systems at their premises. Training sessions and technical assistance are offered to ensure that customers can deploy and operate the systems effectively.
2. **Maintenance and Support:** A robust maintenance and support program is established to address any issues or concerns that may arise during the use of the "Tap and Go" systems. Ongoing technical support, software updates, and troubleshooting assistance are provided to customers to ensure the continued reliability and performance of the systems.

**3.3 Production Size and Schedule**

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**3.3.1Production Size**

The "Tap and Go" system production facility will occupy an area of zones for system preparation, product storage, and administrative offices. The layout is optimized for efficient workflow and ease of movement between production stages.

**3.3.2 Production Schedule**

This business is operated by the store supervisor around 8AM – 5PM, from Monday to Friday.

**3.4 Machinery and Equipment**

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The machinery and equipment needed to complete the process and provide for the client and customers are referred to here.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Machineries and Equipment** | **Description** | **Cost Per Unit** | **Quantity** | **Estimated Cost** |
| **Turnstiles with RFID/NFC Readers**  Several metal gates with a clear screen  Description automatically generated | Turnstiles equipped with RFID/NFC readers will be installed at main entrances and exit to control and monitor access | ₱100,000.00 | 1 | ₱100,000.00 |
| **Dual Monitor Setup**  A computer monitor mounted on a wall  Description automatically generated | Dual monitor setups for real-time monitoring at security and administrative stations. | ₱50,000.00 | 1 | ₱50,000.00 |
| **RFID/NFC Enabled ID Cards**  A close-up of a identification card  Description automatically generated | RFID/NFC-enabled ID cards issued to students, faculty, and staff for secure and quick identification. | ₱100.00 | 200 | ₱20,000.00 |
| **Installation and Network Setup** | Cost for site preparation, network setup, and installation of hardware | ₱50,000.00 | 1 | ₱50,000.00 |

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**3.5 Plant Location**

A screenshot of a computer screen

Description automatically generated

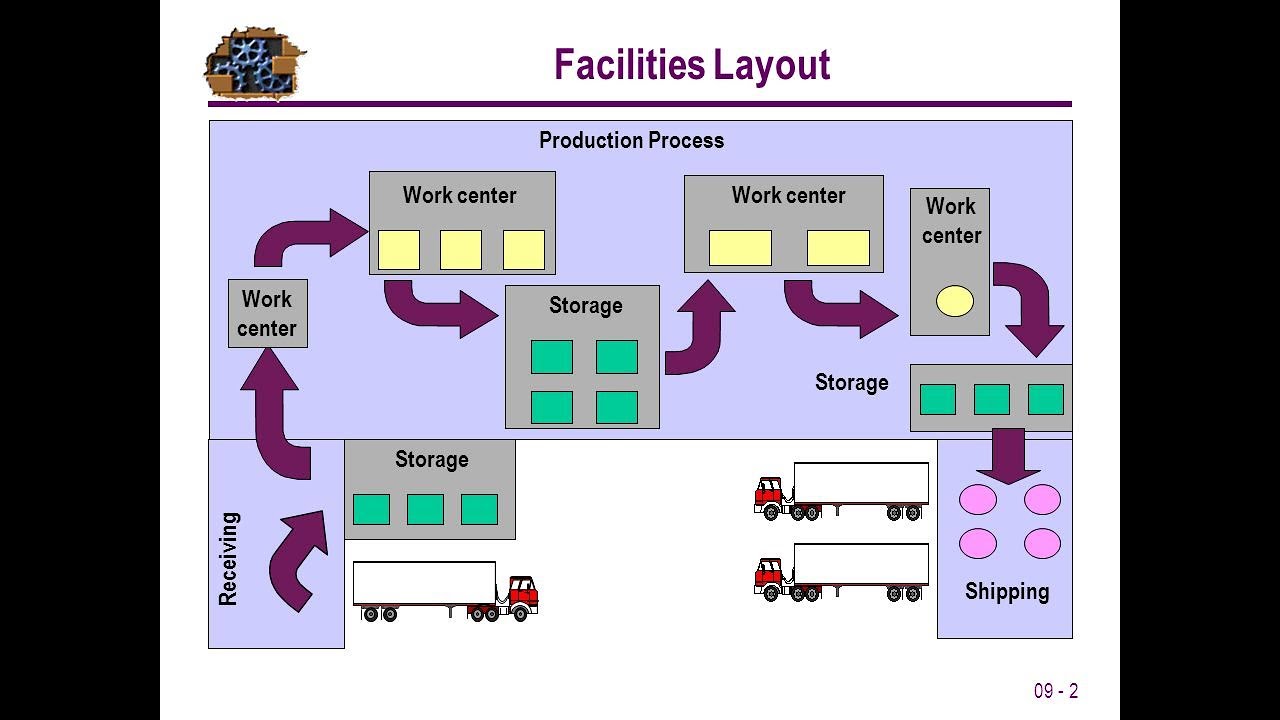
Tap and Go Facilities

**Figure 3.4 Plant Location**

The proposed "Tap and Go" system will be located in Masipit, Calapan City, as it is a bustling area with a high population density. Additionally, it is conveniently located near other shops and markets. This strategic location ensures easy access for both customers and suppliers, contributing to the success and visibility for business.

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**3.6 Plant Layout**

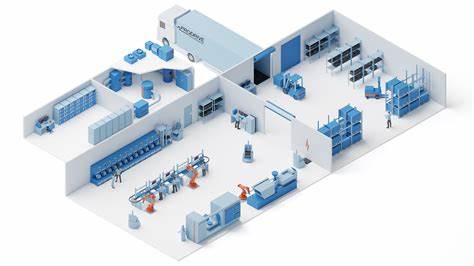
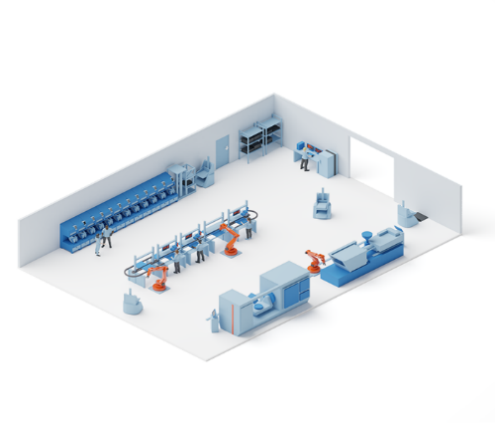


**Figure 3.5 Plant Layout**

The plant layout is designed on purpose. This business wanted to be where there are lots of people and near other shops and markets. This makes it easier for customers to find us and for us to get the things need. This study chose this spot to be a part of the community and to grow the business. This plant layout is set up to make things easy for everyone, so this can make system in the best way possible and make the customers happy. This shop layout is designed to be simple and efficient, helping this make system in the best way possible.

**3.7 Building and Facilities**

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A computer room with a desk and lockers

Description automatically generated

**Figure 3.6 Perspective View**

This shop occupies a spacious building covering about 500 square meters. Inside, this have different areas for assembling and storage of the "Tap and Go" system. The main area, which is around 200 square meters, is where prepare the system, assembled and set up, test if its working, and pack it up. Next to this area, this have a reception space of about 100 square meters. Here, is the showoff the system and have seats for customers to relax while shopping.

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In addition to these areas, this have spaces for storing the hardware and product system, which is around 100 square meters. There is also a place for the staff to take breaks and keep their things, covering about 100 square meters. Overall, this shop is designed to be safe, efficient, and welcoming, ensuring that can make and sell the "Tap and Go" system in the best way possible.

**3.8 Raw Materials and Supplies**

The raw materials and supplies that will be use in the product plays an important role for making complete "Tap and Go" system. Everything, assembling the system to the packaging materials, is carefully chosen to make sure the system is working properly. In this part, it talks about the different things use to make system. The business always try to get the best stuff, and like to get it from nearby places whenever can. The main goal is to make sure to get good reviews when customers use the system.

1. **Turnstiles with RFID/NFC Readers**

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Several metal gates with a clear screen

Description automatically generatedStaff prepare the Turnstiles with RFID/NFC Readers by installing RFID/NFC technology at entry points and configuring the system to recognize authorized personnel. This ensures that scanning ID cards at designated points effectively regulates school entry, enhancing security measures against unauthorized access.

**Figure 3.7 Turnstiles with RFID/NFC Readers**

1. A close-up of a identification card

   Description automatically generated**RFID/NFC Enabled ID Cards**

Staff prepare the RFID/NFC Enabled ID Cards by integrating it with turnstiles, configuring it to recognize ID cards for personal identification and gate access. This preparation streamlines access management, enhancing security measures within the premises.

**Figure 3.8 RFID/NFC Enabled ID Cards**

1. A cleaning kit with cleaning supplies

   Description automatically generated**Cleaning and Sanitizing Supplies**

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Maintaining cleanliness and hygiene in the production facility is essential. "Tap and Go” use cleaning and sanitizing supplies such as detergents, disinfectants, and sanitizing solutions to ensure a safe and hygienic production environment.

**Figure 3.9 Cleaning and Sanitizing Supplies**

1. A pair of blue gloves

   Description automatically generated**Miscellaneous Supplies**

A roll of tape with pink dots

Description automatically generatedA roll of tape on a black background

Description automatically generatedOther supplies essential to the operations include labels, packaging tape, gloves, and other consumables necessary for production, packaging, and quality control processes.

**Figure 3.10 Miscellaneous Supplies**

Within the production facilities, the seamless operation and comfort of the environment hinge upon a range of vital utilities. Electricity stands as the lifeblood, powering the equipment and illuminating the workspace, thus facilitating efficient production processes. Equally indispensable is the water supply, essential for maintaining cleanliness, sanitization, and ingredient preparation, thereby upholding the hygiene and safety standards of the products. Meanwhile, the Heating, Ventilation, and Air Conditioning (HVAC) system ensures a consistently pleasant indoor climate, catering to the comfort of both customers and staff year-round. Moreover, "Tap and Go" prioritize ample lighting across the premises to optimize visibility and safety in workspaces, display areas, and customer zones. The waste management protocols underscore the commitment to responsible disposal and recycling practices, thereby fostering cleanliness and bolstering environmental sustainability. With a steadfast internet connection, "Tap and Go" seamlessly manage communications, conduct online transactions, and access digital resources for administrative and customer service purposes. Ensuring the security of the premises is paramount, achieved through a robust security apparatus comprising surveillance cameras, alarms, and fortified locks. Additionally, the fire safety measures, inclusive of extinguishers, smoke detectors, and clearly marked emergency exits, stand poised to mitigate and address any potential fire hazards swiftly.

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**3.9 Utilities**

|  |  |  |
| --- | --- | --- |
| **Utilities** | **Description** | **Estimated Monthly Cost** |
| Electrical Supply | The electricity will be provided by Oriental Mindoro Electrical Cooperative, Inc. (ORMECO, Inc.), a non-stock and non-profit electrical cooperative established in accordance with the laws, rules, and regulations in effect in the Philippines. | ₱ 11,500 |
| Water Supply | Water chain in Calapan City is provided by Calapan Waterworks Corp., a water utility that provides great service to its customers. | 1,500 |
| Rent | Rent and other expenses must be paid by the end of the month because the entrepreneur does not own the aforementioned location. | 20,000 |
| **Total Cost** |  | **₱ 33,000** |

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**Table 3.** Utilities

**3.10 Waste Disposal**

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Proper waste disposal is essential for maintaining cleanliness and environmental sustainability in the shop. "Tap and Go" have established procedures to ensure that waste generated during the operations is managed responsibly. This includes separating recyclable materials such as cardboard, paper, and plastic from general waste. "Tap and Go" work closely with waste management services to arrange for the collection and disposal of non-recyclable waste in accordance with local regulations. The goal is to reduce the amount of waste sent to landfills and minimize the carbon footprint. By implementing effective waste disposal practices, "Tap and Go" aim to contribute to a cleaner and healthier environment for the community.

**3.11 Labor Requirements**

To ensure the smooth operation of the shop, "Tap and Go" require a dedicated team of skilled individuals to fulfill various roles and responsibilities. These labor requirements include:

1. **Production Staff:** Responsible for system preparation, assembling, quality control, and packaging of the hardware system. This team ensures that the products meet high-quality standards and are prepared efficiently.

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1. **Sales and Customer Service Staff**: Engage with customers, handle transactions, and provide assistance in the sales area. We play a crucial role in creating a positive shopping experience for the customers and promoting customer satisfaction.
2. **Administrative Staff:** Manage administrative tasks such as inventory management, scheduling, and record-keeping. We ensure the smooth coordination of operations behind the scenes.
3. **Cleaning and Maintenance Staff:** Responsible for maintaining cleanliness and hygiene throughout the shop, including equipment maintenance and sanitation procedures. We contribute to a safe and sanitary working environment.
4. **Management Team:** Oversees overall operations, including strategic planning, budgeting, and decision-making. We provide leadership and direction to ensure the success of the business.

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All employees that will be hired by the shop must submit a copy of their Resume, NBI Clearance, Barangay Clearance, Medical Certificate, SSS ID/UMID, and Phil Health ID.

**Chapter IV**

**MANAGEMENT ASPECTS**

In this chapter of the feasibility study for the "Tap and Go" System for ID School Entrance and Exit Control in Oriental Mindoro, meticulous management of the proposed system is paramount. The successful deployment of this system will be instrumental in attracting and retaining users by efficiently managing inventories and providing exceptional customer service through targeted marketing strategies. This section focuses on the organizational considerations specific to the implementation of the "Tap and Go" System for ID School Entrance and Exit Control in Oriental Mindoro, delineates the ideal corporate structure tailored for the product, and outlines the necessary salary requirements for its effective operation within the educational landscape of Oriental Mindoro

**4.1 Basic Considerations Informing the Organization**

In forming an organization that produces eco-friendly hollow blocks from plastic waste materials and implements the "Tap and Go" system, several key considerations must be taken into account for its success and sustainability. The integration of Information Technology (IT) systems, particularly the innovative "Tap and Go" system utilizing RFID and NFC technologies, has revolutionized operational efficiencies and security measures in educational institutions. Therefore, thorough market research is essential to understand the demand for environmentally friendly construction materials and assess the readiness of educational institutions to adopt the "Tap and Go" system for enhanced security and operational management. Adherence to regulations governing the production and sale of building items, as well as the use of recycled materials, is crucial. Establishing a reliable system for sourcing plastic waste, through partnerships with recycling plants and waste management organizations, is necessary to maintain the quality of raw materials for the eco-friendly hollow blocks. Furthermore, assessing the feasibility of implementing the "Tap and Go" system, tailoring a strategic plan for its integration, and targeting a broad range of stakeholders for data collection are essential steps to ensure the practicality and benefits of utilizing this technology in educational institutions. By considering these factors, the organization can successfully merge sustainable construction practices with advanced security and operational management systems, setting a benchmark for technological advancement in the educational sector.

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**Location**

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In determining the optimal location for deploying the "Tap and Go" System for ID School Entrance and Exit Control in Oriental Mindoro, strategic placement of terminals is crucial. The system's terminals should be strategically installed at the main entrances and exits of schools, colleges, and universities throughout Oriental Mindoro to enable secure and efficient monitoring of all students, staff, and faculty members as need to enter and leave the premises.

By focusing on these key access points, the "Tap and Go" System will enhance campus security and ensure that only authorized individuals gain access. The strategic placement of terminals at main entry and exit points will facilitate seamless monitoring of entrance and exit activities, contributing to improved security measures and operational efficiency within the educational institutions of Oriental Mindoro.

Additionally, a comprehensive assessment of utility requirements, including power supply, network connectivity, and physical infrastructure, will be conducted to support the implementation of the "Tap and Go" System. Coordination with school utility providers, IT departments, system developers' support, and facilities management will be essential to address infrastructure needs and ensure the smooth operation of the system. Efforts will prioritize energy efficiency, environmental impact reduction, and sustainability in deploying the "Tap and Go" System infrastructure, aligning with the educational landscape and infrastructure of Oriental Mindoro.

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**Target Customer**

When targeting customers for the "Tap and Go" system for ID school entrance and exit control in Oriental Mindoro, the primary focus is on educational institutions within the province. Administrators, security personnel, and students in Oriental Mindoro's schools are the key customers. Administrators and security personnel will oversee system implementation and management, ensuring enhanced security and operational efficiency within the educational institutions. Students will benefit from improved safety measures and a streamlined campus experience. By tailoring marketing strategies to highlight the system's benefits for educational institutions in Oriental Mindoro, successful adoption and implementation can be achieved.

**Capital**

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When considering capital for implementing the "Tap and Go" system for ID school entrance control in Oriental Mindoro, the focus is on budget allocation and financial resources. Educational institutions in Oriental Mindoro need to assess the costs associated with hardware procurement, software licensing, installation, maintenance, and training. Adequate capital investment is essential to ensure a successful implementation of the system, covering expenses related to infrastructure upgrades and ongoing operational costs. Securing sufficient capital is crucial for educational institutions to effectively deploy the system and maximize its benefits in enhancing security and operational efficiency within their premises.

**Hiring People**

When it comes to hiring personnel for the implementation of the "Tap and Go" system for ID school entrance and exit control in Oriental Mindoro, the focus is on recruiting skilled individuals to manage and maintain the system. Educational institutions in Oriental Mindoro will need to hire IT professionals with expertise in RFID and NFC technologies to handle installation, configuration, troubleshooting, and system administration. Additionally, training staff and providing technical support will be essential to ensure the smooth operation of the system. Recruiting a dedicated technical support team and providing comprehensive training for staff members involved in system management will be crucial for the successful implementation and operation of the "Tap and Go" system in Oriental Mindoro's educational institutions.

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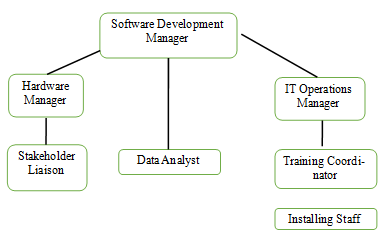
**4.2 Forms of Business Ownership**

When considering forms of business ownership for implementing the "Tap and Go" system for ID-based school entrance and exit control in Oriental Mindoro, educational institutions have several options, such as sole proprietorship, establishing a separate corporate entity, or forming a cooperative. The choice depends on factors like legal considerations, liability protection, governance structure, and institutional preferences. Consulting legal and business professionals can help determine the most suitable ownership form for implementation.

**4.3 Organization Structure**

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The organizational structure is designed to facilitate effective communication, coordination, and execution of projects, ensuring that all aspects of operations are managed efficiently and successfully. Adjustments can be made based on the specific needs and requirements of the project as it progresses.



**Figure 4.1. Organizational structure**

This organizational structure ensures clear roles and responsibilities for each team member, promoting efficient communication, collaboration, and successful implementation of the Tap and Go System in Oriental Mindoro.

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|  |  |
| --- | --- |
| **Position** | **Number of Employees** |
| **Hardware Manager** | 1 |
| **Software development Manager** | 1 |
| **IT Operators Manager** | 1 |
| **Stakeholder Liaison** | 1 |
| **Data Analyst** | 1 |
| **Training Coordinator** | 1 |
| **Installing Staff** | 4 |

**Hardware Manager**: Leads hardware engineering projects, oversees design and testing, ensures compliance with standards, collaborates with software developers, and manages hardware resources.

**Software Development Manager**: Leads software development projects, oversees design, coding, and testing, ensures software meets user requirements, collaborates for deployment, and manages software resources.

**IT Operations Manager**: Manages IT infrastructure, ensures system security and reliability, provides technical support, develops IT policies, and stays informed on IT operations and cybersecurity.

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**Stakeholder Liaison**: Facilitates communication between stakeholders and teams, gathers feedback, maintains stakeholder relationships, addresses concerns, and ensures alignment on project goals.

**Data Analys**t: Analyzes data for decision-making, generates reports and insights, identifies trends, collaborates with departments, ensures data accuracy, and stays updated on data analysis tools.

**Training Coordinator**: Organizes training sessions, develops programs, evaluates effectiveness, ensures compliance, provides ongoing support, and stays informed on training methodologies.

**Installing Stuff:** The one who physically placing and connecting devices, machinery, or tools.

**4.5 Compensation**

Compensation packages should ideally be reviewed and adjusted annually to remain competitive in the market and retain skilled professionals. Annual reviews allow organizations to stay current with market trends, industry standards, and changes in the economic landscape. By conducting regular assessments, companies can ensure that their compensation packages remain attractive to top talent, promote employee retention, and support overall organizational success.

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**4.6 Project Schedule**

The business hours of operation will be 8:00 a.m. to 5:00 p.m.

**Table 4.2 Work Schedules**

|  |  |  |
| --- | --- | --- |
| **POSITION** | **Work start time** | **Work end time** |
| **Hardware Manager** | 8:00 a.m. | 4:00 p.m. |
| **Software development Manager** | 8:00 a.m. | 4:00 p.m. |
| **IT Operators Manager** | 8:00 a.m. | 4:00 p.m. |
| **Stakeholder Liaison** | 8:00 a.m. | 4:00 p.m. |
| **Data Analyst** | 8:00 a.m. | 4:00 p.m. |
| **Training Coordinator** | 8:00 a.m. | 4:00 p.m. |
| **Installing Staff** | 8:00 a.m. | 4:00 p.m. |

**Chapter V**

**FINANCIAL ASPECTS**

This chapter contains the study of financial components. This includes the project cost, financial statement, cash flow statement, income statement, project balance sheet, financial analysis, and payback period that will show the transparency of the company in terms of feasible financial stability.

**5.1 Project Cost**

**Table 5. Project Cost for the TAP AND GO System for ID School Entrance and Exit Control prototype.**

|  |  |
| --- | --- |
| Hardware and Devices | **₱ 100,000.00** |
| Software Development | 50,000.00 |
| Network Infrastructure | 50,000.00 |
| Machine and Equipment | 20,000.00 |
| Repair and Maintenance | 10,000.00 |
| Rental Expense | 5,000.00 |
| Electric bill Expense | 5,000.00 |
| Advertising | 2,000.00 |
| Additional Services | 5,000.00 |
| Labor Cost | 15,000.00 |
| **TOTAL** | **₱ 262,000.00** |
| Minimum Cash Balance | 38,000.00 |
| Initial Capital Requirement | 300,000.00 |
| Divided by Number of Partners | 10 |
| **Individual Contribution** | **₱ 30,000.00** |

**5.2 Basic Financial Statement**

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The basic financial statement discusses the prospective business’s expected cash flow statement, projected balance sheet and income statement.

**Table 6. Income Statement for the TAP AND GO System for ID School Entrance Control prototype.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Year 1** | **Year 2** | **Year 3** |
| Service Income | **₱1,000,000.00** | **₱1,500,000.00** | **₱2,000,000.00** |
| Less Operating Expenses | | | |
| Cost of Goods Sold | 200,000.00 | 262,000.00 | 271,000.00 |
| Office Supplies  Expense | 62,000.00 | 80,000.00 | 91,000.00 |
| Rental | 5,000.00 | 55,000.00 | 61,000.00 |
| Advertising | 2,000.00 | 52,000.00 | 72,000.00 |
| Utilities | 10,000.00 | 62,000.00 | 85,000.00 |
| Repair and  Maintenance | 10,000.00 | 35,000.00 | 20,000.00 |
| Tax and Licenses | 30,000.00 | 35,000.00 | 88,000.00 |
| **Total Expenses** | **319,000.00** | **581,000.00** | **688,000.00** |
| **Net Income** | **₱** **681,000.00** | **₱** **919,000.00** | **₱** **1312,000.00** |

**5.2.1 Projected Cash Flow Statement**

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**Table 7. Projected cash flow statement Projected balance sheet for the TAP AND GO System for ID School Entrance Control prototype.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Year 1** | **Year 2** | **Year 3** |
| **Cash flows from Operating Activities:** | | | |
| Net Sales | ₱ 1,000,000.00 | ₱1,700,000.00 | ₱2,200,000.00 |
| Less: Sales Promo  Discount | 95,000.00 | 95,000.00 | 95,000.00 |
| Gross Income | 905,000.00 | 1,605,000.00 | 2,105,000,000 |
| Cost of Goods Sold | 262,000.00 | 262,000.00 | 262,000.00 |
| Rental Expenses | 5,000.00 | 5,000.00 | 5,000.00 |
| Advertising | 2,000.00 | 2,000.00 | 2,000.00 |
| Utilities | 10,000.00 | 12,000.00 | 15,000.00 |
| Repair and  Maintenance | 10,000.00 | 15,000.00 | 20,000.00 |
| Tax Expenses | 30,000.00 | 35,000.00 | 40,000.00 |
| **Net cash provided by operating activities** | ₱ **586,000.00** | ₱1,2**74,000.00** | ₱**1,761,500.00** |
| **Cash flows from Investing Activities:** | | | |
| Capital expenditures: | | | |
| Equipment | 100,000.00 | 110,000.00 | 130,000.00 |
| Furniture and Fixtures | 20,000.00 | 20,000.00 | 20,000.00 |
| Delivery Truck | 100,000.00 | 100,000.00 | 100,000.00 |
| **Net cash used in investing activities** | ₱ **220,000.00** | **₱ 230,000.00** | ₱ **250,000.00** |
| **Cash flows from Financing Activities:** | | | |
| Issuance of common  Stock | 50,000.00 | 60,000.00 | 70,000.00 |
| Payment of cash  dividends | 60,000.00 | 80,000.00 | 100,000.00 |
| Payment of short-  term debt | 50,000.00 | 75,000.00 | 100,000.00 |
| **Net cash used in financing activities** | **₱ 60,000.00** | **₱ 95,000.00** | ₱ **130,000.00** |
| **Net Cash Increase in Year** | | | |
| Cash at the beginning  of the year | 70,000.00 | 376,000.00 | 1,425000.00 |
| Cash at the end of  the year | 376,000.00 | 1,425,000.00 | 2,906,000.00 |
| **Cash Balance at the End of Period** | **₱ 376,000.00** | **₱2,906,000.00** | **₱2,906,000.00** |

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**5.2.2 Projected Balance Sheet**

**Table 8. Projected balance sheet for the TAP AND GO System for ID School Entrance Control prototype.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **YEAR 1** | **YEAR 2** | **YEAR 3** |
| **ASSETS** | | | |
| **Current Assets** |  |  |  |
| Cash on Hand | ₱ 176,000.00 | ₱ 305,000.00 | ₱ 346,000.00 |
| Cash in Bank | 100,000.00 | 150,000.00 | 200,000.00 |
| Accounts Receivable | 50,000.00 | 75,000.00 | 100,000.00 |
| Prepaid Rent | 20.000.00 | 20,000.00 | 20,000.00 |
| Office Supplies | 10,000.00 | 15,000.00 | 20,000.00 |
| Inventory Supplies | 20,000.00 | 25,000.00 | 30,0000.00 |
| **Total Current Assets** | **₱ 376,000.00** | **₱590,000.00** | **₱ 716,000.00** |
| **Non-Current Assets:** | | | |
| Furniture and  Fixtures | ₱ 20,000.00 | ₱ 18,000.00 | ₱ 16,000.00 |
| Machineries and  Equipment | 100,000.00 | 150,000.00 | 200,000.00 |
| Tools | 30,000.00 | 30,000.00 | 30,000.00 |
| Delivery Truck | 100,000.00 | 100,000.00 | 100,000.00 |
| Office Equipment | 20,000.00 | 25,000.00 | 30,000.00 |
| **Total Non-Current Assets** | **₱ 270,000.00** | **₱ 323,000.00** | **₱ 376,000.00** |
| **Total Assets** | **₱646,000.00** | **₱913,000.00** | **₱ 1,092,000.00** |

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|  |  |  |  |
| --- | --- | --- | --- |
| **LIABILITIES AND EQUITY** | | | |
| **Current Liabilities** | | | |
| Accounts Payable | ₱ 50,000.00 | ₱ 70,000.00 | ₱ 90,000.00 |
| License and Taxes  Payable | 30,000.00 | 35,000.00 | 40,000.00 |
| **Total Current Liabilities** | **₱ 80,000.00** | **₱ 105,000.00** | **₱ 13 0,000.00** |
| **Non-Current Liabilities** | | | |
| Bank Loans | 50,000.00 | 60,000.00 | 70,000.00 |
| **Total Non-Current Liabilities** | **₱ 50,000.00** | **₱ 60,000.00** | **₱ 70,000.00** |
| **Total Liabilities** | **₱ 130,000.00** | **₱ 165,000.00** | **₱ 200,000.00** |
| **Owner’s Equity** |  |  |  |
| Owner’s Capital | **₱** 300,000.00 | **₱**300,000.00 | **₱** 300,000.00 |
| Additional Investment | 50,000.00 | 100,000.00 | 150,000.00 |
| Net Income | 681,000.00 | 1,350,000.00 | 2,006,000.00 |
| Less: Drawings | (15,000.00) | (18,000.00) | (20,000.00) |
| **Total Owner’s Capital** | **₱1,016,000.00** | **₱1,732,000.00** | **₱ 2,436000.00** |
| **Total Liabilities and Equity** | **₱1,146,000.00** | **₱1,897,000.00** | **₱ 2,636,000.00** |

**5.3 Financial Statement Analysis**

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The purpose of the Financial Statement Analysis on TAPAND GO System for ID School Entrance Control prototype is to project the return of investment. The following table would.

**Table 9: Financial Statement Analysis**

|  |  |  |  |
| --- | --- | --- | --- |
| **Return Of Investment** | | | |
|  | **Year 1** | **Year 2** | **Year 3** |
| Net Income | ₱ 681,000.00 | ₱ 669,000.00 | ₱ 656,000.00 |
| Sales and  Revenue | ₱1,000,000.00 | ₱1,000,000.00 | ₱1,000,000.00 |
| **Return of Investment** | **68.10%** | **66.90%** | **65.60%** |

**5.3.1 Rate of Return of Sales**

**Table 10. Rate of Return on Sales**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Year 1** | **Year 2** | **Year 3** |
| Net Income | ₱ 681,000.00 | ₱ 669,000.00 | ₱ 656,000.00 |
| Sales | ₱1,000,000.00 | ₱1,000,000.00 | ₱1,000,000.00 |
| **Rate of Return of Sales** | **68.10%** | **66.90%** | **65.60%** |

**5.3.2 Rate of Return on Assets**

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ROA= INCOME BEFORE TAX

AVERAGE TOTAL ASSET

**Table 11. Rate of Return on Assets**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Year 1** | **Year 2** | **Year 3** |
| Net Income | ₱ 681,000.00 | ₱ 669,000.00 | ₱ 656,000.00 |
| Total Assets | ₱546,000.00 | ₱813,000.00 | ₱992,000.00 |
| **Rate of Return of Assets** | **124.73%** | **82.29%** | **66.13%** |

This ratio is used to assess whether management has achieved reasonable returns on the assets under its control. The project achieved a return of 70% of total invested assets in the first year of operation and achieved a similar return of approximately 80.72% in the second year of operation.

**5.3.3 Rate of Return on Partner’s Equity**

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ROA= NET INCOME

AVERAGE PARTNERS EQUITY

**Table 12. Rate of Return on Partner’s Equity**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Year 1** | **Year 2** | **Year 3** |
| Net Income | ₱ 681,000.00 | ₱ 669,000.00 | ₱ 656,000.00 |
| Total Assets | ₱1,016,000.00 | ₱1,732,000.00 | ₱2,436,000.00 |
| **Rate of Return of Assets** | **67.01%** | **38.61%** | **26.94%** |

The number one reason to run a business is to make a net profit for the owner. Return on equity measures whether a company has achieved this goal. The expected income is 44.17% in the first year, 80.40% in the second year, and 58.96% in the third year.

**5.3.4 Payback Period**

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PAYBACK= COST OF INVESTMENT

ANNUAL CASH FLOW

**Table 13. Payback Period**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Year 1** | **Year 2** | **Year 3** |
| Investment | ₱ 262, 000.00 | ₱ 262,000.00 | ₱ 262,000.00 |
| Cash Flow | ₱ 586,000.00 | ₱ 574,000.00 | ₱ 561,000.00 |
| **Payback Period** | 1 year and 6 months | 9 months | 10 months |

The payback period of an investment is the period of time expected to elapse before the net cash flow covers the original cost of the investment. In business, partners prefer assets with short payback periods to reduce the risk of non-recovery of their investment in the long term. Due to asset acquisitions with short payback periods, counterparties are vulnerable to inaccurate long-term projections of future cash flows. The calculations assume that shareholders' total investment of 1,000,000 can be recovered within one year.

**Chapter VI**

**SOCIO-ECONOMIC ASPECT**

The implementation of the "Tap and Go Tech" system for ID school entrance control in Oriental Mindoro involves assessing manpower needs, tax implications, and community benefits. This includes IT professionals for system management, potential tax costs, and positive impacts like enhanced security and operational efficiency.

**6.1 SOCIAL BENEFITS**

The "Tap and Go Tech" system for ID school entrance control in Oriental Mindoro generates employment opportunities across roles like Production Supervisor, Financial Manager, Machine Operator, Quality Control Inspector, Packaging Specialist, and Maintenance Technician. Ensuring fair wages and essential benefits in compliance with minimum wage regulations for all employees.

**6.2 ECONOMIC BENEFITS**

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The implementation of the "Tap and Go" system for ID school entrance and exit control in Oriental Mindoro yields substantial economic advantages for the local community. It generates job opportunities for various roles involved in system implementation and maintenance, contributing to employment growth and lower unemployment rates. Procurement of hardware, software, and services supports local businesses, stimulating economic activity. Enhanced security measures attract more students, increasing enrollment and tuition revenue for educational institutions. The technology fosters innovation, attracts investments, and enhances the province's technological landscape. Automation and streamlined processes improve operational efficiency, reducing administrative costs and enabling resource reallocation. These economic benefits drive local growth, enhance the community's well-being, and foster economic progress in Oriental Mindoro.

**Chapter VII**

**CONCLUSION**

The integration of advanced IT systems, such as the "Tap and Go" system, has revolutionized operational efficiencies and security measures in various sectors, including education. By leveraging RFID and NFC technologies, this system enables secure monitoring of entry and exit points within educational settings, enhancing campus safety and operational management. Globally, educational institutions have successfully implemented the "Tap and Go" system, showcasing improvements in security management and attendance tracking. In the Philippines, there is a growing interest in adopting advanced IT solutions to modernize educational infrastructure, with leading universities and colleges already implementing the system.

This feasibility study focuses on Oriental Mindoro, assessing the requirements and potential impact of implementing the "Tap and Go" system in educational institutions. By gathering comprehensive data from stakeholders, the study aims to provide a strategic implementation plan tailored to the unique needs of the province. This localized approach ensures practicality and benefits aligned with Oriental Mindoro's infrastructural, operational, and security requirements. By embracing the "Tap and Go" system, educational institutions in Oriental Mindoro can enhance security measures, operational efficiency, and the overall campus experience, positioning the province as a technological advancement benchmark in the region.

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**Chapter VIII**

**RECOMMENDATION**

Based on the findings of the feasibility study and the potential benefits identified, it is highly recommended to proceed with the implementation of the "Tap and Go" system for ID school entrance and exit control in Oriental Mindoro's educational institutions. The system's utilization of RFID and NFC technologies, combined with its ability to enhance security, streamline operations, and improve overall campus experience, makes it a valuable investment for the province.

To ensure a successful implementation, the following recommendations should be considered:

Comprehensive Planning: Develop a detailed implementation plan that addresses the specific requirements and challenges of Oriental Mindoro's educational institutions. This plan should include timelines, resource allocation, and training programs for staff members involved in the system's management and operation.

Stakeholder Engagement: Engage all relevant stakeholders, including students, faculty, administrative staff, and IT professionals, throughout the implementation process. Seek their input, address concerns, and provide training to ensure smooth adoption and acceptance of the system.

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Technical Support: Establish a dedicated technical support team to provide ongoing assistance and maintenance for the "Tap and Go" system. This team should be well-equipped to handle any technical issues, software updates, and system upgrades, ensuring uninterrupted operation.

Collaboration with Local Businesses: Foster partnerships with local businesses, suppliers, and service providers for the procurement of hardware components, software licenses, and professional services. This collaboration not only supports the local economy but also ensures access to quality products and services.

Continuous Evaluation and Improvement: Regularly evaluate the system's performance and gather feedback from users to identify areas of improvement. This will allow for continuous refinement and optimization of the system's features and functionality, ensuring its long-term effectiveness.

**BIBLIOGRAPHY**

1. **Unpublished Materials**

Robin, M., Almarez, Jeremiah, C., Delizo, Mhica May, J., Javier

& Ann Christine B. Orpia (2022) A FEASIBILITY STUDY FOR IT SUPPORT FIRM IN CALAPAN CITY, ORIENTAL MINDORO

Adrian Angel, N., De Guzman, Rachel Ann, M., Labre, Ma. Hanna, G., Saludo, & Jan Cyril, N., San Juan (2022) A FEASIBILITY STUDY OF AUTOMATIC WATERING DEVICE FOR SUBTROPICAL FRUIT IN BACO, ORIENTAL MINDORO

1. **Electronic Resources**

<https://www.ipc.on.ca/sites/default/files/legacy/Resources/mobile-nfc.pdf>

<https://persosim.github.io/docs/The_Vault_14_2014.pdf>

https://idtechproducts.com/blog/tap-and-go-what-it-is-and-why-it-matters/

**CURRICULUM VITAE**

Allan C. Capio

Address: Mulawin, Naujan, Or.Mindoro

Phone No.: 09267772634

Email: ***capioallan091929@gmail.com***

**Personal Information**

Date of Birth : February 19, 2003

Place of Birth : Mulawin, Naujan, Or.Mindoro

Age : 21

Gender : Male

Religion : Roman Catholic

Citizenship : Filipino

Civil Status : Single

Language Spoken : English, Filipino

Father's Name : Maximo I. Capio

Mother's Name : Haydee C. Capio

**Educational Background**

Primary : Mulawin Elementary School

(SY: 2014 -2015)

Secondary : Aurora National High School

(SY: 2019 -2020)

Tertiary : Mindoro State University

Masipit, Calapan City, Oriental Mindoro

(2020 – Present)

**Skills**

Vue Framework Developer

Web Developer

 Computer Literate

Enthusiastic and self-motivated

Good communication skills

Resourceful

Honest with Integrity \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature

A person wearing glasses and a white shirt

Description automatically generated**CURRICULUM VITAE**

Dexther B. Del Monte

Address: Aninuan, Puerto Galera, Or. Mindoro

Phone No.: 09295834368

Email: ***delmontedexther@gmail.com***

**Personal Information**

Date of Birth : November 28, 2002

Place of Birth : San Mateo, Rizal

Age : 21

Gender : Male

Religion : Catholic

Citizenship : Filipino

Civil Status : Single

Language Spoken : English, Filipino

Father's Name : Arte Del Monte

Mother's Name : Nancy Del Monte

**Educational Background**

Primary : Aninuan Elementary School

(SY: 2014 -2015)

Secondary : San Isidro National High School Extension

(SY: 2019 -2020)

Tertiary : Mindoro State University

Masipit, Calapan City, Oriental Mindoro

(2020 – Present)

**Skills**

Web Developer

Computer Literate

**A signature on a white background

Description automatically generated** Critical Thinker

Good communication skills

Resourceful

Honest with Integrity \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature

**A person in a white shirt

Description automatically generatedCURRICULUM VITAE**

Rustom P. Liquigan

Address: Aninuan, Puerto Galera, Or.Mindoro

Phone No.: 09511180139

Email: ***rustomliquigan23@gmail.com***

**Personal Information**

Date of Birth : November 21, 2001

Place of Birth : Gate 1, Paranaque City

Age : 21

Gender : Male

Religion : Catholic

Citizenship : Filipino

Civil Status : Single

Language Spoken : English, Filipino

Father's Name : Geronimo Liquigan

Mother's Name : Marelyn Liquigan

**Educational Background**

Primary : Aninuan Elementary School

(SY: 2014 -2015)

Secondary : San Isidro National High School Extension

(SY: 2019 -2020)

Tertiary : Mindoro State University

Masipit, Calapan City, Oriental Mindoro

(2020 – Present)

**Skills**

CI4 Framework Developer

Python

Web Developer

A close-up of a signature

Description automatically generated Computer Literate

Critical Thinker

Good communication skills

Resourceful

Honest with Integrity \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature

A person in a suit and tie

Description automatically generated**CURRICULUM VITAE**

Lourence T. Quinio

Address: Biga, Calapan City, Oriental Mindoro

Phone No.: 09218510473

Email: ***rence.quinio12@gmail.com***

**Personal Information**

Date of Birth : September 26, 2000

Place of Birth : San Pedro Laguna

Age : 23

Gender : Male

Religion : Catholic

Citizenship : Filipino

Civil Status : Single

Language Spoken : English, Filipino

Father's Name : Ariel Morales Quinio

Mother's Name : Ariel Morales Quinio

**Educational Background**

Primary : Biga Elementary School

SY: 2011 -2017)

Secondary : Oriental Mindoro National High School

(SY: 2017-2021)

Tertiary : Mindoro State University

Masipit, Calapan City, Oriental Mindoro

(2020 – Present)

**Skills**

CI4 Framework Developer

Vue Framework Developer

Python

Web Developer

Computer Literate

A signature of a person

Description automatically generated Critical Thinker

Good communication skills

Resourceful

Honest with Integrity \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature

A person in a suit

Description automatically generated**CURRICULUM VITAE**

Jun Mark Moreno

Address: ilag, San teodoro Oriental Mindoro

Phone No.: 09566830325

Email: [***junmarkmoreno751@gmail.com***](mailto:junmarkmoreno751@gmail.com)

**Personal Information**

Date of Birth : May 1, 2003

Place of Birth : Manguisoc, Camarines Norte

Age : 21

Gender : Male

Religion : Born again

Citizenship : Filipino

Civil Status : Single

Language Spoken : English, Filipino

Father's Name : Rafael Moreno

Mother's Name : Josephine Moreno

**Educational Background**

Primary : Villaflor, Elementary School

(SY: 2010-2015)

Secondary : Northern Mindoro Academy

(SY: 2015-202

Tertiary : Mindoro State University

Masipit, Calapan City, Oriental Mindoro

(2020 – Present)

**Skills**

CI4 Framework Developer

Vue Framework Developer

Python

Web Developer

Computer Literate

 Critical Thinker

Good communication skills

Resourceful

Honest with Integrity \_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature