International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Assessment of It Asset Lifecycle Management for Company X Towards It Process Improvement

Jonathan L. Montano[1], Dr. Heidi R. Maneclang[2]

[1,2]Graduate School, Colegio de San Juan de Letran Calamba, Laguna, Philippines

ABSTRACT

This study assessed the IT Asset Lifecycle Management (ITALCM) practices of Company X on IT process effectiveness. Despite the organization's extensive reliance on IT assets, issues related to governance, integration, asset visibility, and lifecycle cost management remain, potentially affecting efficiency, compliance, and strategic decision-making. The research aimed to determine the maturity level of Company X's IT Asset Lifecycle Management across the planning, acquisition, deployment, maintenance, and disposal stages, identify implementation challenges, and propose process improvements. A descriptive quantitative research design was employed. Data was collected using researcher-made survey questionnaires administered to 28 IT personnel directly involved in IT asset lifecycle activities. Descriptive statistics, including mean and percentage distribution, were used to analyze maturity levels and implementation challenges. Results showed that Company X's overall IT Asset Lifecycle Management maturity is at a Managed and Measured level, with an overall mean of 3.71. The disposal stage demonstrated the highest maturity, while the acquisition stage recorded the lowest maturity due to weaknesses in contract governance, licensing management, and vendor risk assessment. Significant challenges identified include insufficient training and awareness, unclear roles and responsibilities, complex software licensing requirements, inadequate system integration, and poor CMDB data quality. The study concludes that although Company X has established stable and repeatable IT asset management processes, progress toward an optimized and strategic level is constrained by governance, integration, and human-related factors. It is recommended that Company X strengthen executive support, establish a clear RACI framework, improve system integration and data quality, and implement continuous ITAM training programs to enhance asset value, reduce risks, and support long-term operational efficiency.

Keywords: Asset Lifecycle Management, Planning, Acquisition, Deployment, Maintenance, Disposal, Asset Best Practices

INTRODUCTION

In the evolving workplace set up, effective management of information technology (IT) assets has been affected by making it important for all organizations in the digital age. As businesses and companies increasingly rely on complex IT infrastructures to drive operations, foster innovations, and maintain competitive advantages, they should have a structured and systematic approach to their lifecycle management. This is needed for them to accommodate the sheer volume and diversity of hardware, software, network devices, and data as part of their shared goals and innovations. Without a strong IT Asset Management (ITAM) framework, companies and businesses risk experiencing a myriad of challenges which include inflated cost due to underutilized or misplaced assets, compliance vulnerabilities

from unmanaged software licenses, security breaches stemming from outdated or unpatched systems, and operational inefficiencies that may impede the productivity (Staff, 2025). Hence, a lack of comprehensive ITAM can directly hinder an organization's ability to achieve its strategic objectives and maintain business continuity.

Company X is an aviation manufacturing company that established its presence in the Philippines in 2012 with the opening of facilities in Tanauan, Batangas, marking a strategic move to expand its global operations in the Asia -Pacific region. Its continued growth and reliance on a diverse portfolio of IT assets underscores the importance of optimizing its IT operational processes. While the importance and benefits of ITAM are widely acknowledged globally, there remain research gaps concerning localized, in-depth assessment of ITALCM practices within specific organizational contexts in emerging regional economies like in Batangas City. Much of the current research on ITALCM focuses on broader industry trends or large multinational corporations (Payel et al, 2023) leaving a deficit in understanding the unique challenges and opportunities faced by companies operating within specific local regulatory environments, resource constraints and market dynamics. Some of the problems encountered are lack of asset visibility and accurate inventory, especially when there is personnel movement within the departments. Slow deployment and retrieval to onboarding and offboarding employees, and standard Lifecycle Management on when to replace the IT asset on a timely manner.

This study aimed on filling this gap by assessing IT Asset Management (ITAM) of Company X toward the IT process. delved into its current state of company ITAM practices. It uncovered the overall maturity of Company X's IT processes. The findings of this assessment offered recommendations to guide Company X in enhancing its ITAM strategies, thereby optimizing its IT operations and its long-term technological resilience.

Research Questions

This study attempted to assess IT asset life cycle management for Company X towards IT process improvement. Specifically, the following research questions were formulated to guide the researcher in attaining the objectives of the study.

1. What is the level of maturity of Company X's IT Asset Life cycle Management in terms of the following IT Asset Life cycle Stages?

1.1 Planning
1.2 Acquisition
1.3 Deployment
1.4 Maintenance
1.5 Disposal

2. What are the challenges faced by Company X in the process implementation of IT Asset Management?
3. What process improvements can be made to enhance and optimize Company X's IT Asset Management in terms of IT Asset Life cycle stages?

METHODOLOGY

Research Design

This study applied a quantitative research design to measure and analyze the IT Asset Lifecycle Management for Company x Towards IT process improvement. It involved a systematic process that involved the collection and analysis of numerical data to identify patterns, test relationships, and draw conclusions (Creswell & Creswell, 2018).

Research Locale

The research took place at Company X, a manufacturing company located in Region 4A Batangas. The company built a reputation for precision engineering, safety compliance and technological innovation, over 13 years of operation.

Population and Sampling Design

Total enumeration method was applied to include all 28 IT personnel as respondents for their direct involvement in the entire IT asset lifecycle and IT processes.

Research Instrument

A researcher-made questionnaire was adapted from multiple sources. It was developed through a systematic synthesis of six authoritative frameworks (ITIL 4 IT Asset Management Practice, ISO 55001 with IAM SAM+, CPCON 2024 ITAM Maturity Model, GFMAM 39-subject landscape, KnowledgeLeader self-assessment, and ServiceNow/Freshworks maturity tools)

Data Gathering Procedure

The questionnaire is distributed using printed or electronic questionnaire, based on the respondents' convenience. All respondents provided consent forms. which emphasized the voluntary nature of their participation. They were given adequate time to thoroughly review the survey and comfortably complete the questionnaire. Once completed, the responses were tabulated and consolidated and then subjected to statistical treatment.

Table 1. Management and Treatment of Data

Objectives	Source of Data	Type of Data	Analysis
To assess the maturity level of Company X's IT Asset Life cycle Management in terms of the Asset Life cycle Stages	Survey Questionnaire	Quantitative Data	Descriptive / Mean/ Percentage
To identify the challenges in the current IT Asset Management processes implementation of Company X.	Survey Questionnaire	Quantitative Data	Descriptive / Mean/ Percentage
To propose process improvement strategic plan to enhance and optimize the IT Asset Management of Company X.	Based on the results of RQs 1 & 2	Quantitative Data	-

Data Analysis Plan

The researcher utilized descriptive statistics to summarize the collected data, Data analysis begins with descriptive statistics, such as mean and percentage distribution to summarize the data and provide an overview of respondent characteristics and item responses (Creswell & Creswell, 2018).

RESULTS AND DISCUSSION

This part presents results and discussions of the level of maturity of Company X's IT Asset Lifecycle Management in terms of IT Asset Lifecycle Stages; the challenges and improvements can be made to enhance IT Asset Management.

I. Level of maturity of Company X's IT Asset Lifecycle Management.

Table 2. Mean Ratings and Percentage of Responses per Rating on the Level of Maturity of Company X's IT Asset Lifecycle Management in terms of Planning Stage

Description	Mean	VI	Percentage of Responses Per Rating				
			1 – IA	2 – DR	3 – D&R	4 – M&M	5 – O&S
1. Business and IT demands are systematically analyzed and translated into a multi-year IT asset plan.	3.68	Managed & Measured	0.00%	0.00%	42.86%	46.43%	10.71%
2. Total Cost of Ownership (TCO) and full lifecycle costs are calculated and used before any acquisition decision.	3.48	Defined & Repeatable	0.00%	0.00%	60.72%	32.14%	7.14%
3. Asset planning is fully aligned with Company X's strategic objectives, risk appetite, sustainability targets, and financial planning cycles.	3.71	Managed & Measured	0.00%	0.00%	42.86%	42.86%	14.28%
4. Obsolete, redundant, underutilized, or end-of-support assets are proactively identified and scheduled for phase-out.	3.75	Managed & Measured	0.00%	0.00%	46.43%	32.15%	21.42%
5. Cross-functional stakeholders	3.60	Managed & Measured	0.00%	0.00%	50.00%	39.29%	10.71%

actively participate in annual and ongoing asset planning.							
Mean Average	**3.64**	**Managed & Measured**	**0.00%**	**0.00%**	**48.57%**	**38.57%**	**12.85%**

Table 2 reveals the level of maturity of Company X's IT Asset Lifecycle Management in terms of Planning stage. It shows an overall mean = 3.64 (Managed & Measured). Highest: obsolete asset identification (3.75); lowest: TCO calculation (3.48). Responses cluster at Defined & Repeatable (48.57%) and Managed & Measured (38.57%). Structured processes exist but TCO optimization is needed for cost savings. These findings align with strategic asset planning as a competitive advantage that improves adaptability and eliminates underutilized assets (Gavrikova et al., 2020; Madamidola et al., 2024; Ugbebor et al., 2024).

Table 3. Mean Ratings and Percentage of Responses per Rating on the Level of Maturity of Company X's IT Asset Lifecycle Management in terms of Acquisition Stage

Description	**Mean**	**VI**	**Percentage of Responses Per Rating**				
			1 – IA	**2 – DR**	**3 – D&R**	**4 – M&M**	**5 – O&S**
1. A standardized, mandatory procurement process with predefined vendor evaluation criteria exists and is always followed.	3.36	Defined & Repeatable	0.00%	0.00%	53.58%	42.85%	3.57%
2. All acquisitions are automatically recorded in the central ITAM/CMDB system at or before purchase order stage.	3.86	Managed & Measured	0.00%	0.00%	35.72%	42.86%	21.42%
3. Contracts and licenses consistently include clear SLAs, security requirements, data protection clauses, and right-to-audit provisions.	2.75	Defined & Repeatable	0.00%	0.00%	46.42%	46.43%	7.15%
4. Supply-chain, vendor, and third-party risks are formally assessed before any contract is signed.	3.50	Defined & Repeatable	0.00%	0.00%	53.57%	42.86%	3.57%
5. All acquisition decisions are driven by the approved asset plan and budget; rogue or shadow IT purchases are	3.68	Managed & Measured	0.00%	0.00%	42.86%	46.43%	10.71%

prevented or immediately detected.							
Mean Average	**3.43**	**Defined & Repeatable**	**0.00%**	**0.00%**	**45.44%**	**41.91%**	**9.28%**

The data in Table 6 reveals that Company X's IT Asset Lifecycle Management in the Planning Stage achieves an overall mean rating of 3.43, interpreted as "Defined & Repeatable." Item mean values vary from 2.75 to 3.86, with the highest for automatic recording in the CMDB (3.86, "Managed & Measured") and acquisition decisions driven by approved plans (3.68). The data reveal strengths in integration and preventing unauthorized purchases. Overall, the data suggests a reactive approach in some areas, which could be improved to support strategic decision-making more effectively. Literature confirms acquisitions must include clear SLAs, security clauses, and risk assessments to reduce compliance penalties (Parra et al., 2024; Madamidola et al., 2024; Dosal, 2020).

Table 4. Mean Ratings and Percentage of Responses per Rating on the Level of Maturity of Company X's IT Asset Lifecycle Management in terms of Deployment Stage

Description	**Mean**	**VI**	**Percentage of Responses Per Rating**				
			1 – IA	**2 – DR**	**3 – D&R**	**4 – M&M**	**5 – O&S**
1. Standardized, repeatable deployment/configuration processes are used for all asset types.	3.74	Managed & Measured	0.00%	0.00%	32.14%	57.15%	10.71%
2. Every deployed asset is immediately and accurately tagged, assigned, and visible in the CMDB with 98%+ accuracy.	3.86	Managed & Measured	0.00%	0.00%	32.14%	50.00%	17.86%
3. Security baselines, license compliance, patching, and user acceptance testing are verified and documented before an asset is declared "in production".	3.64	Managed & Measured	0.00%	0.00%	46.43%	42.86%	10.71%
4. End-user training, handover documentation, and knowledge transfer are embedded as mandatory steps in the deployment workflow.	3.71	Managed & Measured	0.00%	0.00%	35.71%	57.14%	7.15%

5. Deployment performance (time-to-deploy, failure rate, downtime) is measured and continuously improved.	3.74	Managed & Measured	0.00%	0.00%	39.29%	46.42%	14.29%
Mean Average	**3.73**	**Managed & Measured**	**0.00%**	**0.00%**	**37.14%**	**50.71%**	**12.14%**

Table 4 reveals an overall mean = 3.73 (Managed & Measured). Highest: CMDB tagging/accuracy (3.86); lowest: security baselines (3.64). Responses: 37.14% Defined & Repeatable, 50.71% Managed & Measured. Strong workflows ensure accuracy; security and training gaps limit optimization. It implies strong deployment workflows that ensure accuracy and compliance which can lead to reduced downtime and better user adoption. However, the slightly lower mean for security verification points to possible gaps in risk management. Effective deployment requires centralized inventory, secure configuration, and user training for service continuity (Nandhakumar, 2025; Madamidola et al., 2024; Alquraidi and Awad, 2022).

Table 5. Mean Ratings and Percentage of Responses per Rating on the Level of Maturity of Company X's IT Asset Lifecycle Management in terms of Maintenance Stage

Description	**Mean**	**VI**	**Percentage of Responses Per Rating**				
			1 – IA	**2 – DR**	**3 – D&R**	**4 – M&M**	**5 – O&S**
1. Preventive and predictive maintenance schedules are automated and actively tracked for 100% of in-scope assets.	3.71	Managed & Measured	0.00%	0.00%	35.71%	57.14%	7.15%
2. Real-time monitoring and utilization data are collected and acted upon for critical assets.	3.62	Managed & Measured	0.00%	0.00%	40.75%	55.55%	3.7%
3. Patch management and vulnerability remediation follow a risk-based, largely automated process with measured SLAs.	3.68	Managed & Measured	0.00%	0.00%	39.28%	53.57%	7.15%
4. Incidents, problems, and service requests are linked to the correct Configuration Item (CI) in the CMDB with high data accuracy (>95%).	3.71	Managed & Measured	0.00%	0.00%	39.29%	50%	10.71%
5. Preventive and predictive maintenance schedules are	3.58	Managed & Measured	0.00%	0.00%	50%	42.85%	7.15%

automated and actively tracked for 100% of in-scope assets.							
Mean Average	**3.66**	**Managed & Measured**	**0.00%**	**0.00%**	**41.01%**	**51.82%**	**7.17%**

Table 5 for the Maintenance Stage shows an overall mean of 3.66, interpreted as "Managed & Measured." Item means span 3.58 to 3.71, with preventive maintenance (3.71) and incident linkage to CMDB (3.71) scoring highest. Responses are concentrated in "Defined & Repeatable" (41.01%) and "Managed & Measured" (51.82%), with minimal top ratings (7.17%) and none in the bottom two levels. Real-time monitoring (3.62) and predictive schedules (3.58) indicate solid but not exceptional practices. Insights show a focus on automation and risk-based processes, indicating reliable asset performance. However, lower utilization data action suggests opportunities for integrating predictive analytics. Maintenance is the longest phase and benefits from data-driven, risk-based interventions for resilience and asset longevity (Tuladhar et al., 2024; Geisbush and Ariaratnam, 2022; Weerasekara et al., 2022).

The Disposal Stage data in Table 9 yields the highest overall mean of 3.93, rated "Managed & Measured." All items score between 3.90 and 3.97, with data sanitization (3.97) and performance measurement (3.97) leading. Responses cluster in "Managed & Measured" (54.29%) and "Optimized & Strategic" (19.28%), demonstrating strong enforcement and evaluation practices. This high maturity indicates effective risk management and a focus on sustainability. It implies preventing data breaches and maximizing residual value, which can reduce e-waste and costs.

Table 6. Mean Ratings and Percentage of Responses per Rating on the Level of Maturity of Company X's IT Asset Lifecycle Management in terms of Disposal Stage

Description	**Mean**	**VI**	**Percentage of Responses Per Rating**				
			1 – IA	**2 – DR**	**3 – D&R**	**4 – M&M**	**5 – O&S**
1. Clear end-of-life/end-of-support triggers and a formal decommissioning process exist and are strictly enforced.	3.90	Managed & Measured	0.00%	0.00%	28.58%	53.57%	17.85%
2. Data sanitization follows an approved standard with certificates retained for audit.	3.97	Managed & Measured	0.00%	0.00%	25.00%	53.58%	21.42%
3. Disposal options are evaluated to maximize residual value and meet Company X sustainability targets.	3.92	Managed & Measured	0.00%	0.00%	25.00%	57.15%	17.85%
4. Retired assets are immediately and permanently removed from the CMDB,	3.90	Managed & Measured	0.00%	0.00%	28.57%	53.58%	17.85%

financial ledger, and license records to eliminate ghost assets.							
5. Disposal performance (security incidents prevented, financial recovery, e-waste reduction, CO_2 metrics) is measured and reported.	3.97	Managed & Measured	0.00%	0.00%	25.00%	53.58%	21.42%
Mean Average	**3.93**	**Managed & Measured**	**0.00%**	**0.00%**	**26.43%**	**54.29%**	**19.28%**

It also suggests a proactive approach that could model best practices for other stages. But consistent measurement is crucial for maintaining this level amid regulatory changes. Secure retirement prevents breaches and supports sustainability when aligned with regulations (Mishra, 2025; Miranda et al., 2025; Madamidola et al., 2024).

2. Challenges Faced by Company X

The challenges faced by Company X in the process implementation of IT Asset Management. To determine how employees perceive the level of challenges they faced, the computed percentage of sample employees who responded per Likert scale item

Table 7. Mean Ratings and Percentage of Responses per Rating on the Level of Challenges Faced by Company X in the Process Implementation of IT Asset Management

Challenge Statement	Mean	VI	Percentage of Responses Per Rating				
			1 – NC	2 – MiC	3 – MoC	4 –SC	5 – CB
1. Lack of clear executive sponsorship and sustained leadership support for ITAM	2.86	Moderate Challenge	0.00%	3.58%	32.14%	39.28%	25.00%
2. Insufficient budget or resources allocated to the ITAM program (tools, staff, training)	2.71	Moderate Challenge	0.00%	3.58%	35.71%	46.43%	14.28%
3. Resistance to change from employees, managers, or business units (e.g., "we've always done it this way")	2.92	Moderate Challenge	0.00%	3.58%	25.00%	46.42%	25.00%
4. Difficulty obtaining accurate and complete discovery data for	2.71	Moderate Challenge	0.00%	3.58%	35.71%	46.42%	14.29%

hardware, software, and cloud assets							
5. High volume of shadow IT and decentralized (unapproved) purchasing of IT assets	2.86	Moderate Challenge	0.00%	7.14%	25.00%	42.86%	25.00%
6. Poor data quality or lack of trust in the existing CMDB / ITAM tool	3.64	Significant Challenge	0.00%	3.58%	32.14%	60.71%	3.57%
7. Inadequate integration between ITAM tool and other systems (Procurement, Finance, HR, Service Desk, Security)	3.75	Significant Challenge	0.00%	3.58%	28.57%	57.14%	10.71%
8. Complexity of software licensing rules and frequent vendor audits creating fear or paralysis	3.86	Significant Challenge	0.00%	3.58%	25.00%	53.57%	17.85%
9. Lack of clear roles, responsibilities, and accountability (RACI) for asset lifecycle stages across departments	3.92	Significant Challenge	0.00%	3.58%	21.42%	53.57%	21.43%
10. Insufficient training and awareness of ITAM processes among employees and stakeholders	3.96	Significant Challenge	0.00%	3.58%	25.00%	53.57%	17.85%

Table 7 presents an overall mean of 3.32 (Moderate Challenge). Highest: insufficient training (3.96), unclear RACI (3.92), licensing complexity/audits (3.86), integration (3.75), poor CMDB data quality (3.64). Data quality, integration, RACI, training, and licensing are the dominant barriers. These mirror documented implementation issues such as incomplete lifecycle costing, lack of senior sponsorship, and siloed systems (Gartner, 2010; Ziemba, 2020; Tworek, 2023).

3. Improvements to Enhance and Optimize Company X's IT Asset Management

Table 8. Improvements to Enhance and Optimize Company X's IT Asset Management

Asset Lifecycle Stage	Current Process	Developed Strategy
Planning	Total Cost of Ownership (TCO) and Full Lifecycle Costs Calculation.	Implement a comprehensive, policy-driven asset management strategy that incorporates automated TCO modeling tools

Acquisition	- Contracts and Licenses - Standardized Procurement Process with Vendor Evaluation Criteria. - Supply-Chain, Vendor, and Third-Party Risk Assessment.	Establish standardized procurement policies with predefined vendor evaluation scorecards. Automate vendor on boarding and contract management via integrated ITAM platforms.
Deployment	- Security Baselines, License Compliance, Patching, and User Acceptance Testing Verification. - End-User Training, Handover Documentation, and Knowledge Transfer.	Develop automated deployment workflows that enforce security baselines, automated patching, and license compliance checks. Incorporate mandatory end-user training modules and interactive documentation to boost awareness, ensuring >98% CMDB accuracy upon deployment and measuring metrics like time-to-deploy to continuously improve processes and security posture.
Maintenance	- Real-Time Monitoring and Utilization Data Collection/Action - Patch Management and Vulnerability Remediation	Adopt real-time monitoring tools for asset utilization and predictive analytics to automate preventive maintenance schedules, integrating with patch management systems for risk-based vulnerability remediation under defined SLAs.
Disposal	- Clear End-of-Life/End-of-Support Triggers and Decommissioning Process. - Disposal Options Evaluation for Residual Value and Sustainability Targets.	Implement formal end-of-life triggers with automated alerts for decommissioning, evaluating disposal options like resale, recycling, or re-proposing through certified ITAD partners to maximize residual value and achieve sustainability goals. Ensure secure data sanitization with audit certificates and immediate CMDB/financial record removal, incorporating RACI-defined roles and training to comply with regulations and minimize environmental impact

As shown in the table, to address maturity gaps and the five major challenges (CMDB data quality, integration, licensing complexity, unclear RACI, and insufficient training), targeted strategies are proposed per stage. Planning will deploy automated TCO modeling with daily reconciliations and workshops to reach >70% Managed & Measured and deliver 15–30% cost savings. Acquisition adopts a standardized procurement framework with clause libraries and API integrations to hit 4.0 maturity and eliminate audits. Deployment introduces a Zero-Touch Pipeline for >98% CMDB accuracy and 4.2+ maturity. Maintenance adds predictive analytics to achieve 4.3 maturity and extend asset life by 12–18 months. Disposal incorporates EOL alerts and certified ITAD partnerships to exceed 4.5. Cross-cutting actions include AI-driven CMDB reconciliation, unified ITAM platform, centralized SAM team, detailed RACI matrix, and tiered "ITAM Champion" training (>90% completion). Collectively, these will elevate overall maturity from ~3.6 to ≥4.2 within 24 months.

Developed Strategies for the Five Major Challenges

Table 9. Strategies to Address the Challenges Encountered by Company X's IT Asset Management

Challenges Faced by Company X	1. Poor data quality or lack of trust in the existing CMDB / ITAM tool.	Establish a clear data governance strategy that includes automated data checks using AI tools to spot and fix inconsistencies in real-time. Conduct regular audits, such as quarterly, to restore trust in the CMDB. Assign data stewardship roles to monitor quality metrics, gather user feedback, and use automation for discovery and reconciliation tasks.
	2. Inadequate integration between ITAM tool and other systems (Procurement, Finance, HR, Service Desk, Security)	Adopt an API-first integration framework by choosing or upgrading to a unified ITAM platform that allows easy connections with key systems through standard protocols, such as REST APIs or webhooks. Carry out a gap analysis to highlight integration priorities, deploy middleware if needed, and track integration performance using dashboards to break down silos and improve ITAM efficiency.
	3. Complexity of software licensing rules and frequent vendor audits creating fear or paralysis	Build a unified Software Asset Management (SAM) program that uses specialized tools for license optimization and compliance tracking.
	4. Lack of clear roles, responsibilities, and accountability (RACI) for asset lifecycle stages across departments.	Create and refine a detailed RACI matrix for each stage of the ITAM lifecycle—Planning, Acquisition, Deployment, Maintenance, and Disposal. Hold cross-departmental workshops to define ownership and gain commitment from IT, finance, procurement, and business sectors. Integrate the RACI into ITAM policies and tools for better visibility, review it biannually during governance meetings, and tie accountability to performance metrics.
	5. Insufficient training and awareness of ITAM processes among employees and stakeholders	Launch a tiered training program with on-demand e-learning modules, live workshops, and certification courses focused on ITAM principles and tool usage. Tailor training to the specific roles of different stakeholders, such as end-users for asset requests and managers for compliance. Introduce gamification and awareness campaigns, like newsletters and webinars, to boost engagement.

		Track completion rates with required assessments and update content annually to address new challenges, thus improving process compliance and lowering resistance.

Conclusions

Company X has successfully moved beyond ad-hoc and reactive IT asset management and now operates predominantly at a Managed & Measured maturity level. The organization-wide processes are defined, repeatable, and increasingly measured, although people-related and governance-related challenges are significantly holding back further advancement. Its IT Asset Management currently has a moderate maturity level but progress is hindered by five main issues: poor CMDB data quality, lack of system integration, complex licensing and audit fears, unclear roles and accountability (RACI), and insufficient training.

Recommendations

Based on the findings and conclusions presented, the researcher derived the following recommendations:

1. To enhance maturity from "Defined & Repeatable" and mitigate "Significant Challenges" to moderate or lower levels: (1) For deficiencies in Acquisition and Planning regarding licensing and RACI, develop standardized contract templates that include obligatory SLAs and audits, and create a cross-departmental RACI matrix through collaborative workshops (within 0–6 months, targeting means of 4.0+); (2) Improve data quality and integration across all phases by transitioning to an integrated CMDB platform with automated reconciliation and APIs linked to Procurement, Finance, and HR (within 6–12 months, aiming for over 95% accuracy and reducing challenge means below 3.0); (3) Tackle training and awareness gaps in Deployment and Maintenance by launching role-based e-learning and certifications with over 90% completion, focusing on monitoring and tools (immediate, improving items like utilization mean 3.62); (4) Implement phase-specific automation, such as TCO modeling in Planning and predictive alerts in Maintenance (12–24 months); (5) Monitor quarterly KPIs and conduct annual resurveys to ensure sustained reduction of challenges and uplift in maturity, potentially leading to 15–30% cost savings.
2. Company X should seek strong executive support, create a clear RACI matrix, and provide everyone with proper ITAM training. The company should upgrade to a modern, fully integrated ITAM platform with automated discovery and TCO analytics. It should enforce standard contracts, predictive maintenance, and certified disposal partners, and begin measuring and reporting simple KPIs every quarter. Implementing these steps together will increase maturity, reduce IT costs by 15–30%, and turn IT Asset Management into a genuine business advantage within 2–3 years.
3. For future researchers, enhance the study by providing a sample matrix or template to contextualize the proposed strategies for each challenge encountered by Company X and include the strategic plan that incorporates these strategies.
4. For future researchers, conduct qualitative research and explore the current organizational practices and cultural factors that affect IT Asset Lifecycle Management for Company X.

Compliance with Ethical Standards

The authors confirm that this study was conducted in accordance with ethical standards, that respondents provided consent and were also allowed to withdraw from the study at any given time. Respondent identity was maintained anonymous throughout the research process. The findings were interpreted properly, and the results were employed for research purposes.

REFERENCES

1. Alquraidi, A., & Awad, M. (2022). Physical asset management for critical utilities: A systematic literature review. IEEE Access. https://www.researchgate.net/publication/381889284_Physical_Asset_Management_for_Critical_Utilities_-_A_Systematic_Literature_Review
2. Barclay, C., & Osei-Bryson, K.-M. (2010). Project performance development framework: An approach for developing performance metrics. International Journal of Productivity and Performance Management, 59(3), 237–253. Retrieved from: https://doi.org/10.1108/17410401011023538
3. Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). Sage Publications.
4. Dosal (2020). What is IT Asset Management (ITAMLC) & Why is It Important?. Retrieved from: https://www.compuquip.com/blog/importance-of-it-asset- management
5. Gartner. (2010). *IT asset life cycle management: Understanding and defining asset longevity*. Gartner Research.
6. Gavrikova et al (2020). Strategic Aspects of Asset Management: An Overview of Current Research. Retrieved from: https://www.mdpi.com/2071- 1050/12/15/5955
7. Geisbush, J., & Ariaratnam, S. T. (2022). Reliability centered maintenance (RCM): Literature review of current industry state of practice. *Journal of Quality in Maintenance Engineering*. https://www.emerald.com/insight/content/doi/10.1108/jqme-02-2021-0018/full/html
8. Ghonim, Mohamed & Khashaba, Nagi & Al-Najaar, Hameda & Khashan, Mohamed. (2020). Strategic alignment and its impact on decision effectiveness: a comprehensive model. International Journal of Emerging Markets. ahead-of-print. 10.1108/IJOEM-04-2020-0364.
9. ISO. (2017). *ISO/IEC 19770-1: IT asset management — Overview and concepts*.
10. ITIL Foundation. (2019). *ITIL 4 Foundation: IT service management*. AXELOS.
11. KPMG. (2025). *Handbook: Asset acquisitions*. https://kpmg.com/kpmg-us/content/dam/kpmg/frv/pdf/2025/handbook-asset-acquisitions.pdf
12. Madamidola et al (2024). A Review of Existing Inventory Management Systems. Retrieved from: https://www.researchgate.net/publication/383947700_A_Review_of_Existing_Inventory_Management_Systems
13. Miranda, E. S. da S., Souza, É. D. S., Cardoso, M. G., & Braga, A. A. (2025). Asset disposal and bibliographic collection management in university libraries. *Revista de Gestão - RGSA*. https://rgsa.openaccesspublications.org/rgsa/article/view/12563
14. Mishra (2025). IT Asset Disposition in 2025: Everything You Need To Know. Retrieved from: https://www.goworkwize.com/blog/it-asset-disposition.
15. Nandhakumar (2025). IT Asset Lifecycle Management: A Complete Guide for 2025. Retrieved from: https://infraon.io/blog/asset-lifecycle-management/

16. Parra et al (2024). Implementation of Asset Management, Operational Reliability and Maintenance Survey in Recycled Beverage Container Manufacturing Lines. Retrieved from: https://www.mdpi.com/2078-2489/15/12/784
17. Payel, Spandan & Ahmed, S M Faysal & Taseen, Nabila & Siraj, Md. Tanvir & Shahadat, Muhammad. (2023). Challenges and Opportunities for Achieving Operational Sustainability of Boilers in the Context of Industry 4.0. International Journal of Industrial Management. 17. 138-151. 10.15282/ijim.17.3.2023.9062.
18. Staff (2025). What is IT Asset Management? ITAMLC explained. Retrieved from: https://www.tanium.com/blog/what-is-it-asset-management-itam/. Date retrieved: July 29, 2025
19. Tanium (2025). What is IT Asset Management? ITAMLC Explained. Retrieved from: https://www.tanium.com/blog/what-is-it-asset-management-itam/
20. Tuladhar (2024). Maintenance decision-making and its relevance in engineering asset management. Retrieved from: https://www.researchgate.net/publication/379283764_Maintenance_decision-making_and_its_relevance_in_engineering_asset_management
21. Ugbebor, F., Adeteye, M., & Ugbebor, J. (2024). Automated Inventory Management Systems with IoT Integration to Optimize Stock Levels and Reduce Carrying Costs for SMEs: A Comprehensive Review. *Journal of Artificial Intelligence General science (JAIGS). 6*. 306-340. 10.60087/jaigs.v6i1.257.
22. Weerasekara, S., Lu, Z., Ozek, B., Isaacs, J., & Kamarthi, S. (2022). Trends in adopting Industry 4.0 for asset life cycle management for sustainability. *Sustainability, 14*(19), 12233.
23. Witt, A.J.. (2025). The IT asset manager's guide to sustainable IT. ITAM Review Publications. https://itassetmanagement.net/wp-content/uploads/2023/03/FINAL-ITAM-Review-Guide-to-Sustainable-IT-June-2025.pdf
24. Ziemba (2020). *Information Technology for Management: Current Research and Future Directions*. Retrieved from: https://link.springer.com/book/10.1007/978-3-030-43353-6