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Cebu Institute of Technology-University Information Technology Resources Management System (CIT-UITRMS)

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ABSTRACT: This research focuses on the development and evaluation of the Web-Based Cebu Institute of Technology–University Information Technology Resources Management System (CIT-UITRMS) for Cebu Institute of Technology–University, Cebu City, during Academic Year 2025–2026. It aims to improve the management, monitoring, maintenance, and utilization of information technology resources through a centralized web-based platform. Specifically, the study examines existing IT resource management practices and challenges associated with the manual Service Order Form (SOF) process, identifies the functional and non-functional requirements of the system, determines its essential features and functionalities, evaluates its software quality, assesses user acceptance, and proposes an enhancement framework based on the findings. The study involves 30 respondents composed of Technical Support Group personnel, administrative office representatives, academic department representatives, and computer laboratory in-charges. A descriptive-developmental research approach is appropriate for examining existing practices, determining user requirements, developing the system, and evaluating its quality and acceptance. Data are gathered through a researcher-made questionnaire, system evaluation, and relevant observations, subject to institutional approval. Frequency, percentage, weighted mean, and standard deviation are used to analyze the collected data. The proposed CIT-UITRMS integrates IT asset inventory management, electronic service request processing, maintenance and repair documentation, equipment lifecycle tracking, access control, and automated report generation. The system is intended to provide authorized users with centralized access to updated IT resource information, enable monitoring of service requests, improve the retrieval of maintenance records, and support decisions concerning equipment replacement, procurement, and resource allocation. Software quality is evaluated using the eight quality characteristics of ISO/IEC 25010:2011, while user acceptance is assessed through the Technology Acceptance Model, particularly perceived usefulness, perceived ease of use, attitude toward using, and behavioral intention to use. The study is expected to provide a practical framework for strengthening IT resource management, improving service delivery, promoting accountability, and supporting the sustainable utilization of technology resources at CIT-U. Final conclusions regarding system quality and user acceptance should be based on actual evaluation results.

KEYWORDS: Technology Management, Web-Based System, IT Resource Management, Asset Inventory, Maintenance Management, Service Request Management, Software Quality, User Acceptance, Technology Acceptance Model, CTU-Main Campus, Cebu Philippines

DEFINITION OF TERMS

The following terms are defined conceptually and operationally to clarify their meanings and applications in the study entitled Web-Based Cebu Institute of Technology–University Information Technology Resources Management System (CIT-UITRMS).

Acceptability. This refers to the degree to which CIT-UITRMS satisfies the expectations and requirements of its intended users in terms of software quality, usability, and usefulness. The concept is supported by the information systems success model, which considers system quality, user satisfaction, system use, and net benefits in evaluating an information system (DeLone & McLean, 2003).

Asset Lifecycle Tracking. This refers to the systematic monitoring of IT assets from acquisition and deployment to maintenance, reassignment, retirement, and disposal. It is guided by asset management principles that emphasize the coordinated management of assets throughout their life cycles (International Organization for Standardization [ISO], 2014).

Behavioral Intention to Use. This refers to the willingness of intended users to use CIT-UITRMS in performing their assigned IT resource management tasks. Davis (1989) identified perceived usefulness and perceived ease of use as important determinants of technology acceptance, while Venkatesh et al. (2003) examined behavioral intention as a predictor of technology use.

The system, CIT-UITRMS, refers to the proposed web-based Cebu Institute of Technology–University Information Technology Resources Management System, which is designed to centralize IT asset inventory, technical service requests, maintenance records, resource monitoring, and report generation. Its development is consistent with IT service management principles that promote organized service delivery, operational control, and continual improvement (ISO, 2018).

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Computer Laboratory In-Charge. This refers to personnel responsible for monitoring computer laboratory equipment, maintaining inventory records, and reporting technical problems involving laboratory resources. These responsibilities are consistent with IT asset management practices that emphasize asset identification, recordkeeping, monitoring, and lifecycle control (International Organization for Standardization & International Electrotechnical Commission [ISO/IEC], 2017).

Data Security. This refers to the measures implemented to protect system information against unauthorized access, alteration, disclosure, or destruction. It encompasses security controls and risk management practices intended to protect information systems and organizational assets (National Institute of Standards and Technology [NIST], 2024).

Enhancement Framework. This refers to the proposed set of strategies and recommendations formulated from the study's findings to improve the functionality, quality, implementation, and sustainability of CIT-UITRMS. It draws on the principle of continual improvement in IT service management, whereby evaluation results inform corrective actions and system improvements (ISO, 2018).

Functional Suitability. This refers to the extent to which CIT-UITRMS provides functions that meet specified user needs and operational requirements. It is a software quality characteristic concerned with whether a system's functions are appropriate, complete, and correct for its intended purposes (ISO/IEC, 2023).

Information Technology Resources. These refer to the university's technological assets, including computers, printers, network devices, servers, software, and related equipment used to support academic and administrative operations. These resources fall within the scope of organizational asset management and information technology asset identification and control (ISO/IEC, 2017).

IT Asset Management. This refers to the systematic process of recording, monitoring, maintaining, and managing the university's IT assets throughout their useful life. It follows the principles of IT asset management, which emphasize asset identification, inventory accuracy, lifecycle management, and effective utilization (ISO/IEC, 2017).

Maintenance Management. This refers to the process of recording maintenance activities, monitoring equipment conditions, scheduling preventive maintenance, and documenting repairs performed on IT assets. It supports the systematic management of asset performance, risks, and lifecycle costs (ISO, 2014).

Perceived Ease of Use. This refers to the degree to which intended users believe that CIT-UITRMS can be operated with minimal effort. Davis (1989) defined perceived ease of use as the extent to which a person believes that using a particular system will be free of effort.

Perceived Usefulness. This refers to the degree to which intended users believe that CIT-UITRMS can improve their efficiency and effectiveness in managing IT resources and processing technical service requests. Davis (1989) defined perceived usefulness as the extent to which a person believes that using a particular system will enhance job performance.

Reliability. This refers to the ability of CIT-UITRMS to perform its intended functions consistently under specified operating conditions. It is a software quality characteristic associated with consistent performance, availability, and the ability to operate as intended under specified conditions (ISO/IEC, 2023).

Service Request Management. This refers to the process of submitting, recording, tracking, prioritizing, and resolving technical support requests through CIT-UITRMS. It is aligned with IT service management principles that establish structured processes for delivering and managing IT services (ISO, 2018).

Software Quality. This refers to the degree to which CIT-UITRMS satisfies specified quality requirements and user expectations based on the software quality criteria adopted in the study. The ISO/IEC 25010 quality model for software products provides a framework for evaluating software quality characteristics relevant to system performance and user needs (ISO/IEC, 2023).

System Usability. This refers to the extent to which users can understand, learn, and operate CIT-UITRMS effectively and efficiently. Usability is recognized in software quality evaluation and concerns the extent to which intended users can interact with a system successfully and satisfactorily (ISO/IEC, 2023).

Technical Support Group (TSG). This refers to the personnel responsible for providing technical assistance, addressing IT-related concerns, maintaining equipment, and supporting the university's IT infrastructure. They handle IT service management processes, including those involving service delivery, incident handling, and operational support (ISO, 2018).

Technology Acceptance Model (TAM). This refers to the theoretical model developed by Davis (1989), which explains technology acceptance through factors such as perceived usefulness and perceived ease of use. In this study, TAM provides the theoretical basis for assessing users' acceptance of CIT-UITRMS.

Web-Based System. This refers to a software application accessed through a web browser over a network, allowing authorized users to perform designated tasks without requiring a separate desktop application. Software quality principles addressing functional suitability, usability, reliability, security, and compatibility (ISO/IEC, 2023) inform its development and evaluation.

INTRODUCTION

The continuous development of Information and Communication Technology (ICT) has significantly influenced the ways higher education institutions administer technological assets, deliver educational services, and carry out organizational responsibilities (UNESCO, 2023). Various IT resources, including computers, servers, network devices, software programs, and printers, play an essential role in facilitating teaching, research activities, communication, and university operations (UNESCO, 2023). The growing reliance on these technologies necessitates the implementation of systematic procedures for asset inventory, maintenance supervision, resource distribution, and equipment replacement (National Institute of Standards and Technology [NIST], 2022). Inadequate coordination of IT resources may create challenges in preserving accurate inventory information, monitoring equipment performance, and establishing appropriate maintenance and replacement schedules (NIST, 2022). Consequently, implementing a centralized Information Technology Resources Management System can enhance operational effectiveness, promote transparency and accountability, facilitate data-driven decision-making, and encourage the sustainable utilization of technological assets (International Organization for Standardization [ISO], 2014).

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This study aims to develop the Cebu Institute of Technology–University Information Technology Resources Management System (CIT-UITRMS), a web-based application intended to consolidate and streamline the management of the university's IT resources. The proposed platform will combine asset inventory management, technical service request processing, equipment maintenance documentation, resource utilization monitoring, asset lifecycle tracking, and administrative reporting within an integrated digital environment. It is intended to provide authorized users with accessible and updated information regarding equipment availability, physical condition, maintenance history, and replacement needs to support timely and informed decision-making. Furthermore, the system will incorporate electronic documentation and analytical reporting to assist in procurement planning, preventive maintenance scheduling, and the appropriate retirement of obsolete technological assets, following recognized information security and asset management principles (NIST, 2022; ISO, 2014). Through these integrated functions, CIT-UITRMS is designed to improve the accessibility, accuracy, and practical value of IT resource information while advancing the university's digital transformation and sustainable resource management initiatives (UNESCO, 2023).

CIT-UITRMS development draws on literature that highlights the importance of technology governance, organized asset management, and sustainable digital transformation in educational institutions. UNESCO (2023) emphasized that digital technologies can strengthen educational delivery, institutional planning, and administrative management when supported by appropriate governance structures, equitable access, and evidence-based implementation. Similarly, the National Institute of Standards and Technology (NIST, 2024) pointed out the necessity of identifying, documenting, classifying, and managing organizational assets, including hardware, software, and information systems, throughout their operational lifecycles as part of cybersecurity risk management. The International Organization for Standardization (ISO, 2024) also highlighted the value of systematic asset management in optimizing asset performance, maximizing organizational value, and supporting strategic institutional objectives. Environmental considerations further strengthen the need for responsible IT resource management, as the World Health Organization (WHO, 2024) reported that approximately 62 million metric tonnes of electronic waste were generated worldwide in 2022, with only 22.3% documented as formally collected and recycled. In the Philippines, Republic Act No. 6969 establishes regulatory provisions for controlling toxic substances and hazardous and nuclear wastes, reinforcing the importance of properly managing electronic equipment that falls under applicable hazardous waste regulations.

REVIEW LITERATURE

This chapter reviews literature and studies relevant to developing and evaluating the Web-Based Cebu Institute of Technology–University Information Technology Resources Management System (CIT-UITRMS). It discusses IT asset management, software quality, IT service management, technology acceptance, and information systems success.

ISO and IEC (2017) emphasized IT asset lifecycle management through ISO/IEC 19770-1, supporting accurate inventory, asset tracking, and maintenance documentation. ISO/IEC 25010 (2023) provides software quality characteristics for evaluating system performance and suitability. ISO/IEC 20000-1 (2018) establishes requirements for effective IT service management, including service delivery and continuous improvement. Davis (1989), through the Technology Acceptance Model, highlighted perceived usefulness and perceived ease of use as determinants of technology acceptance. DeLone and McLean (2003) emphasized system quality, information quality, service quality, use, user satisfaction, and net benefits in evaluating information systems.

Related studies demonstrate the benefits of web-based asset and inventory management systems. Putra et al. (2020) and Rahmansyah et al. (2023) demonstrated improved asset monitoring and reporting. Pamungkas et al. (2024) developed an inventory system for university laboratory equipment that includes tracking and reporting features. Rachmat et al. (2022) and Gormantara and Elisabeth (2023) examined information system success and user satisfaction.

Overall, these sources support developing CIT-UITRMS to integrate IT inventory, technical service requests, maintenance records, resource monitoring, and management reporting. Evaluating software quality and user acceptance will guide system enhancements responsive to university operational requirements.

OBJECTIVES

1. Determine the existing practices and challenges encountered by the Technical Support Group (TSG) in managing IT resources through the manual Service Order Form (SOF) system.
2. Identify the functional and non-functional requirements for developing CIT-UITRMS as to:
    2.1. IT asset and maintenance management;
    2.2. Service delivery and information management; and
    2.3. System quality, security, and sustainability.
3. Describe the features and functionalities incorporated into the developed CIT-UITRMS to address the identified IT resource management requirements.
4. Evaluate the software quality of CIT-UITRMS using the ISO/IEC 25010 Software Quality Model, focusing on the following aspects of the ISO/IEC 25010 Software Quality Model:
    4.1. Functional suitability;
    4.2. Performance efficiency;
    4.3. Compatibility;
    4.4. Usability;
    4.5. Reliability;
    4.6. Security;
    4.7. Maintainability; and
    4.8. Portability.

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5. Determine the level of user acceptance of CIT-UITRMS based on the Technology Acceptance Model (TAM) as to:
   5.1. Perceived usefulness;
   5.2. Perceived ease of use;
   5.3. Attitude towards using; and
   5.4. Behavioral intention to use.
6. Formulate a system enhancement framework for CIT-UITRMS based on the findings of the study.

MATERIALS AND METHODS

This section presents the materials, research design, respondents, data-gathering instruments, procedures, and statistical tools used in conducting the study. It describes the systematic methods employed to collect, analyze, and interpret the data to achieve the study's objectives and ensure the validity and reliability of the findings.

Design

The study employed a developmental research design combined with a descriptive-evaluative approach to develop and assess the Cebu Institute of Technology–University Information Technology Resources Management System (CIT-UITRMS). The developmental component focused on designing and implementing a web-based application for IT asset inventory, technical service requests, maintenance documentation, resource monitoring, and administrative reporting. The descriptive component examined existing IT resource management practices and challenges encountered by the Technical Support Group (TSG), while the evaluative component assessed the developed system's software quality and user acceptance.

The software quality evaluation was anchored in the ISO/IEC 25010 Software Quality Model, while user acceptance was assessed using the Technology Acceptance Model (TAM). The findings served as the basis for formulating a system enhancement framework responsive to the university's operational requirements.

Environment

The study was conducted at Cebu Institute of Technology–University (CIT-U), located in Cebu City, Philippines. The university served as the research locale because its academic and administrative operations relied on various information technology resources requiring systematic inventory management, technical support, maintenance monitoring, and utilization reporting. The study focused on the existing Service Order Form (SOF) process and the requirements of the university's Technical Support Group and other authorized system users.

Respondents

The participants consisted of personnel directly involved in IT resource management, technical support, equipment maintenance, and system utilization. These included members of the Technical Support Group, IT personnel, administrative representatives, and other authorized personnel who regularly requested or used technical services.

Purposive sampling was employed to select participants based on their relevant responsibilities, experience, and familiarity with the existing IT resource management procedures. The final sample size was determined according to the availability of qualified participants and the requirements for system evaluation. Software quality assessment also involved qualified IT experts or software evaluators, while user acceptance assessment involved intended CIT-UITRMS users. The actual number and distribution of participants were documented after the sampling process.

Table 1: Distribution of Respondent Groups
N=30

Stakeholder Group	Frequency (f)	Percentage (%)
Technical Support Group (TSG) Personnel	6	20
Administrative Offices	9	30
Academic Departments	9	30
Computer Laboratory In-Charge	6	20
Total	**30**	**100**

Instruments

The study utilized the existing manual Service Order Form, IT asset inventory records, maintenance documentation, and other relevant university records as references for identifying system requirements. Development materials included computer hardware, web development software, a database management system, a web browser, and a suitable development and testing environment.

Data were collected using the following instruments:

1. Requirements Assessment Guide. This instrument gathered information about existing IT resource management practices, operational difficulties, and functional and non-functional requirements.

2. Software Quality Evaluation Questionnaire. This instrument assessed CIT-UITRMS according to eight selected quality characteristics: functional suitability, performance efficiency, compatibility, usability, reliability, security, maintainability, and portability, based on the study's adopted ISO/IEC 25010 model.

3. User Acceptance Questionnaire. This instrument measured perceived usefulness, perceived ease of use, attitude toward using, and behavioral intention to use CIT-UITRMS, based on the Technology Acceptance Model.

The questionnaires were reviewed by qualified experts to establish content relevance, clarity, and alignment with the research objectives. Appropriate pilot testing and reliability analysis were conducted when feasible before the final administration.

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System Development Procedure

The system was developed through an iterative software development process consisting of the following phases:

1. Requirements Analysis. Existing SOF procedures, asset records, and technical support activities were examined to identify operational problems and system requirements.

2. System Design. The system architecture, database structure, user interfaces, access privileges, workflows, and reporting functions were designed based on the identified requirements.

3. System Development. The web-based application was programmed to support asset registration, inventory monitoring, service request submission, request status tracking, maintenance history, resource monitoring, and administrative report generation.

4. System Testing. The application underwent functional testing, integration testing, usability checks, and appropriate performance and security assessments. Identified defects were corrected before evaluation.

5. System Evaluation. Qualified evaluators and intended users assessed the software quality and user acceptance of CIT-UITRMS using the prepared instruments.

6. System Enhancement. Evaluation findings were analyzed to identify strengths, weaknesses, and recommended improvements. These results informed the proposed system enhancement framework.

Data Gathering Procedure

The data were gathered through a structured questionnaire administered to selected respondents involved in IT asset management and technical support services at Cebu Institute of Technology–University. The respondents evaluated the existing IT resource management practices, system requirements, software quality, and user acceptance of the proposed CIT-UITRMS. The collected data were organized, tabulated, and analyzed using appropriate statistical tools to determine the system's requirements, acceptability, and potential to improve IT resource management and service delivery.

Permission to conduct the study was secured from the appropriate university authorities. After getting permission, the researcher worked with the Technical Support Group and other qualified participants to find out about current procedures and operational problems.

The researcher reviewed relevant records, administered the requirements assessment instrument, and used the findings to guide system development. Once the application was developed and tested, participants were oriented on its functions and provided sufficient opportunity to explore its features. The software quality and user acceptance questionnaires were then administered. Completed responses were checked, organized, and prepared for analysis. Participation was voluntary, and appropriate measures were observed to protect confidential institutional information and respondents' identities.

Treatment of Data

The data gathered were tabulated, analyzed, and interpreted using appropriate descriptive statistical tools. Frequency and percentage were used to summarize respondents' profiles and responses, while the weighted mean was employed to determine the level of system requirements, software quality, and user acceptance of CIT-UITRMS. The established five-point Likert scale was used to interpret the results. Higher mean scores established a five-point Likert scale, with higher mean scores indicating stronger agreement, greater system acceptability, or a higher level of requirement. Responses to open-ended questions were analyzed thematically to identify recurring concerns, suggestions, and recommendations for improving the system. The findings served as the basis for evaluating the proposed CIT-UITRMS and identifying areas for further enhancement.

Frequency counts and percentages were used to summarize participant characteristics and identified operational concerns. Weighted means and standard deviations were used to describe the assessment of system quality and user acceptance. The interpretation of mean scores followed a five-point Likert scale, subject to the study's adopted rating descriptors.

Qualitative responses concerning existing practices, challenges, and improvement recommendations were organized into recurring themes. The quantitative and qualitative findings were integrated to formulate the system enhancement framework.

Ethical Considerations

The study observed informed consent, voluntary participation, confidentiality, and responsible data handling. Only authorized personnel were permitted to access system functions and relevant IT records. Sensitive information, including user credentials and institutional data, was protected through appropriate access controls and security measures. Data were used solely for the stated research purposes and handled in accordance with applicable university policies and data protection requirements.

RESULTS AND DISCUSSIONS

The results and discussions present the assessment of the proposed Cebu Institute of Technology–University IT Resource Management System (CIT-UITRMS) in terms of existing IT resource management challenges, system requirements, software quality, and user acceptance. The results indicate that there is a need for a centralized, secure, and efficient web-based system to make it easier to keep track of assets, manage maintenance, deliver services, and obtain information. The results also provide a basis for identifying areas for continuous system improvement and ensuring sustainable IT resource management.

The implementation of the Cebu Institute of Technology-University Information Technology Resources Management System (CIT-UITRMS) significantly enhances operational, administrative, security, and strategic outcomes across the institutional ecosystem. By centralizing hardware inventories, software licensing, and laboratory resource tracking, the system optimizes asset allocation, eliminates redundant purchases, and minimizes asset loss. Furthermore, integrating automated maintenance scheduling and helpdesk support reduces network downtime, directly enhancing instructional quality and academic productivity for students and faculty. Centralized role-based access controls, robust audit logs, and proactive risk management frameworks enforce strict compliance with privacy standards such as the Philippine Data Privacy Act of 2012, safeguarding sensitive institutional assets from cyber threats. Ultimately, the system provides management with actionable, data-driven analytics on usage lifecycles and equipment performance, driving proactive budget forecasting and cost-optimized procurement strategies.

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The Technical Support Group (TSG) manages the university's IT resources, including asset deployment, inventory monitoring, maintenance, repair, replacement, retirement, and technical support services. Under the existing manual Service Order Form (SOF) system, service requests, inventory records, and maintenance activities are documented and stored manually. This process presents challenges in tracking asset life cycles, retrieving maintenance histories, monitoring recurring technical problems, maintaining accurate records, identifying End-of-Life (EoL) and End-of-Support (EoS) equipment, and generating timely management reports. These limitations may affect maintenance scheduling, procurement planning, budgeting, and resource utilization. The findings indicate a preference for the proposed CIT-UITRMS, which obtained a weighted mean of 4.43, while IT service and support request management and EoL/EoS resource monitoring each received a weighted mean of 4.50. Five of the 16 respondents who provided substantive answers mentioned centralized information access and retrieval. Overall, these findings support developing CIT-UITRMS to centralize IT resource records, streamline service request processing, improve maintenance documentation, and facilitate timely reporting and informed decision-making.

The findings revealed that the functional and non-functional requirements of CIT-UITRMS were very highly required, with overall means of 4.49 for IT Asset and Maintenance Management, 4.53 for Service Delivery and Information Management, and 4.51 for System Quality, Security, and Sustainability. Respondents particularly emphasized centralized information management, maintenance documentation, data protection, and access controls. The identified features and functionalities also obtained an overall mean of 4.53, indicating a strong need for an integrated web-based platform to improve IT resource monitoring, service request processing, recordkeeping, and reporting.

In terms of software quality, CIT-UITRMS was rated Very Highly Acceptable across all eight characteristics: functional suitability (4.53), performance efficiency (4.48), compatibility (4.49), usability (4.52), reliability (4.49), security (4.55), maintainability (4.45), and portability (4.47). Security received the highest rating, while maintainability received the lowest, indicating the importance of sustaining data protection while improving technical documentation, troubleshooting, and system updates.

Regarding user acceptance, perceived usefulness obtained a mean of 4.53, perceived ease of use 4.51, attitude toward using 4.55, and behavioral intention to use 4.53. All were interpreted as Very Highly Acceptable, reflecting favorable perceptions and willingness to adopt the system.

Overall, the findings support the development and continued enhancement of CIT-UITRMS. Improvements should prioritize technical documentation, error handling, user guidance, performance monitoring, reporting capabilities, and regular security assessments to ensure reliable, secure, and sustainable IT resource management at Cebu Institute of Technology–University.

FIGURES AND TABLES

This section presents the figures and tables used to summarize and illustrate the study's findings. These provide a clear and systematic presentation of the data on the development, evaluation, and user acceptance of the proposed CIT-UITRMS.



Figure 1. Location Map of the Research Environment

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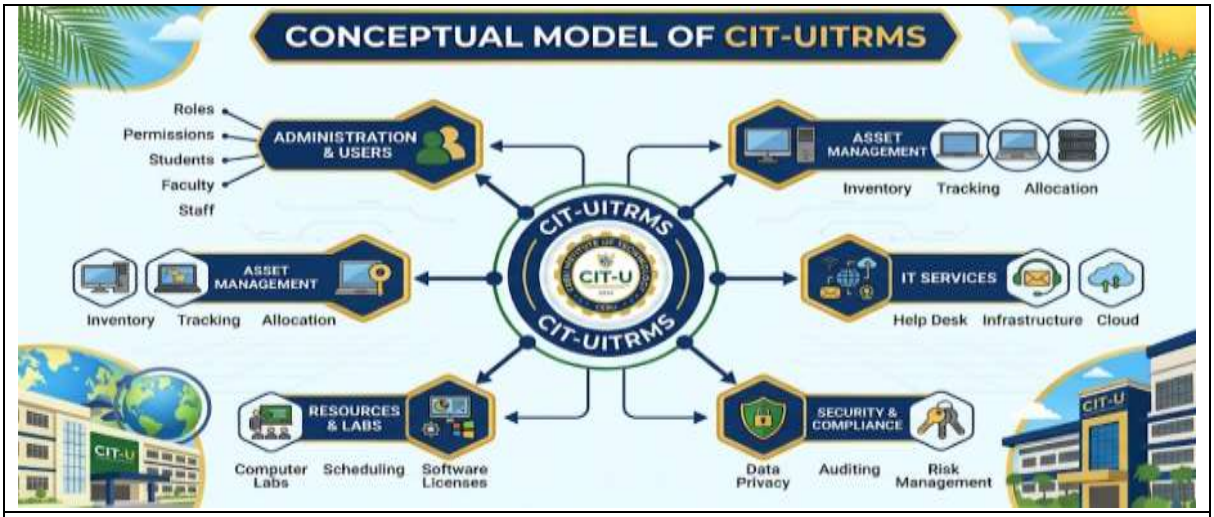


Figure 2. Conceptual Model

Table 2. IT Asset and Maintenance Management
N = 30

Attributes	5	4	3	2	1	Mean	SD	Interpretation
The system records and maintains an updated inventory of IT assets.	18	9	3	0	0	4.50	0.68	Very Highly Required
The system tracks the location, assignment, and status of IT equipment.	17	10	3	0	0	4.47	0.68	Very Highly Required
The system records equipment repair and maintenance histories.	19	8	3	0	0	4.53	0.68	Very Highly Required
The system supports monitoring of asset lifecycle, including retirement and disposal.	16	11	3	0	0	4.43	0.68	Very Highly Required
The system helps identify equipment requiring preventive maintenance or replacement.	18	9	3	0	0	4.50	0.68	Very Highly Required
Overall Mean						**4.49**		**Very Highly Required**

Suggested Interpretation Scale

Weight	Mean Range	Verbal Interpretation
5	4.21–5.00	Very Highly Required
4	3.41–4.20	Highly Required
3	2.61–3.40	Moderately Required
2	1.81–2.60	Slightly Required
1	1.00–1.80	Not Required

Table 3. Service Delivery and Information Management
N = 30

Attributes	5	4	3	2	1	Mean	SD	Interpretation
The system allows users to submit IT service requests electronically.	19	8	3	0	0	4.53	0.68	Very Highly Required
The system enables users to monitor the status of submitted service requests.	18	9	3	0	0	4.50	0.68	Very Highly Required
The system centralizes IT service requests, maintenance records, and related information.	20	8	2	0	0	4.60	0.62	Very Highly Required
The system facilitates the retrieval of IT resource and service records.	18	10	2	0	0	4.53	0.63	Very Highly Required
The system generates reports to support planning and decision-making.	17	10	3	0	0	4.47	0.68	Very Highly Required
Overall Mean						**4.53**		**Very Highly Required**

Table 4. System Quality, Security, and Sustainability
N = 30

Attributes	5	4	3	2	1	Mean	SD	Interpretation
The system is easy to learn and use.	17	10	3	0	0	4.47	0.68	Very Highly Required
The system responds efficiently and performs its functions reliably.	18	9	3	0	0	4.50	0.68	Very Highly Required

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The system protects IT resource records through appropriate access controls and data security measures.	20	8	2	0	0	4.60	0.62	Very Highly Required
The system supports the identification of obsolete IT assets for replacement and responsible disposal.	17	10	3	0	0	4.47	0.68	Very Highly Required
Overall Mean						**4.51**		**Very Highly Required**

Table 5. Features and Functionalities of CIT-UITRMS
N = 30

Attributes	5	4	3	2	1	Mean	SD	Interpretation
The system provides centralized recording and monitoring of IT assets.	18	9	3	0	0	4.50	0.68	Very Highly Required
The system records equipment maintenance schedules, repairs, and service histories.	19	8	3	0	0	4.53	0.68	Very Highly Required
The system allows users to submit and track IT service requests electronically.	19	8	3	0	0	4.53	0.68	Very Highly Required
The system provides centralized storage and retrieval of IT-related records.	20	8	2	0	0	4.60	0.62	Very Highly Required
The system generates reports to support IT resource planning and decision-making.	17	10	3	0	0	4.47	0.68	Very Highly Required
The system provides user access controls and security measures to protect institutional data.	20	8	2	0	0	4.60	0.62	Very Highly Required
The system identifies obsolete IT assets for replacement and responsible disposal.	17	10	3	0	0	4.47	0.68	Very Highly Required
Overall Mean						**4.53**		**Very Highly Required**

Table 6. Functional Suitability
N = 30

Characteristics	5	4	3	2	1	Mean	SD	Interpretation
Provides necessary functions for IT asset inventory management.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
Accurately records and updates IT asset information.	19	8	3	0	0	4.53	0.68	Very Highly Acceptable
Records maintenance schedules and repair histories.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
Allows users to submit and monitor IT service requests.	19	8	3	0	0	4.53	0.68	Very Highly Acceptable
Generates reports for IT resource management and decision-making.	17	10	3	0	0	4.47	0.68	Very Highly Acceptable
Overall Mean						**4.51**	**0.68**	**Very Highly Acceptable**

Table 7. Performance Efficiency
N = 30

Characteristics	5	4	3	2	1	Mean	SD	Interpretation
Loads pages and displays information within an acceptable time.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
Processes IT service requests efficiently.	17	10	3	0	0	4.47	0.68	Very Highly Acceptable
Retrieves asset and maintenance records quickly.	19	8	3	0	0	4.53	0.68	Very Highly Acceptable
Generates reports without unnecessary delays.	17	10	3	0	0	4.47	0.68	Very Highly Acceptable
Performs efficiently during normal use by multiple authorized users.	16	11	3	0	0	4.43	0.68	Very Highly Acceptable
Overall Mean						**4.48**	**0.68**	**Very Highly Acceptable**

Table 8. Compatibility
N = 30

Characteristics	5	4	3	2	1	Mean	SD	Interpretation
Operates properly on commonly used web browsers.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
Can be accessed using compatible desktop and laptop computers.	19	8	3	0	0	4.53	0.68	Very Highly Acceptable
Displays information consistently across supported devices and browsers.	17	10	3	0	0	4.47	0.68	Very Highly Acceptable
Works within the university's available network and computing environment.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
Coexists with other applications without unnecessary interference.	16	11	3	0	0	4.43	0.68	Very Highly Acceptable
Overall Mean						**4.49**	**0.68**	**Very Highly Acceptable**

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Table 9. Usability
N = 30

Characteristics	5	4	3	2	1	Mean	SD	Interpretation
The system interface is clear and easy to understand.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
Users can easily navigate menus and functions.	19	8	3	0	0	4.53	0.68	Very Highly Acceptable
Provides understandable instructions and messages.	17	10	3	0	0	4.47	0.68	Very Highly Acceptable
Users can learn essential tasks with minimal assistance.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
Presents asset information and service request details in an organized manner.	20	8	2	0	0	4.60	0.62	Very Highly Acceptable
Overall Mean						**4.52**	**0.67**	**Very Highly Acceptable**

Table 10. Reliability
N = 30

Characteristics	5	4	3	2	1	Mean	SD	Interpretation
Performs its functions consistently during normal operation.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
Maintains accurate and consistent IT asset records.	19	8	3	0	0	4.53	0.68	Very Highly Acceptable
Saves submitted information correctly.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
Handles errors without causing unnecessary data loss.	16	11	3	0	0	4.43	0.68	Very Highly Acceptable
Is available when authorized users need its functions.	17	10	3	0	0	4.47	0.68	Very Highly Acceptable
Overall Mean						**4.49**	**0.68**	**Very Highly Acceptable**

Table 11. Security
N = 30

Characteristics	5	4	3	2	1	Mean	SD	Interpretation
Requires appropriate authentication before granting access.	20	8	2	0	0	4.60	0.62	Very Highly Acceptable
Limits user access according to assigned roles and responsibilities.	19	8	3	0	0	4.53	0.68	Very Highly Acceptable
Protects IT asset and service request records against unauthorized access.	20	8	2	0	0	4.60	0.62	Very Highly Acceptable
Helps prevent unauthorized modification or deletion of records.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
Protects confidential information through appropriate data security measures.	19	8	3	0	0	4.53	0.68	Very Highly Acceptable
Overall Mean						**4.55**	**0.66**	**Very Highly Acceptable**

Table 12. Maintainability
N = 30

Characteristics	5	4	3	2	1	Mean	SD	Interpretation
Can be updated to accommodate new IT resource management requirements.	17	10	3	0	0	4.47	0.68	Very Highly Acceptable
Allows technical problems to be identified and diagnosed efficiently.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
Allows system components to be modified without unnecessarily affecting other functions.	16	11	3	0	0	4.43	0.68	Very Highly Acceptable
Can be tested after modifications to verify correct functionality.	17	10	3	0	0	4.47	0.68	Very Highly Acceptable
Can be maintained using clear technical documentation and organized code.	16	10	4	0	0	4.40	0.72	Very Highly Acceptable
Overall Mean						**4.45**	**0.69**	**Very Highly Acceptable**

Table 13. Portability
N = 30

Characteristics	5	4	3	2	1	Mean	SD	Interpretation
Can be deployed in a compatible server environment.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
Can be transferred to another compatible hosting environment with minimal modification.	16	11	3	0	0	4.43	0.68	Very Highly Acceptable
Can be configured for deployment using documented installation procedures.	17	10	3	0	0	4.47	0.68	Very Highly Acceptable
Can be accessed from supported computers without a separate desktop installation.	19	8	3	0	0	4.53	0.68	Very Highly Acceptable
Can be reconfigured for future changes in the university's computing infrastructure.	16	10	4	0	0	4.40	0.72	Very Highly Acceptable
Overall Mean						**4.47**	**0.69**	**Very Highly Acceptable**

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Table 14. Perceived Usefulness
N = 30

Characteristics	5	4	3	2	1	Mean	SD	Interpretation
CIT-UITRMS improves the efficiency of IT asset management.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
The system facilitates faster retrieval of IT asset and maintenance records.	19	8	3	0	0	4.53	0.68	Very Highly Acceptable
CIT-UITRMS improves the monitoring of IT service requests and maintenance activities.	18	10	2	0	0	4.53	0.63	Very Highly Acceptable
The system supports accurate reporting and informed decision-making.	17	10	3	0	0	4.47	0.68	Very Highly Acceptable
CIT-UITRMS improves the overall management of university IT resources.	19	9	2	0	0	4.57	0.63	Very Highly Acceptable
Overall Mean						**4.52**	**0.66**	**Very Highly Acceptable**

Table 15. Perceived Ease of Use
N = 30

Characteristics	5	4	3	2	1	Mean	SD	Interpretation
The system interface is clear and easy to understand.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
The menus and functions of CIT-UITRMS are easy to navigate.	19	8	3	0	0	4.53	0.68	Very Highly Acceptable
Users can learn to perform essential tasks with minimal assistance.	17	10	3	0	0	4.47	0.68	Very Highly Acceptable
IT asset and service request information is presented in an organized manner.	20	8	2	0	0	4.60	0.62	Very Highly Acceptable
The system provides understandable instructions and feedback messages.	17	9	4	0	0	4.43	0.73	Very Highly Acceptable
Overall Mean						**4.51**	**0.68**	**Very Highly Acceptable**

Table 16. Attitude Toward Using
N = 30

Characteristics	5	4	3	2	1	Mean	SD	Interpretation
I have a positive attitude toward using CIT-UITRMS for IT resource management.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
I am comfortable using the system to manage IT-related information.	19	8	3	0	0	4.53	0.68	Very Highly Acceptable
I believe using CIT-UITRMS is a good idea for the university.	20	8	2	0	0	4.60	0.62	Very Highly Acceptable
I prefer using the system over manual procedures for appropriate IT management tasks.	18	10	2	0	0	4.53	0.63	Very Highly Acceptable
I consider CIT-UITRMS a beneficial tool for university personnel.	19	9	2	0	0	4.57	0.63	Very Highly Acceptable
Overall Mean						**4.55**	**0.65**	**Very Highly Acceptable**

Table 17. Behavioral Intention to Use
N = 30

Characteristics	5	4	3	2	1	Mean	SD	Interpretation
I intend to use CIT-UITRMS regularly for my assigned IT-related tasks.	19	8	3	0	0	4.53	0.68	Very Highly Acceptable
I plan to use the system whenever I need to access IT asset or service request information.	20	8	2	0	0	4.60	0.62	Very Highly Acceptable
I am willing to continue using CIT-UITRMS in the future.	19	9	2	0	0	4.57	0.63	Very Highly Acceptable
I would recommend the system to other authorized university personnel.	18	9	3	0	0	4.50	0.68	Very Highly Acceptable
I am willing to participate in training or orientation to improve my use of the system.	17	10	3	0	0	4.47	0.68	Very Highly Acceptable
Overall Mean						**4.53**	**0.66**	**Very Highly Acceptable**

CONCLUSION

The study's objectives lead to the following conclusions:

1. The existing manual Service Order Form (SOF) system provides a basic mechanism for managing IT resource requests, inventory, maintenance, repairs, and technical support services. However, its manual processes may result in delays, fragmented records, difficulties in tracking IT assets, and limited access to real-time information, leading to the need for a centralized web-based management system.
2. The functional and non-functional requirements of the Cebu Institute of Technology–University Information Technology Resources Management System (CIT-UITRMS) were identified to address the needs of the Technical Support Group (TSG) in IT asset and maintenance management, service delivery, information management, system quality, security, and sustainability. These requirements served as the foundation for the system's design and development.

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3. The developed CIT-UITRMS incorporated features and functionalities intended to improve IT asset inventory, service order processing, maintenance monitoring, information storage, request tracking, and report generation. These features aim to streamline TSG operations, improve record accuracy, and support timely and informed decision-making.
4. The software quality of CIT-UITRMS was evaluated using the ISO/IEC 25010 Software Quality Model, covering functional suitability, performance efficiency, compatibility, usability, reliability, security, maintainability, and portability. The evaluation provides a basis for determining the system's technical adequacy and identifying areas for further improvement.
5. User acceptance of CIT-UITRMS was examined using the Technology Acceptance Model (TAM), focusing on perceived usefulness, perceived ease of use, attitude toward using, and behavioral intention to use. These dimensions give insight into the system's potential adoption and continued use by its intended users.
6. A system enhancement framework was formulated based on the study's findings to guide the continuous improvement of CIT-UITRMS. The framework emphasizes user feedback, software quality assurance, security improvements, system maintenance, and the alignment of system functionalities with the evolving IT resource management needs of CIT-U.

RECOMMENDATIONS

In consideration of the study's objectives and conclusions, the following recommendations are proposed:
1. Improve IT resource management practices. The Technical Support Group (TSG) should gradually transition from the manual SOF system to CIT-UITRMS to centralize IT asset records, standardize service requests, improve maintenance monitoring, and strengthen accountability in managing university IT resources.
2. Ensure continuous alignment with system requirements. The system developers and TSG should regularly review functional and non-functional requirements to accommodate changing operational needs, including asset lifecycle management, preventive maintenance scheduling, service request prioritization, records management, and timely report generation.
3. Enhance system features and functionalities. Future system development should consider automated notifications, service request status tracking, maintenance history, asset utilization monitoring, dashboard analytics, and role-based access to improve operational efficiency and user experience.
4. Maintain software quality and security. The system administrators and developers should conduct regular software quality assessments based on ISO/IEC 25010. Particular attention should be given to performance optimization, compatibility, usability, reliability, security controls, maintainability, and portability. The implementation of regular backups, access reviews, security testing, and recovery procedures is essential.
5. Strengthen user acceptance and adoption. The university should provide user orientation, hands-on training, technical assistance, and accessible user documentation. Periodic TAM-based assessments should be conducted to determine users' perceived usefulness, perceived ease of use, attitudes, and behavioral intentions and to identify barriers to adoption.
6. Implement the system enhancement framework. CIT-U should establish a continuous improvement mechanism involving the TSG, system administrators, university management, and end users. The mechanism should include periodic performance reviews, user feedback, issue prioritization, software updates, and measurable performance indicators to ensure the system remains responsive to institutional needs.
7. Conduct further research and evaluation. Future researchers should assess CIT-UITRMS after implementation using actual operational data, including the turnaround time for service requests, asset record accuracy, maintenance response time, system availability, and user satisfaction. Comparative studies between manual and web-based processes may also be conducted to determine the system's measurable contribution to IT resource management.
Overall, CIT-UITRMS is intended to support the university's transition toward a more centralized, efficient, secure, and sustainable approach to IT resource management. Its long-term effectiveness will depend on continuous system improvement, institutional support, user participation, and evidence-based evaluation.

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