The International Review of
Multidisciplinary Research
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Information Technology Management Plan for a Technical Vocational Institution in the Province of Laguna

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Abstract. This advanced management consulting study developed an information technology management plan for the records and accounting offices of International Electronics and Technical Institute, Inc. (IETI) Calamba, a long-established technical–vocational institution that has accumulated substantial student and financial records over three decades of operation. Despite this growth, the school continues to depend on manual, paper-based processes and a beta accounting system, leading to recurring issues in reporting and data retrieval, archiving, and timely generation of accurate reports and requested documents. The consultancy aimed to provide a structured plan that would guide the design and future implementation of an integrated Records and Accounting Management System to improve efficiency, data integrity, and decision-support capabilities. The study employed a management consulting approach combining interviews, focus group discussions, document review, and on-site observation to examine workflows in the registrar and accounting offices. Core analytical tools included a TOWS (Threats, Opportunities, Weaknesses, Strengths) analysis to surface strategic issues, a Process–People–Technology (PPT) analysis to map operational realities and capacities, and a detailed Software Requirements Specification (SRS) grounded in ISO/IEC 9126 software quality characteristics. These were consolidated into a Project Implementation Plan (PIP) with an eight-month Gantt chart covering system analysis, design, development, testing, and implementation stages. Findings showed that, while IETI Calamba faces weaknesses in organizational structure, facilities, manual transactions, and archival practices, it also benefits from experienced staff, IT-oriented faculty, and existing computer-based operations that can support system adoption.

Introduction

International Electronics and Technical Institute, Inc. (IETI) Calamba is a well-established technical–vocational and senior high school institution serving Calamba City and its surrounding areas. Over approximately three decades of campus-level operation, the institution has accumulated extensive student, alumni, and faculty records, as well as significant financial and transaction data managed by the registrar and accounting offices. Although these records are essential for enrollment, credentialing, compliance, and institutional decision-making, many processes remain predominantly manual, relying on basic office applications and a beta accounting system. This reliance on manual processes increases the institution's exposure to risks such as compromised data quality, operational delays, and limited analytical capacity for effective planning and management.

The registrar and accounting offices face persistent challenges in three primary areas: reporting and data retrieval, archiving and long-term preservation of records, and the generation of reports and requested documents for both internal and external stakeholders. Manual record retrieval, fragmented storage systems, and limited technological support impede service delivery and hinder the timely and accurate production of reports for administrators and regulatory bodies. Furthermore, school leadership acknowledges that continued reliance on traditional record-keeping and temporary solutions is unsustainable for maintaining competitiveness, meeting evolving reporting requirements, and supporting strategic decision-making with reliable information.

In response to these challenges, this study focuses on crafting an information technology management plan specifically for the records and accounting functions of IETI Calamba. Rather than immediately building software, the consultancy emphasizes structured analysis and planning as prerequisites for any sustainable digital transformation. By examining the institution's strengths, weaknesses, opportunities, and threats, as well as the interplay between processes, people, and technology, the study seeks to produce a set of grounded, institution-specific recommendations that can guide future system development and implementation. This planning orientation acknowledges that successful IT initiatives depend as much on organizational readiness and governance as on technical specifications.

The study is structured around three primary objectives. First, it seeks to deliver a thoroughly analyzed implementation plan for software projects using a TOWS analysis, resulting in a matrix that connects strategic conditions to specific software development and implementation strategies. Second, it aims to assist the institution in developing a Software Requirements Specification (SRS) for a Records and Accounting Management System, clearly defining functional modules, quality attributes, design and content requirements, and infrastructure needs. Third, it intends to provide a Project Implementation Plan (PIP) that includes a realistic timeline and software characteristic indicators, serving as a comprehensive roadmap for system analysis, design, development, testing, deployment, and maintenance.

Within this framing, the study also clarifies the scope and boundaries of the consultancy. It is limited to planning and specification: analyzing current conditions, defining requirements, and outlining implementation steps, rather than coding or deploying a fully operational system. The outputs—which include the TOWS analysis, Process–People–Technology (PPT) analysis, SRS, and PIP—are meant to equip IETI Calamba's management and prospective development teams with a coherent, context-aware basis for future decisions about investments, vendor engagement, and internal development. By doing so, the study aspires to strengthen the institution's capacity to modernize its records and accounting operations while minimizing risk and maximizing alignment with its mission, vision, and strategic directions.

Review of Related Literature

The related literature around records and information systems in education and government can be grouped into several key clusters. Miah and Samsudin emphasize that electronic document and records management systems (EDRMS) in universities must be designed to meet rigorous institutional and regulatory requirements, particularly for academic and research records that demand reliable capture, retention, and retrieval (Miah & Samsudin, 2016). In parallel, international standards such as ISO/IEC 9126 frame software quality in terms of functionality, reliability, usability, efficiency, maintainability, and portability, offering a structured lens for specifying and evaluating records and accounting systems over their life cycle (ISO/IEC, 2001). Together, these works argue that institutional records systems should be judged not only by operability but by how well they sustain defined quality attributes in real organizational contexts.

Figueroa and colleagues show how barangay-level information systems enhance constituent services and open opportunities to improve ICT procedures at the local level (Figueroa et al., 2014). Canedo reports that transaction processing systems for social insurance claims reduce client inconvenience and support more timely, accurate processing of applications through automation and real-time monitoring (Canedo, 2019). Villones and Requinto et al. document high user acceptability and functional performance of barangay database and document management systems, noting faster transaction times, improved record retrieval, and better support for decision-making among local officials (Villones, 2021; Requinto et al., 2019). Collectively, these works suggest that well-designed, localized systems can significantly improve service efficiency and perceived quality in small-to-medium institutions.

Bharadwaj and co-authors conceptualize IT capability as a multi-dimensional construct—including business–IT partnership, external linkages, strategic thinking, process integration, IT management, and infrastructure—which

underpins sustained organizational benefits from IT investments (Bharadwaj et al., 1999). Gonzales and colleagues, working with rapid application development and community-based systems, show how iterative design and close user involvement can accelerate development while preserving relevance to actual processes (Gonzales et al., 2013). In the public sector, Dimaunahan's precinct mapping system for COMELEC and Grepon's web-based case docket information system for the courts demonstrate that applying structured system development life cycles can move institutions away from purely manual operations toward more transparent and data-driven practices (Dimaunahan, 2013; Grepon, 2021). These studies reinforce the value of coupling technical design with explicit attention to process and organizational change

Data governance, security, and archiving standards form another important thread. Karppinen's work on attack trees in mobile ad hoc networks illustrates the complexity of systematically analyzing vulnerabilities in interconnected systems and the need for structured security modeling to address them (Karppinen, 2005). Sauerwein's discussion of data and information quality emphasizes that quality expectations vary by domain and that cybersecurity information sharing, in particular, requires careful attention to accuracy, relevance, and context (Sauerwein, 2020). Sirkemaa argues that flexible, standards-based IT infrastructures are essential for reliable operations and for adapting to future business needs, positioning infrastructure as a strategic rather than purely technical concern (Sirkemaa, 2002). Complementing these, national archival and records management guidelines, such as those of the National Archives of the Philippines, underscore proper retention, classification, and disposition of records to safeguard institutional memory and legal compliance (National Archives of the Philippines, n.d.)

Finally, several works speak directly to local Philippine governance and LGU-level information systems. Imus and co-authors show that barangay management information systems, when designed around actual stakeholders, policies, and forms, can significantly improve work efficiency and data integrity at the grassroots level (Imus et al., 2018). Tacuban's barangay decision-support and mapping system demonstrates how basic GIS and visualization can support planning and resource allocation in a small local government context (Tacuban, 2016). Estinar and colleagues' rural health information system project in Pampanga highlights how decision-support and analytics help health units align services with community needs (Estinar et al., 2018). Lacansandile et al. report favorable outcomes from a barangay profiling dashboard that meets standards for timeliness and completeness, while Vandenbosch and Hoven, in the broader executive support system literature, explain how such systems contribute to learning, mental model building, and improved organizational performance (Lacansandile et al., 2020; Vandenbosch, 1993; Hoven, 1996). Together, these studies provide both conceptual backing and practical precedents for designing an IT management plan that links strategy, process, people, and technology in a school setting like IETI Calamba

Methodology

Research Design

This study adopted a descriptive management consulting design with a strong systems-analysis orientation. It focused on understanding existing records and accounting workflows at International Electronics and Technical Institute, Inc. (IETI) Calamba and translating these into an information technology management plan, rather than developing and deploying a full system. Qualitative techniques (interviews, focus group discussions, document review, and observation) were used to capture the current state of processes, roles, and technologies, while structured planning tools (TOWS and Process–People–Technology analyses, Software Requirements Specification, and Project Implementation Plan) were used to generate actionable outputs. The design is primarily descriptive and design-oriented, aimed at producing a context-specific blueprint for a Records and Accounting Management System.

Participants and Sampling Technique

The primary participants were key personnel directly involved in records and accounting operations at IETI Calamba. These included the school director and vice president, the registrar and records assistant, the school cashier and accounting staff, and selected faculty with IT-related expertise. A purposive sampling approach was used, deliberately selecting those who possessed detailed knowledge of current procedures, bottlenecks, and technology use. This ensured that the management plan and technical specifications were grounded in the practical realities and strategic priorities of the institution.

Data Gathering Procedure

Data gathering began with coordination and formal approval from IETI Calamba's management, followed by an initial briefing on the consultancy's scope and intended outputs. First, document review and non-participant observation were conducted to map current records and accounting processes, including record retrieval, archival, attendance reporting, fee collection, payroll preparation, and inventory tracking. Second, individual interviews were held with the director, vice president, registrar, records assistant, cashier, and accounting staff to clarify pain points, system needs, and strategic priorities. Third, a focus group discussion with records and accounting staff was conducted to validate identified issues and to discuss possible features and constraints of a future system. Insights from these activities informed the preparation of the TOWS and PPT analyses, which in turn served as the basis for drafting the SRS and PIP. Draft outputs were presented to management for feedback and refinement.

Data Analysis Procedure

Data analysis proceeded in two interconnected stages. In the diagnostic stage, qualitative data from interviews, focus groups, documents, and observations were coded and organized around key themes: strengths and weaknesses in current operations, opportunities and threats in the external environment, and the roles of people, processes, and technology. These themes fed into the TOWS Matrix, where internal and external factors were systematically combined into SO, ST, WO, and WT strategies, and into the PPT analysis, where overlaps among process, people, and technology highlighted leverage points and gaps. In the design stage, the strategies and overlaps were used to specify functional modules, non-functional requirements, and design constraints in the SRS, and to structure the phases, timelines, and responsibilities in the PIP. This ensured that the proposed system requirements and implementation roadmap directly addressed the diagnosed issues and made use of existing capabilities.

Ethical Considerations

Participation of IETI personnel was voluntary, and the purpose and scope of the project were clearly explained before data collection. Information shared by the director, administrators, and staff was treated as confidential and used solely for planning and analytical purposes within the project. Internal documents, including forms, reports, and operational manuals, were reviewed with explicit permission and were not reproduced beyond what was necessary to prepare the analyses and specifications. Descriptions of weaknesses and risks in the current system were framed constructively and were shared only with authorized school officials. The consultancy was designed to respect institutional autonomy, avoid disruption of normal operations, and support informed decision-making by IETI's leadership.

Results and Discussion

TOWS Analysis of IETI Calamba

The following provides the TOWS analysis as depicted in figure no. 1 followed by a more detailed explanation and analysis.

SO Strategy

S1O1. Low cost trainings and seminars. With a small number of faculty and employee, it is easy and low cost to send faculty members to trainings and seminars.
S2O2. Establish extensions and linkages. With a centralized and system form of administration the linkages and extension Calamba can go through outside the city and province. The school can have established connections with other universities and colleges, as long as they bear the name of the IETI
System
S3O5. Renovations of the School. Because of the strategic position of the school in the future when the bypass road is to be finished in a couple of months, the school can now prepare for it. Renovations and acquisitions of new equipment and creation of new courses
S4O4. System Development integrating the experiences of the staff. On the analysis phase of the development only one person can be the primary source of information regarding the processes and transactions of the office. The experience of the registrar will be the main source of the analysts in gathering data and dispensing his/her duty in the analysis phase of the development.

S6O7. Reengineering of transactions and processes with proper analysis. The Reengineering of processes would be done in a matter of time with the cooperation of the school registrar given her experience with records and documents. With proper analysis the integration of new process should take place.

S708. Upgrading of system and technology. With the existing process, system, and technology, the audit could now take place. This existing materials can be upgraded depending on the findings of the assessment or audit

ST Strategy

S3T2. Learning experience of students. Although the school has limited courses, with it's techvoc facilities it has an advantage in providing the best learning experience for students in the field of mechanics ad computer services

S1T1. Ratio of Techvoc schools is balanced with the number of faculty. The limited number of technical and vocational courses in the vicinity is an advantage as the rate of the faculty members are almost the same with the existing rate at IETI, in terms of incentives the school has a more detailed plan and scheme for this

S6T3. Various communication with clients. With the open communication clients who are having a long duration of waiting for their requested documents they can contact the registrar's office in various means (social media, telephone/ cellphone, and email

S2T1. Streamline communication with employees, faculty, and students. The school has a limited number of employees, the communication process or streamline would be fast and easy. Any damage or emergency in the archive records of the registrar would be immediately reported to the director and utility worker for immediate action.

S1T5. Faculty members can respond to digital attacks. As an information technology school and with trained faculty members in the area of security and digital attacks. In case of digital attacks, faculty members can respond and help the office.

S7T6. Upgrading of technology to prevent unauthorized access. The existing system and technology can be upgraded by the faculty members and also students who have the technical abilities to restrict the system on unauthorized access

WO Strategy

W1O1. Reconstruction of Organizational Structure. IETI Calamba should reconstruct the organizational structure to meet the demands of the industry and also the academe. Provided that faculty and employees are given adequate training and seminars.

W2O3. Marketing avenue for the school. With the advent of having a new bypass road, the school could utilize this to promote / market the school in various ways. Also, while preparing the school can create extension activities to promote and raise the number of enrollees and raise the income to provide new learning facilities before accepting large number of students that is the effect of the possible new location of the school.

W3O4. Creation of Record Management System. The system that would be proposed must cater the basic functions of a Record Management. The archival, updating, and tracking of documents and records.

W4O4. Integrate modules for archiving and personalized rules on updating of files. The updating and proper archival of records would be addressed of the development of the system would adhere to the rules and regulations of the National Archiving of the Philippines of r the standard archival process implemented in schools and universities

W5O6. Creation of Accounting Information System with inventory feature. Acquiring new equipment, technology, and even renovating the physical storage of hard copy of documents would solve the issue of possible damage and security of the records be it physical or virtual

WT Strategy

W1T1. Work delegation and salary-based work. Having a well-organized and functioning organizational structure would address the issues of delegation of work and stability of the school. With the proper salary scheme for the employees, they will not have an option to transfer to other school or company.

W2T3. Proper and decent facilities improving the number of satisfied and future enrollees. With a proper and decent facility, students would choose IETI rather than other schools because of its new, professional, and working facilities and environment. This would in effect promote the school. W3T3. Higher satisfaction rate. The satisfaction rate of the students, alumni, and prospect students would change into positive as the new system could monitor all requests and keep their records updated. This only an intangible benefit of the system. Also, it would promote productivity in the part of the employees.

W4T5. Minimize digital attacks. The new and renovated physical storage of the school would minimize the damage and possibility of digital attacks in the system

W6T6. Proper inventory and secured process. The inventory and other accounting services will now be updated and keeping track of all transactions because of the proposed system. Security features of the proposed system will be one of the primary concerns as the accounting involves monetary transactions and assets of the school.

External	OPPORTUNITIES	THREATS
	O1. Development of existing faculty and employees.	T1. Salary competition.
	O2. Extension and Linkages.	T2. Courses and payment schemes.
	O3. New roads nearby the school.	T3. Unsatisfied Clients.
	O4. System development.	T4. Security and Damage to Records.
	O5. Renovation.	T5. Digital Attacks.
	O6. Acquisition of equipment for upgrade.	T6. Unauthorized Access.
	O7. Reengineering of processes.	
	O8. Upgrading of system.	
Internal	O9. Assessment/ Audit.	
STRENGTHS	**SO Strategy**	**ST Strategy**
S1. Number of employees and trained faculty.	S1O1. Low cost trainings and seminars	S3T2. Learning experience of students
S2. Centralized reporting.	S2O2. Establish extensions and linkages	S1T1. Ratio of Techvoc schools are balanced with the number of faculty
S3. Tech Voc Facilities.	S3O5. Renovations of the School	S6T3. Various communication with clients
S4. Registar and Cahier's experience and length of service.	S4O4. System Development integrating the experiences of the staff	S2T1. Streamline communication with employees, faculty, and students
S5. Location of the Records.	S6O7. Reengineering of transactions and processes with proper analysis	S1T5. Faculty members can respond to digital attacks
S6. Open Communication.	S7O8. Upgrading of system and technology	S7T6. Upgrading of technology to prevent unauthorized access.
S7. Existing technology.		
WEAKNESS	**WO Strategy**	**WT Strategy**
W1. Organizational Structure.	W1O1. Reconstruction of Organizational Structure	W1T1. Work delegation and salary based work
W2. Location and Facilities.	W2O3. Marketing avenue for the school	W2T3. Proper and decent facilities improving the number of satisfied and future enrollees.
W3. Transactions and Record Keeping.	W3O4. Creation of Record Management System	W3T3. Higher satisfaction rate
W4. Updating and Archival of Records.	W4O4. Integrate modules for archiving and personalized rules on updating of files	W4T5. Minimize digital attacks
W5. Salary and other computations.	W5O6. Creation of Accounting Information System with Inventory Feature	W6T6. Proper inventory
W6. Inventory of equipment and supplies.		

Figure No. 1. TOWS Analysis of IETI Calamba

People, Process, Technology Analysis (PPT)

Shown below is the Venn Diagram of the PPT Analysis of IETI Calamba followed by analysis of each part.
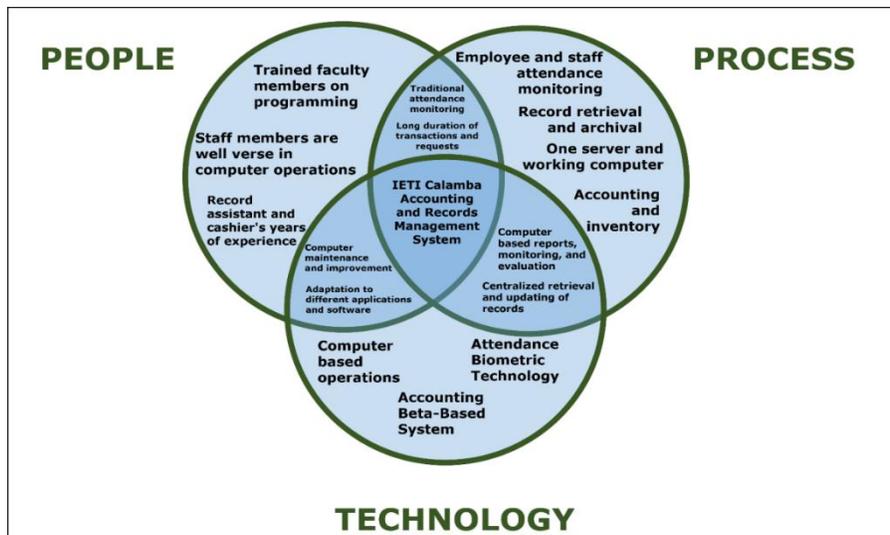

Figure No. 2. PPT Analysis of IETI Calamba

People
1. Trained faculty members on programming. Faculty members of IETI Calamba are trained on computer programming, network administration and visual graphics which are an advantage in developing systems.
2. Staff members are well versed in computer operations. Staff members are well educated and skillful in using basic computer operations.
3. Record Assistant and Cashier's years of experience. The cashier and registrar has large amount of experience which makes them irreplaceable and can be a reference in creating software as they know the process in all corners.

Process
1. Employee and Staff Attendance Monitoring. The attendance of employees is monthly written as they call it Recapitulation or shorten as "Recap". These are records of time in and time out of employees and then manually computed and reported to the main office for cheque creation.
2. Record retrieval and archival. Records retrieval and archival are manually processed and place in a rack or file document with labels.
3. Also, the records assistant will have manual searching of all files. Considered old files are placed in an archive room beside the entrance of the school.
4. One server and working on a computer. All documents that are archived and working or active files and documents are only in one server. In case of disaster or emergency there is no backup.
5. Accounting and inventory. Inventory, audit, and accounting are all done manually and inserted in an office application.

Technology
1. Computer based operations. The current process of the school in terms of records and accounting are computer-based operation, meaning they are currently handling all their records by using Microsoft office applications especially MS Excel for their data banking.
2. Accounting Beta-Based System. The accounting system uses betabased software which deals with the payment of students and payroll computation of faculty and staff.
3. Attendance Biometric Technology. Employees use a biometric system in recording their time in and out. Thigh there exist a biometric system, one faculty is assigned to create the report of all employees and to have double check their entries.

People and Technology
1. Computer maintenance and improvement. Faculty and staff members who are well verse in computer hardware are also the ones who maintain the computer laboratories and equipment.
2. Adaptation to different applications and software. Because all employees are trained to operate basic computer operations, they are ready for any change of operation provided that they are trained for such changes. This will help IETI in transitioning from their current to the proposed software.

People and Process
1. Traditional attendance monitoring. The process of monitoring, reporting, and payroll is manual in computation and a staff member delivers all the reports every cut off personally to the main office via hand carry.
2. Long duration of transactions and requests. The office caters multiple requests and document processing. This takes days before a requested document can be issued.

Process and Technology
1. Computer based reports, monitoring, and evaluation. There is an existing monitoring and evaluation process which involves manual and softcopy using MS Office application.
2. Centralized retrieval and updating of records. Having only one server and one working computer retrieval documents are centralized and updating is only done in one computer and one person only.

Software Requirement Specification

This result provides the technological plan for the technical vocational institution by using the Software Requirement specifications (SRS) template

Software Requirements Specification

Name of Project:	**IETI Calamba Records and Accounting Management System**
Requirement Classification:	**Whole System/ Web Based**
Name of Module:	**N/A**
Estimated Duration	**4 Months**

Software Requirements/ Modules	
Requirement No. 1: **Log In to different Accounts and Processes**	The system must have a log in feature for different types of accounts and each account has its own role and process.

RECORDS MANAGEMENT

Requirement No. 2: **Admission Management**	This feature is intended to streamline the traditional admission processes and offer convenience to parents, students, and other stakeholders
Requirement No. 3: **Faculty and Course Loading**	The system will include the records of the faculty and their assigned teaching load.
Requirement No. 4: **Scheduling**	Registrar's office will schedule the subjects per section and faculty assignment and also rooms using the system.
Requirement No. 5: **Attendance Management**	Attendance shall be in form of RFID technology installed in the IDs of the students, it will generate the reports per day, week, and month.
Requirement No. 6: **Private and Group Messaging**	The system shall have a feature where the accounting and records can contact the group or student regarding inquiries.
Requirement No. 7: **Document Scanning and Imaging**	The system shall convert tangible documents and files into digital files
Requirement No. 8: **Document Locator**	The web based system upon inquiry of the students, faculty, or staff can locate what is the status of their documents.
Requirement No. 9: **Dashboard and Reporting**	The system will use usage metrics, workflow details, and other important intelligence with reports
Requirement No. 10: **Folder Structure Manager**	Automates folder structure organization and maintain folder consistency
Requirement No. 11: **Document workflow automation** **ACCOUNTING MANAGEMENT**	Automates paper and document based business processes using document workflow to manage the flow of information electronically.
Requirement No. 12: **Payroll System**	The system shall have the payroll of faculty and staff according to their in and out in the biometrics system
Requirement No. 13: **Inventory and Stock Management**	The software shall feature the inventory of all supplies and acquired assets of the school. I t shall have features of stock control and notifications.

Requirement No. 14: **Student Fee Management**	This module will accept the fees of the students and will report outstanding balance and transactions made
Requirement No. 15: **Dashboard and Reporting**	The system will use usage metrics, workflow details, and other important intelligence with reports
Requirement No. 16: **Transactions**	Monitors all transactions of payments, expenses and cash flow of the office
Requirement No. 17: **Quotations**	This module shall showcase the request of quotations it will also include request aging and monitoring of contractors

Usability

Characteristic No. 4: **Efficiency**	The software must be able to adopt to the requirements and resources available. Also the system must be able to comply to the standards of the end users and system development
Characteristic No. 5: **Portability**	The software must be able to adjust to different working environments.

Design and Content Requirements	
Requirement No. 1: **Design must follow the Color Pallet of the**	Individual Colors: <mark>Green,</mark> <mark>Yellow,</mark> **White**
Requirement No. 2: **Content**	Content will come from school such as the name, address, mission, vision, and other related text and characters that will be requested by the front end developers via email.
Requirement No. 3: **Font Styles shall be in accordance to the company theme.**	Font Styles: **Bookman Old Style, Verdana, Garamond**
Requirement No. 3: **Logo and other distinct icons are in flat and minimalistic design**	The logo and the main design must be minimalistic, and user friendly. The school logo shall be used most of the time in headings and major parts of the software.
Requirement No. 4: **Design is in accordance with the process**	The design must be in accordance and well-coordinated with the functions assigned. The design must be measured in terms of accuracy.

Network Requirements	
Requirement No. 1: **Upload and attain Domain and SSL Certification**	The system will be accessible via internet and shall have its own domain and SSL Certification for one-two years.
Requirement No. 2: **Provide System and Data Server**	The system must be stored in the local server of the school.
Requirement No. 3: **Maintain stable Internet Connection**	The system must have a 24/7 internet connection from the developers to access the system in any time of the day.
Requirement No. 4: **Authentication Features**	The system must have an authentication or multiple securities, such as VPN, Browser authentication, etc.

Hardware Requirements	

Requirement No. 1: **Desktop or Laptop Computers**	The desktop must be able to access the website via any internet browser. Also, the computer must be able to process office applications Quantity: **3-4 sets**
Requirement No. 2: **Printer**	The printer must be able to print large volume of Files, accept different kinds of paper material and must have a continuous ink storage. Quantity: **3 pcs**
Requirement No. 3: **Internet Connection**	The internet connection must be able to handle multiple gadgets and manage load distribution. The provider must be able to process in different environment conditions. Quantity: **2 ISP Providers**

Management Requirements	
Requirement No. 1: **Provide SDLC**	The developers must provide and explain the software development life cycle to the end users and how the project will be updated.
Requirement No. 2: **Every two-week Reporting**	The project lead and other developers must provide the end users a monthly report or other necessary reports regarding the progress of the project.
Requirement No. 3: **Final Reporting/ Turnover**	The team must be able to report the final and acceptance criteria of the system. There must be a turnover of the system's documents and other manuals.

Conclusion and Implications

The consultancy for International Electronics and Technical Institute, Inc. (IETI) Calamba concludes that its registrar and accounting offices are at a critical juncture: they handle large, complex volumes of academic and financial records using predominantly manual processes supported only by basic office tools and a beta accounting system. The diagnostic analyses—through interviews, focus discussions, document review, and observations—confirmed three central problem areas: slow and error-prone reporting and data retrieval, vulnerable and fragmented archiving practices, and time-consuming generation of internal and external reports. At the same time, the institution possesses important strengths, including experienced records and accounting staff, IT-oriented faculty, and basic computer-based operations, which can be leveraged for digital transformation.

The IT management plan produced through this consultancy addresses these findings by providing four key outputs: a TOWS analysis, a Process–People–Technology (PPT) analysis, a detailed Software Requirements Specification (SRS), and a Project Implementation Plan (PIP). Together, these artefacts translate the diagnosed issues into a coherent design for a web-based Records and Accounting Management System that integrates admissions and records management, document imaging and tracking, payroll and inventory, student fee management, and automated dashboards and reports. The SRS embeds software quality requirements drawn from ISO/IEC 9126, while the PIP lays out an eight-month roadmap for system analysis, design, development, testing, deployment, and turnover, including responsibilities and criteria for acceptance.

The practical implication for IETI Calamba is that it now has a structured, context-specific roadmap for modernizing its records and accounting operations, rather than relying on ad hoc decisions or generic off-the-shelf solutions. Management can use the TOWS and PPT results to prioritize investments, sequence implementation phases, and plan capacity building for staff. The SRS can inform procurement or collaboration with developers, ensuring that any future system explicitly addresses identified pain points and aligns with institutional branding, policies, and infrastructure constraints. The PIP, in turn, provides a baseline schedule and governance framework that can be adapted as resources and conditions evolve.

Beyond IETI Calamba, the consultancy has broader implications for similar educational institutions and local organizations facing comparable challenges. It demonstrates that a rigorous management consulting approach—grounded in strategic analysis and participatory design—can yield actionable IT management plans even before a single line of code is written. Other schools and organizations can replicate this approach: starting with structured diagnosis (e.g., TOWS, PPT), moving to requirements specification and quality criteria, and then defining realistic implementation plans. In doing so, they can

reduce the risks associated with technology projects, increase organizational readiness, and ensure that future information systems genuinely support their missions and operational realities.

Funding

This research received no external funding from any public, commercial, or not-for-profit funding agency, and no organization provided financial support for the conduct of the study, authorship, or publication of this article.

Competing Interests Statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

Data Availability Statement

The data used in this research can be accessed through a formal request to the author of the study.

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Appendices

No appendices are included in this article.