



A PRELIMINARY STRATEGIC FRAMEWORK FOR IMPROVING PUBLIC ASSET MANAGEMENT IN MALAYSIA

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Abstract

Public asset management in Malaysia faces persistent financial challenges, including poor revenue collection, weak budgeting, outdated asset registers, limited digital integration, and delays in asset disposal. This study develops a document-based preliminary strategic framework to improve the financial management of public assets in Malaysia. Its novelty lies in integrating audit findings, policy documents, academic literature, and international asset management guidance into a finance-driven framework that links key financial issues with practical strategic responses. Using qualitative document analysis, 30 purposively selected documents published mainly between 2015 and 2025 were reviewed, including Auditor General's Reports (2020–2024), DPAK, MPAM, TPATA, ISO 55000-related guidance, institutional reports, and academic articles selected based on relevance to public asset management, financial management, lifecycle costing, digital asset systems, asset disposal, and public sector governance. Thematic content analysis identified seven recurring financial issues: poor revenue collection, lack of lifecycle-based budgeting for operation and maintenance, inadequate digital tools, inefficient asset disposal, weak financial governance training, manual and outdated asset registers, and inconsistent policy implementation across agencies. These issues were matched with strategic responses, including smart payment systems, lifecycle costing, CMMS adoption, structured asset disposal, workforce financial training, digitalised asset registers, and standardised compliance monitoring. The framework is presented as a preliminary conceptual output derived from document analysis.

Keywords: Public Asset Management, Financial Management, Strategic Framework, Lifecycle Costing, Asset Disposal, Malaysia

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INTRODUCTION

Public asset management is essential for effective government service delivery, infrastructure maintenance, and protection of public wealth. In Malaysia, public asset management continues to face recurring weaknesses, including outdated asset registers, poor maintenance practices, weak enforcement of asset-use policies, delays in disposal, and limited digital integration (Auditor General's Report, 2024; Sapri, 2021; The Edge Malaysia, 2025). Although these problems appear operational, they are closely linked to financial management weaknesses such as poor revenue collection, inadequate operation and maintenance (O&M) budgeting, weak cost control, and limited financial monitoring.

Financial management is therefore a critical part of public asset management. Without effective revenue collection, structured budgeting, and expenditure control, public agencies may struggle to maintain assets, update asset records, adopt digital systems, or recover value from obsolete assets. Previous studies show that weak financial planning can create liquidity pressure, fiscal uncertainty, and long-term asset deterioration (Kaw et al., 2020; Grozdanovska et al., 2017). In Malaysia, audit findings have repeatedly highlighted weaknesses related to rent and lease arrears, incomplete asset records, improper disposal procedures, and weak reporting practices (Auditor General's Report, 2023; Auditor General's Report, 2024). Media reports on rental and lease arrears provide recent public context, but the core evidence of this study is drawn mainly from official audit reports, policy documents, and academic literature (The Star, 2024; The Star, 2025).

These weaknesses have important financial implications. Inadequate O&M planning may increase future repair costs and shorten asset lifespan, while weak asset data limits agencies' ability to forecast expenditure and make evidence-based decisions. Limited digital integration also reduces transparency in maintenance spending and asset performance monitoring. Tools such as Computerized Maintenance Management Systems (CMMS) can support cost tracking, maintenance planning, and financial oversight, but their adoption and integration remain uneven across public agencies (Wienker et al., 2016; Ismail et al., 2019; Tajudin et al., 2022).

Malaysia already has several policy instruments for public asset management, including the Dasar Pengurusan Aset Kerajaan (DPAK), Manual Pengurusan Aset Menyeluruh (MPAM), and Tatacara Pengurusan Aset Tak Alih Kerajaan (TPATA). However, recurring audit findings suggest that policy availability has not fully translated into consistent financial control, lifecycle budgeting, digital asset monitoring, or value-based disposal practices. Existing studies have identified issues such as inaccurate asset data, delayed maintenance, weak enforcement, and poor disposal processes, but these issues have not been

sufficiently integrated into a finance-driven strategic framework for Malaysian public agencies (Ismail et al., 2019; Tajudin et al., 2021)

Therefore, this study aims to develop a preliminary strategic framework to improve the financial management of public assets in Malaysia. Specifically, it identifies key financial management issues affecting public asset administration and proposes strategic financial responses to enhance efficiency, accountability, and sustainability. This study adopts a qualitative document analysis approach by reviewing national audit reports, government policy documents, academic literature, and international asset management guidance, particularly ISO 55000. The paper proceeds with a review of relevant literature, followed by the methodology, findings and proposed framework, and conclusion with recommendations.

LITERATURE REVIEW

Definition of Terms

Public Asset Management (PAM) refers to the systematic planning, acquisition, use, maintenance, and disposal of public sector assets to maximise value throughout their life-cycle (OECD, 2025). In the public sector, PAM also supports transparency, accountability, service delivery, and efficient use of public resources (Hanis et al., 2010).

Financial management is central to PAM because each asset life-cycle stage involves financial decisions, including acquisition budgeting, O&M funding, revenue collection, expenditure control, valuation, and disposal value recovery. Earlier public sector practices often focused on acquisition cost while overlooking recurring O&M costs, which can lead agencies to underestimate the true cost of owning and maintaining assets (Hanis et al., 2010).

This study adopts a life-cycle financial perspective. Life-cycle costing requires agencies to consider the full cost of an asset from acquisition to disposal, not only its initial cost (Oh et al., 2023; Kneifel & Webb, 2022). This is consistent with ISO 55000 principles, which emphasise value creation, risk control, cost optimisation, and life-cycle decision-making in asset management (International Organization for Standardization, 2018; Parra et al., 2020; Institute of Asset Management, 2021). Therefore, this study treats financial management as the mechanism through which public assets can be planned, maintained, monitored, and disposed of more effectively.

Issues in Public Asset Management in Malaysia

Studies and audit findings show that Malaysia's public asset management continues to face several recurring weaknesses, particularly in financial governance, budgeting, digital integration, disposal, staff capacity, asset records, and policy implementation.

Poor Revenue Collection and Weak Financial Governance

Weak revenue collection remains a major financial issue in public asset management. Audit findings have reported arrears involving public assets, including land lease, quit rent, and public housing rental collections (Auditor General's Report, 2023; Auditor General's Report, 2024). This is consistent with studies showing that local governments often face weaknesses in revenue management, enforcement, and long-term asset financing (Kaw et al., 2020; Salleh & Yusof, 2011). Poor collection reduces cash flow, weakens fiscal stability, and limits funds that could be reinvested into maintenance, upgrading, or service improvement (Grozdanovska et al., 2017; Mohd et al., 2018; Ismail et al., 2019; Teo et al., 2022). Media reports on rental and lease arrears provide recent public context, but the core evidence remains audit and academic sources (The Star, 2024; The Star, 2025).

Lack of Lifecycle-Based Budgeting for Operation and Maintenance

Public agencies often budget for assets through annual allocations rather than full life-cycle needs. This weakens long-term O&M planning and may lead to premature asset deterioration (Kaw et al., 2020). Life-cycle cost methods are important because they estimate costs from acquisition to maintenance, renewal, and disposal (Oh et al., 2023). Without lifecycle-based budgeting, agencies may underestimate future maintenance liabilities, leading to emergency repairs, service disruption, and higher long-term costs (Campbell & Reyes-Picknell, 2016; RICS, 2025; Mohd Tombel et al., 2024). Therefore, the absence of lifecycle budgeting shifts asset management from preventive financial planning to reactive expenditure.

Inadequate Digital Tools and Weak System Integration

Digital systems are important for tracking asset performance, maintenance costs, and financial accountability. Although Malaysia has introduced systems and frameworks such as mySPATA, iGFMAS, DPAK, MPAM, and TPATA, integration between financial data and technical asset data remains limited (Jabatan Akauntan Negara Malaysia, 2019). CMMS can support maintenance planning, work orders, cost tracking, inventory control, and resource management (Wienker et al., 2016). However, uneven adoption and weak integration reduce transparency over maintenance expenditure, limit cost forecasting, and increase the risk of inefficient spending (Abu Bakar & Kamaruzzaman, 2023; Mahamad Subri et al., 2025; Rustanto, 2019).

Inefficiency in Asset Disposal and Low Value Recovery

Asset disposal is often handled as an administrative process rather than a financial strategy. Delayed disposal of idle, obsolete, or damaged assets can reduce resale

value, increase storage costs, and prevent value recovery (Ismail et al., 2019; Tajudin et al., 2022). Audit-related reporting has also shown that poor asset decisions may result in avoidable financial waste (Bernama, 2023). From a life-cycle perspective, disposal should involve clear criteria, valuation, audit trails, skilled personnel, and value-based decision-making (International Organization for Standardization, 2018; Obicci et al., 2021; Joseph-Lara & Maharajh, 2024). Inefficient disposal therefore weakens financial recovery and reduces funds available for reinvestment.

Weak Staff Capacity in Financial Governance

Financial governance also depends on staff competency. Recurring issues such as irregular payments, delays in collection, non-compliance with procedures, procurement weaknesses, and weak internal controls suggest gaps in financial knowledge and institutional oversight (Ismail et al., 2019; Tajudin et al., 2021; Tajudin et al., 2022). Training can improve staff performance, compliance, budgeting accuracy, and asset-related decision-making (Lima & Costa, 2019; Singh et al., 2023). The Institute of Asset Management (2021) also identifies competency development as an important condition for effective asset management. Without adequate training, agencies face higher risks of misallocation, leakage, audit findings, and poor financial decisions.

Manual and Outdated Asset Registers

Accurate asset registers are necessary for financial tracking, valuation, maintenance planning, and auditability. However, many agencies still rely on manual, fragmented, or outdated records. This limits visibility over asset location, condition, value, ownership, and usage. As a result, agencies may struggle to plan maintenance budgets, identify idle assets, calculate depreciation, or prepare reliable financial reports (Grubišić et al., 2009; Theron, 2016). Integrated digital asset registries can strengthen fiscal accountability and support evidence-based planning (Razali et al., 2021; OECD, 2025; The Edge Malaysia, 2025).

Inconsistent Implementation of Asset Management Policies

Malaysia already has major public asset management policy instruments, including DPAK, MPAM, and TPATA. However, recurring audit findings suggest that implementation remains inconsistent across agencies (Auditor General's Report, 2024; JPAK, 2024). The issue is therefore not only policy availability, but the gap between policy design and actual practice. Inconsistent implementation creates uneven financial control, weak compliance, and fragmented reporting. Stronger standardisation, monitoring, and accountability mechanisms are needed to translate existing policies into measurable financial outcomes (Abdullah et al., 2011; Grubišić et al., 2009; Tajudin et al., 2022).

Key Financial Solutions for Strategic Public Asset Management

The literature identifies several financial strategies for improving public asset management. These strategies can be grouped into governance standardisation, revenue optimisation, lifecycle budgeting, digitalisation, disposal management, capacity building, and asset data improvement.

In addition to identifying strategic responses, this section also presents possible KPIs for each solution. The KPIs are treated as indicative monitoring measures derived from the reviewed audit reports, policy documents, academic literature, and institutional guidance. They are included to show how each proposed strategy could be assessed in practice, but they are not presented as final or empirically validated performance indicators. Their role is to support the development of the preliminary framework and to provide measurable links between financial issues, strategic responses, and implementation outcomes.

Standardised Financial Governance Procedures

Standardised financial governance procedures can reduce variation in how agencies collect revenue, approve expenditure, monitor arrears, and report financial performance. Clear procedures strengthen consistency, accountability, and compliance across agencies (Ball, 2002; Ismail et al., 2019; Tajudin et al., 2022). Implementation requires clear operating procedures, defined roles, enforcement rules, internal audit checks, digital monitoring, and alignment with DPAK, MPAM, and TPATA (Tajudin et al., 2021; Joseph-Lara & Maharajh, 2024). Possible KPIs include arrears reduction, collection rate, number of audit findings, average time taken to act on arrears, and percentage of agencies complying with standard procedures.

Smart Payment Systems for Revenue Collection

Smart payment systems can improve revenue collection by making payments easier, traceable, and enforceable. Online billing, automated reminders, digital payment tracking, incentives, and penalty enforcement can reduce manual errors and improve payment compliance (Ball, 2002; Mahamad Subri et al., 2025). Wider evidence also supports the role of digital systems in strengthening fiscal transparency and accountability (The World Bank, 2023; OECD, 2025). Implementation requires online payment infrastructure, updated debtor records, integration with financial systems, clear arrears policies, and staff capability to monitor payment data. Possible KPIs include arrears reduction rate, digital payment uptake, average collection period, payment compliance rate, number of automated reminders issued, and percentage of accounts with updated debtor information.

Lifecycle Costing for O&M Financial Stability

Lifecycle costing supports financial planning by estimating the full cost of an asset from acquisition to disposal. Instead of relying on reactive repairs, agencies can allocate funds based on expected maintenance, renewal, replacement, and disposal needs (Kaw et al., 2020; Oh et al., 2023; RICS, 2025). Implementation requires asset condition data, cost histories, maintenance schedules, risk assessment, and multi-year budget planning (Matos et al., 2015; Mahamad Subri et al., 2025). Possible KPIs include percentage of assets with lifecycle cost plans, percentage of O&M budget based on lifecycle costing, reduction in emergency maintenance expenditure, maintenance cost variance against forecast, asset downtime rate, and preventive maintenance completion rate.

CMMS for Cost Control and Transparency

Computerized Maintenance Management Systems (CMMS) can improve cost control by linking maintenance activities with financial information. CMMS records work orders, maintenance history, spare parts, labour costs, asset condition, and expenditure, allowing agencies to identify high-cost assets and justify budget requests using data (Wienker et al., 2016; Beniacoub et al., 2021). Implementation requires system selection, data migration, staff training, asset coding, integration with finance systems, and clear responsibility for updating records (World Health Organization, 2011; Meira et al., 2020; Ali & Khalid, 2021). Possible KPIs include percentage of assets recorded in CMMS, reduction in unplanned maintenance, average response time, maintenance cost per asset, and accuracy of maintenance cost records.

Asset Disposal as a Financial Strategy

Asset disposal should be treated as a financial strategy rather than a routine administrative task. Agencies can recover value by identifying obsolete, idle, or uneconomic assets early and disposing of them before their value declines further. This approach is consistent with ISO 55000's life-cycle view and previous studies on public asset disposal (Obicci et al., 2021; Tanui & Moronge, 2020; Joseph-Lara & Maharajh, 2024). Implementation requires disposal criteria, valuation procedures, market assessment, approval timelines, audit trails, trained officers, and linkage between disposal decisions, asset registers, and financial planning. Possible KPIs include average disposal time, percentage of obsolete assets disposed within target period, value recovered, reduction in holding costs, complete disposal audit trails, and percentage of disposal proceeds reinvested into asset needs.

Workforce Financial Training

Workforce training strengthens financial governance by improving staff knowledge in budgeting, compliance, valuation, cost control, and asset-related decision-making. Better-trained officers are more likely to follow procedures, detect risks, maintain accurate records, and make financially sound decisions (Lima & Costa, 2019; Singh et al., 2023; Institute of Asset Management, 2021). Implementation requires structured training modules, competency standards, refresher courses, certification pathways, and evaluation of learning outcomes (Institute of Asset Management, 2014; Fegade & Sharma, 2023; Caterino et al., 2025). Possible KPIs include percentage of asset officers trained, training completion rate, post-training assessment scores, number of certified personnel, reduction in audit findings linked to non-compliance, and improvement in budget preparation accuracy.

Digitalised and Centralised Asset Register

A digitalised and centralised asset register improves financial tracking by providing accurate information on asset location, condition, value, ownership, maintenance history, and disposal status. Better asset data supports budgeting, auditability, maintenance planning, and evidence-based financial decisions (Grubišić et al., 2009; Tajudin et al., 2022). Integrated digital asset registries also support fiscal accountability and preventive maintenance planning (Razali et al., 2021; OECD, 2025). Implementation requires asset verification, standardised asset coding, data cleansing, access control, regular updates, and integration with finance systems and CMMS. Possible KPIs include percentage of assets verified and digitised, completeness of financial data, frequency of register updates, reduction in duplicate or missing assets, audit accuracy rate, and percentage of asset records linked to finance or CMMS systems.

Based on the reviewed literature, audit reports, policy documents, and institutional guidance, several recurring financial issues in public asset management were identified. Table 1 synthesises the main themes found in the literature and links each theme to its financial implication, proposed strategic response, and indicative KPI. This synthesis provides the conceptual basis for the subsequent document analysis and the development of the preliminary strategic framework.

Table 1: Evidence Trail, Financial Implications and Strategic Responses

Theme	Main evidence type	Financial implication	Strategic response	Indicative KPI
Revenue collection	Audit reports; public finance studies	Weak cash flow and arrears	Smart payment and enforcement	Collection rate; arrears reduction
O&M budgeting	Lifecycle costing literature; policy manuals	Reactive repairs and higher cost	Lifecycle costing in budget planning	Emergency maintenance reduction
Digital tools	CMMS studies; government manuals	Poor cost tracking	CMMS and finance-system integration	Assets recorded in CMMS
Asset disposal	Audit and disposal literature	Lost recovery value and holding cost	Structured value-based disposal	Average disposal time; value recovered
Staff capacity	Governance and training literature	Non-compliance and weak decisions	Financial governance training	Training completion; audit issue reduction
Asset register	OECD; asset register studies	Weak valuation and auditability	Digitalised central register	Record completeness; duplicate reduction
Policy implementation	DPAK, MPAM, TPATA; audit reports	Uneven control and repeated findings	Standardised compliance monitoring	Compliance rate; corrective-action closure

RESEARCH METHODOLOGY

This study used qualitative document analysis to develop a preliminary finance-driven framework for public asset management in Malaysia. Document analysis is appropriate where existing texts are systematically reviewed to identify patterns, meanings and relationships (Bowen, 2009; Clarke & Braun, 2017). The study is conceptual and did not involve interviews, surveys, Delphi validation, case testing or pilot implementation.

Documents were identified through targeted searches in academic databases, Google Scholar, official Malaysian government portals, audit report portals and institutional websites. Search terms included public asset management Malaysia, government asset management, financial management public assets, lifecycle costing, operation and maintenance budgeting, CMMS, asset disposal public sector, asset register, DPAK, MPAM, TPATA and ISO 55000. Documents were included if they were relevant to public asset management, financial management, asset maintenance, disposal, digitalisation, asset records or public sector governance. Documents were excluded if they were unrelated to the public sector, duplicated other sources, lacked clear authorship

or had unverifiable publication details. Media reports were used only as contextual examples and not as the core evidence base.

A total of 30 documents were selected through purposive sampling. The document corpus covered official audit reports, government policies, technical manuals, international guidance and peer-reviewed studies. Table 2 summarises the corpus to make the selection traceable and reproducible.

Table 2: Document Corpus Used for Analysis (N = 30)

No.	Document/Source	Type	Main Relevance
1	Auditor General's Report 2021	Audit	Federal financial statements
2	Auditor General's Report 2022	Audit	Public-sector weaknesses
3	Auditor General's Report 2023	Audit	Revenue and asset issues
4	Auditor General's Report 2024	Audit	Recent audit findings
5	DPAK Version 2.0	Policy	Asset management policy
6	MPAM Version 2.0	Manual	Whole-life asset management
7	TPATA Version 3.0	Procedure	Immovable asset procedures
8	iGFMAS Asset Accounting Manual	Manual	Financial-system linkage
9	ISO 55002 guidance	Standard	Asset management system
10	IAM SSG 21	Guidance	Asset decommissioning and disposal
11	OECD Government at a Glance 2025	Institutional	Digital and fiscal accountability
12	World Bank public asset guidance	Institutional	Public asset management
13	RICS lifecycle costing guidance	Institutional	Lifecycle costing
14	Kneifel & Webb (2022)	Manual	Life-cycle costing method
15	Hanis et al. (2010)	Article	Public asset management framework
16	Ismail et al. (2019)	Article	Government asset management practices
17	Tajudin et al. (2021)	Article	Factors affecting asset management performance
18	Tajudin et al. (2022)	Article	Malaysian government agency asset issues
19	Kaw et al. (2020)	Book/report	Urban public assets and financing
20	Oh et al. (2023)	Article	Lifecycle costing
21	Mohd Tombel et al. (2024)	Article	O&M challenges
22	Abu Bakar & Kamaruzzaman (2023)	Article	CMMS acceptance
23	Wienker et al. (2016)	Article	CMMS functions
24	Beniacoub et al. (2021)	Article	CMMS evaluation
25	Obicci et al. (2021)	Article	Public asset disposal
26	Joseph-Lara & Maharajh (2024)	Article	Disposal process
27	Razali et al. (2021)	Article	Preventive maintenance data
28	Grubišić et al. (2009)	Article	Asset records and financial reporting
29	Lima & Costa (2019)	Article	Regulatory asset management
30	Singh et al. (2023)	Article	Training and performance

The selected documents were analysed using thematic content analysis. The coding protocol involved five steps including;

1. familiarisation with the documents.
2. extraction of text segments related to financial issues and solutions.
3. initial coding using categories such as revenue collection, O&M budgeting, CMMS, disposal, staff capacity, asset register and compliance.
4. grouping of codes into themes; and
5. synthesis of themes into a preliminary framework.

A coding matrix recorded the source, evidence segment, theme, financial implication and proposed strategic response. Trustworthiness was strengthened through triangulation across audit, policy, academic and institutional sources. Coded segments were checked against original documents, overlapping codes were refined and the interpretation was discussed through peer debriefing with supervisors (Nowell et al., 2017). The study does not claim empirical validation. The output is a preliminary framework derived from document analysis and should be tested through expert review.

FINDINGS/RESULTS

The thematic analysis produced seven financial issues and seven corresponding strategic responses. The themes appeared across different document types, which suggests that the issues are not isolated observations but recurring patterns in Malaysian public asset management. The evidence trail in Table 1 shows how each theme is linked to financial implications, strategic responses and indicative performance measures.

The findings indicate that financial weaknesses in public asset management operate as a connected system. Poor revenue collection limits funds available for maintenance. Weak lifecycle budgeting shifts agencies toward reactive repairs. Outdated registers and weak digital integration reduce visibility over asset condition and expenditure. Delayed disposal prevents value recovery. Staff capability gaps and inconsistent policy implementation allow the same weaknesses to recur. Therefore, the proposed framework treats public asset management reform as a finance-driven governance process rather than a purely administrative exercise.

Figure 1 positions audit findings, national policies, financial records, asset data and ISO 55000-related principles as inputs. These inputs support seven mechanisms such as smart payment systems, lifecycle costing, CMMS integration, structured disposal, financial governance training, digitalised asset registers and standardised compliance monitoring. The mechanisms produce

measurable outputs and contribute to financial efficiency, accountability, asset value retention, reduced wastage, and sustainable public asset management. The feedback loop allows KPI results, audit findings, CMMS reports, register updates, budget reviews and compliance reviews to inform future decisions.

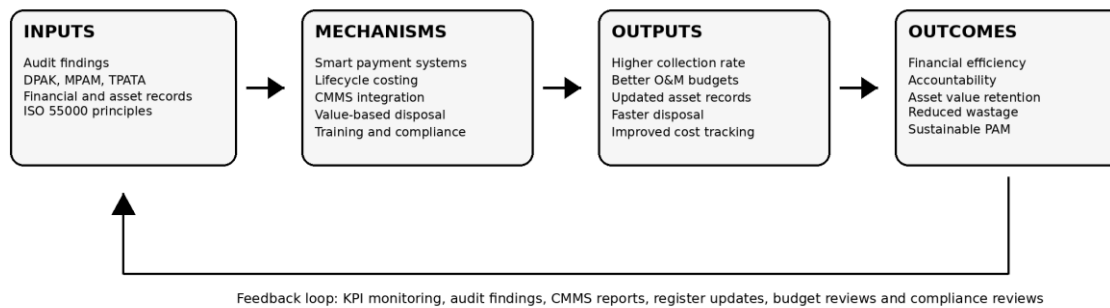


Figure 1: Finance-driven Strategic Framework for Public Asset Management

Table 3 translates the proposed strategies into an implementation matrix. It identifies the main issue, strategic response, responsible parties, key implementation steps, timeframe, and KPIs for each financial management issue. The timeframes are presented as indicative implementation phases rather than fixed deadlines. This phasing is adapted from the NSW Integrated Planning and Reporting Framework, which links annual operational planning, a four-year delivery programme, and long-term financial, workforce, and asset management planning (Office of Local Government NSW, 2025). Therefore, short-term actions refer to improvements that can begin within an annual planning cycle, while medium-term and longer-term actions refer to reforms requiring stronger coordination, budgeting, data preparation, system integration, and continuous monitoring.

Table 3: Strategic Implementation Matrix

Issue	Strategy	Responsible parties	Key steps	Timeframe	KPIs
Poor revenue collection	Smart payment and enforcement	Finance units;	Update debtor records; issue digital bills; automate reminders; monitor arrears; enforce penalties	0-12 months	Collection rate; arrears reduction; digital payment uptake
Weak lifecycle O&M budgeting	Lifecycle costing	Asset owners; finance units; technical departments	Assess condition; estimate lifecycle cost; prioritise critical assets; link to annual	1-3 years	Assets with lifecycle plans; emergency maintenance reduction; budget variance

Issue	Strategy	Responsible parties	Key steps	Timeframe	KPIs
			and multi-year budgets		
Weak digital integration	CMMS adoption and integration	ICT units; asset managers; maintenance and finance units	Select CMMS; migrate data; train users; record work orders; link costs to assets	1-3 years	Assets in CMMS; work orders completed; maintenance cost per asset
Inefficient disposal	Value-based disposal	Disposal committee; asset managers; finance and audit units	Identify obsolete assets; value assets; approve disposal; record proceeds; maintain audit trail	0-24 months	Average disposal time; value recovered; complete audit trail
Weak staff capacity	Financial governance training	HR; finance; asset units; training institutes	Develop modules; train officers; assess competency; conduct refresher training	0-24 months	Training completion; assessment scores; reduction in audit findings
Outdated asset registers	Digitalised central register	Asset registry; ICT; finance; agency management	Verify assets; cleanse data; standardise coding; update records; link to finance and CMMS	1-3 years	Verified assets; complete records; duplicate/unrecorded asset reduction
Inconsistent policy implementation	Standardised compliance monitoring	Ministries; agencies; internal audit; central monitoring bodies	Standardise SOPs; assign compliance owners; audit periodically; monitor corrective action	1-5 years	Compliance rate; repeat audit findings; corrective-action closure

The framework summarises the relationship between the main financial issues, proposed strategic responses, implementation actions, and possible KPIs for improving public asset management in Malaysia. Therefore, the framework serves as a preliminary guide for public agencies to strengthen financial accountability, improve cost control, and support more sustainable public asset management practices.

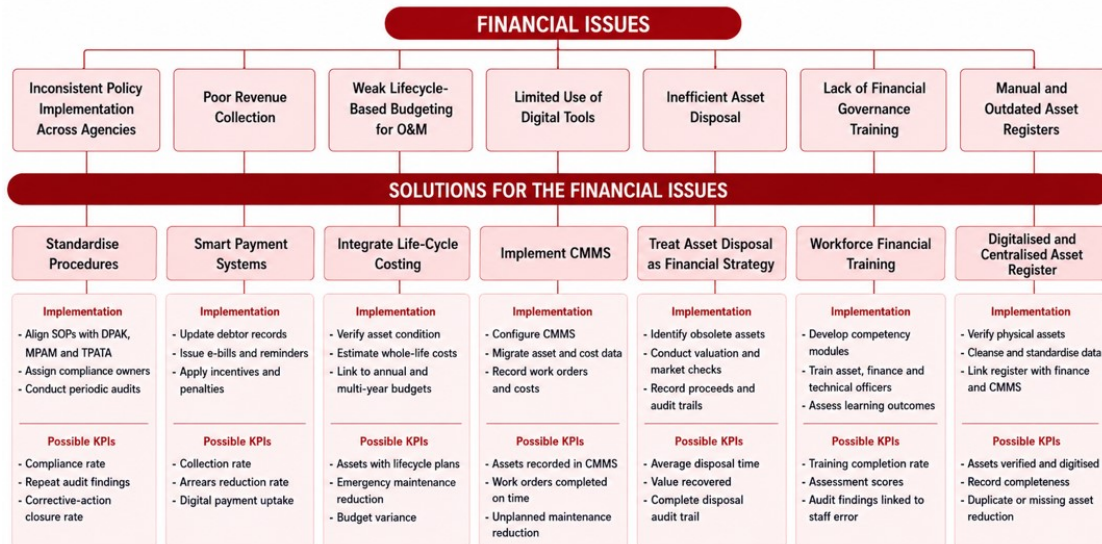


Figure 2: Strategic Framework for Improving Public Asset Management in Malaysia

CONCLUSION AND RECOMMENDATIONS

Summary of Findings

This study examined the financial challenges affecting public asset management in Malaysia and developed a preliminary strategic framework based on document analysis. The findings show that weaknesses in public asset management are strongly linked to financial governance issues, particularly poor revenue collection, limited lifecycle-based budgeting for operation and maintenance, weak digital integration, inefficient asset disposal, weak staff capacity, outdated asset registers, and inconsistent policy implementation across agencies. The study proposes seven corresponding strategies: smart payment and enforcement systems, lifecycle costing for O&M budgeting, CMMS adoption, structured asset disposal, targeted financial governance training, digitalised asset registers, and standardised compliance monitoring. These strategies form the basis of the proposed preliminary strategic framework for improving public asset management in Malaysia.

The findings suggest that public asset management should not be treated only as an administrative or technical function. It should also be managed as a financial governance function. Better revenue collection, lifecycle budgeting, asset data, disposal planning, and compliance monitoring can help public agencies reduce wastage, improve accountability, and protect asset value. The proposed framework provides a practical guide for public agencies to connect financial issues with implementation mechanisms and measurable performance

indicators. It can support decision-making by helping agencies identify priority reforms, assign responsibilities, and monitor progress through KPIs.

This study has several limitations. First, it is based only on document analysis and does not include primary data from interviews, surveys, Delphi panels, or case studies. Second, the documents were selected through purposive sampling, which may create selection bias even though the sources were chosen based on relevance and credibility. Third, the proposed framework has not yet been empirically validated with practitioners, policymakers, or public asset managers. Therefore, the framework should be treated as a preliminary conceptual output rather than a fully tested implementation model. Future research should validate the proposed framework through a Delphi study involving experts in public asset management, public finance, auditing, local government, and infrastructure maintenance. In addition, the framework should be tested through a pilot application in one or two local authorities. A pilot study would allow researchers to assess whether the proposed strategies, responsibilities, timeframes, and KPIs are practical in real administrative settings. The results could then be used to refine the framework before wider application across public agencies in Malaysia.

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Received: 5th December 2025. Accepted: 6th February 2026