MAINTENANCE MANAGEMENT FRAMEWORK

(Applicable to all Line Ministries occupying government facilities and the Department of Works as custodian of immovable government property)
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1. Introduction

The Government of Namibia owns and uses billions of dollars worth of building assets. These assets must be properly maintained so that they continue to support the delivery of a wide range of government services which fulfill the social, economic and environmental needs of the community.

The Maintenance Management Framework (MMF) is the whole-of-Government policy for managing building maintenance. By adhering to the policy requirements in the MMF, departments will have a consistent approach to the management, planning and delivery of building maintenance.

Terminology

For the purposes of this policy document, the terms ‘asset’, ‘building’, ‘building asset’ and ‘facility’ have the same meaning and are used interchangeably. It also includes all infrastructure related to it. Similarly, the term ‘building element’ is equivalent to ‘building component’ and the term ‘ministries’ include all ‘Offices/ Ministries/ Agencies’ in government.

2. Scope of Application

The MMF applies to all ministries that control or administer facilities occupied by them and have the responsibility for maintenance as part of the overall asset management of their portfolio.

3. What is Maintenance

Within the context of this policy, maintenance is defined as work on existing buildings undertaken with the intention of:

• re-instating physical condition to a specified standard
• preventing further deterioration or failure
• restoring correct operation within specified parameters
• replacing components at the end of their useful/economic life with modern engineering equivalents
• making temporary repairs for immediate health, safety and security reasons (e.g. after a major building failure)
• assessing buildings for maintenance requirements (e.g. to obtain accurate and objective knowledge of physical and operating condition, including risk and financial impact for the purpose of maintenance).

The following are not classified as maintenance:

• improvements and upgrading to provide additional or new service capability or function
• upgrading to meet new statutory requirements
• major refurbishment and replacements to extend the useful life of the building
• restoration of the entire building to operational condition after total or near total failure (e.g. resulting from natural disasters)
• work performed under warranty or defects liability period
• operational tasks to enable occupancy and use (e.g. cleaning, security, waste management)
• supply of utilities (e.g. electricity, water, refuse and telecommunication services).
4. Maintenance Objectives

The maintenance of government building assets should:

• meet departmental service delivery expectations reflected in the standards to which building assets are to be maintained
• focus on the impact of the condition of an asset on service delivery and risk
• minimize whole-of-life costs of building assets
• make the best use of maintenance resources
• facilitate maintaining relevant and up to date building information at departmental and whole-of-Government levels.

The key outcomes to be achieved from undertaking maintenance are:

• the functional and operational needs are realized
• the physical condition of assets is kept up to a standard appropriate for their service function to the user and value to the community
• all statutory and technical requirements to ensure health, safety, security and reliability are met.

5. Objectives of the Maintenance Management Framework

The main objectives of the MMF are to ensure:

• continuous improvement in asset planning, maintenance procedures and risk management
• government buildings are adequately maintained
• the risks to Government are well managed
• ministries take a more strategic role in maintenance of government buildings
• the Government has pertinent information for monitoring the maintenance, condition and performance of buildings at a whole-of-Government level
• there is sufficient operational information to perform maintenance, including the ability to review policies and strategies, analyze life-cycle costs, assess environmental impact, plan for replacements and upgrades, and improve the efficiency and effectiveness of maintenance.

6. Roles and Responsibilities

All ministries must comply with this policy document. Any departure from the requirements of this policy document should only occur after consultation and agreement with the Department of Works.

The Department of Works (DOW) has a pivotal role from both a policy and operational perspective. This role encompasses:

• services to ministries such as maintenance, condition assessments and planning and program administration on a fee-for-service basis
• monitoring of maintenance outcomes and asset performance on a whole-of-Government basis;
• implementation and review of the MMF
• provision of assistance and advice to ministries on maintenance and asset management related issues
• co-ordination of whole-of-Government special maintenance programs and other initiatives.
7. Elements of the Maintenance Management Framework

The elements of the MMF are shown in the diagram below. These elements must form part of departmental processes. Departments’ management of their building assets (including maintenance) should suit their needs at both a strategic and operational level.

<table>
<thead>
<tr>
<th>7.1 Maintenance Planning and Development</th>
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</tr>
</thead>
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<td>Policy Requirement 9 – Arrange provision of maintenance services</td>
<td></td>
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<td>Policy Requirement 10 – Monitor and review maintenance performance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7.1 Maintenance Planning and Development

7.1.1 Policy Requirement 1 – Document an internal Ministerial Maintenance Policy

Ministries must produce an internal departmental maintenance policy that complies with the MMF.

The MMF provides high-level direction to departments. However, in order for full implementation of the MMF to occur, it is essential that individual departments document an internal maintenance policy that incorporates their delivery objectives.

The ministerial maintenance policy should explain ministerial-specific processes and practices to enable ministerial personnel responsible for building maintenance to successfully manage their maintenance program.

The policy should also address the handover and retention of technical and asset information, and arrangements for an effective feedback loop to building planners and designers to improve maintainability and minimize maintenance needs associated with
future buildings.

7.1.2 Policy Requirement 2 – Determine Condition Standard Ratings

Ministries must determine a Condition Standard Rating for each building asset and periodically review and update the rating. (See table 1)

Ministries must specify the level at which their buildings are to be maintained. A Condition Standard Rating for each building must be documented, having regarded to the:

- building’s physical condition
- functional purpose
- operating environment
- future plans and associated costs in relation to proposed refurbishments, upgrades, replacement or disposal.

Table 1: Condition Standards

Ministries should use this table to determine the appropriate standard required at facility level or individual building level.

<table>
<thead>
<tr>
<th>Functional Purpose</th>
<th>Specified Standard</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly sensitive purpose with critical results (e.g. hospital operating theatre) or high profile public building (e.g. Parliament)</td>
<td>Building to be in the best possible condition. Only minimal deterioration will be allowed.</td>
<td>S5</td>
</tr>
<tr>
<td>Good public presentation and a high quality working environment are necessary (e.g. modern multi-storey CBD office buildings)</td>
<td>Building to be in good condition operationally and aesthetically, benchmarked against industry standards for that class of asset.</td>
<td>S4</td>
</tr>
<tr>
<td>Functionally-focused building (e.g. laboratory)</td>
<td>Building to be in reasonable condition, fully meeting operational requirements.</td>
<td>S3</td>
</tr>
<tr>
<td>Ancillary functions only with no critical operational role (e.g. storage) or building has a limited life.</td>
<td>Building to meet minimum operational requirements only.</td>
<td>S2</td>
</tr>
<tr>
<td>Building is no longer operational - it is dormant, pending disposal, demolition, etc.</td>
<td>Building can be allowed to deteriorate, however, must be marginally maintained to meet minimum statutory requirements.</td>
<td>S1</td>
</tr>
</tbody>
</table>

Where standards are specified at overall building level, detailed descriptions of what is meant by the S1 to S5 ratings should be articulated in terms of condition standards of key building elements most critical to delivery of services. This is because more complex and critical building elements will generally have specific performance requirements and these elements therefore may need to be maintained above the standards required of the overall building.

Such descriptions should be used to establish a common understanding and agreement with condition assessors by focusing on building elements most likely to warrant immediate repair or further assessments. The descriptions can also be used to monitor change in general condition over time.
7.1.3 Policy Requirement 3 – Prepare a ministerial Maintenance Strategy

Ministries must adopt a Maintenance Strategy that incorporates a balance of planned maintenance and unplanned maintenance.

All ministries are required to document a strategy for maintenance of their building assets and site improvements which is a combination of the following:

**Planned Maintenance:**
Planned work at predetermined intervals to meet statutory, health and safety, technical or operational reliability considerations, and to preserve the asset and prolong its economic life.

The planned maintenance consists of preventative, statutory, and condition-based maintenance.

Preventative maintenance may be applied to building structures, building fabric, services and site improvements but is predominantly used for maintenance of building services. When preparing their maintenance strategy, ministries should be aware of the benefits of preventative maintenance practices which minimize the likelihood of building asset failures, health and safety issues and disruptions to service delivery.

Statutory maintenance is maintenance to meet requirements mandated in Acts, Regulations and other statutory instruments.

Condition-based maintenance is work driven by a condition assessment or inspection process. The maintenance work is carried out because the physical condition of a building structure, building fabric, service or site improvement is below acceptable standards.

**Unplanned Maintenance:**
Unplanned (often referred to as reactive) maintenance occurs when failure of a building component requires immediate attention. It is usually limited to rectification for health, safety or security reasons.

**Observation:**
For minor, non-critical buildings and those buildings scheduled for refurbishment, replacement or disposal, the maintenance strategy can incorporate a “minimum maintenance” approach. Under this approach, apart from statutory maintenance requirements, there is no maintenance action until breakdown or the condition is expected to fall below legal requirements.

7.1.4 Policy Requirement 4 – Develop a Strategic Maintenance Plan

Each ministry must develop a Strategic Maintenance Plan as part of its asset strategic planning process.

When formulating a Strategic Maintenance Plan (SMP) each ministry should take into account:

- service delivery plans
- the age, condition, value, deferred maintenance and functionality of its buildings
- the performance of its buildings in terms of water and energy consumption
- health, safety and security requirements
- new buildings
- disposal or refurbishment plans
- emerging issues which may impact on service potential.

The SMP should reflect the maintenance needs of the ministry’s portfolio of buildings over the immediate, medium and long term. Modifications may be necessary if/when service delivery priorities change.
The SMP should link to the ministry’s Asset Strategic Plan and consider, amongst other matters, the maintenance of existing and new assets and how this will be dealt with in the longer term.

The SMP should concentrate on how ministries will:

• manage backlog/deferred maintenance
• fund and sustain future maintenance
• reduce maintenance demand through improved design of new buildings and incorporation of feedback from facility managers and occupants on maintainability and other issues
• gain better value for money in expenditure of maintenance funds
• improve the management of maintenance by utilizing better systems and procurement models
• incorporate ecologically sustainable development and environmental impact considerations into maintenance strategies and practices
• maintain or improve the health and safety aspects of their buildings.

7.2 **Maintenance Implementation**

7.2.1 **Policy Requirement 5** – Arrange/conduct **Condition Assessments**

As a minimum, all government buildings are to be assessed by site inspection at least every three years, depending on the nature of the facility. (See table 2)

The results from condition assessment should be analyzed by ministries in the context of other building data, such as: functionality, utilization and operational cost efficiency; ministerial and government priorities; environmental and social commitments; and budget imperatives.

A structured condition assessment process must be part of any condition-based maintenance strategy which should be incorporated into the maintenance planning process. The MMF guideline, *Building Condition Assessment* describes the methodology that should be used in the assessment of building assets.

A condition assessment is a technical inspection by a competent assessor to evaluate the physical state of building elements and services and to assess the maintenance needs of the facility. The assessment should provide sufficient information on building condition to support informed asset management decisions.

Condition Assessment generally comprises:

• physical inspection of buildings
• assessment of the actual condition of individual elements, services and buildings
• comparison of the actual condition with the asset owners’ specified condition standard as outlined in Table 1
• identification of maintenance works required to bring the condition of the building up to the specified condition standard
• ranking of maintenance works in order of priority
• determining actions deemed necessary by the assessor to mitigate any immediate risk until remedial works (or other actions) can be taken to address problems.
**Frequency of Condition Assessments**

Site inspections must be conducted on all government buildings at least every three years, depending on the nature of the building and its building elements and services.

Ministries should decide on the appropriate interval in terms of criticality to service delivery and complexity of the building asset. The more critical and complex an asset is, the more likely it is that condition assessment will be required more often. For example, undertaking annual condition assessments focused on workplace health and safety risk may be more advantageous for building types that may incur a high potential incident.

The following factors should also be taken into account when determining assessment intervals:

- intensity of use (number of occupants and nature of business activities)
- robustness of construction and susceptibility to wear and tear
- number of days and hours of operation
- extent of public use (visitors or users)
- exposure to harsh environmental conditions or malicious damage
- age of the building and its components
- costs, risks and benefits of assessment interval adopted
- likelihood or possibility of health and safety or other environmental issues prevalent occurring
- other periodic inspections or monitoring of building assets that may be required such as the inspection of hazardous building materials (e.g. asbestos, lead paint, etc).

**Results from Condition Assessment**

The results from the condition assessment should be presented in a report format. The report should include:

- the desired Condition Standard Rating identified for each building (refer to Table 1)
- an assessed condition index for each building (refer to Table 2) which communicates to the asset owner the general state of their buildings
- an itemized, recommended schedule of maintenance work necessary to bring each building up to the condition standard (Table 1) as nominated by the asset owner. A condition assessment priority ranking scale (refer to Table 3) must be used by the assessor in developing the recommended schedule of maintenance work
- cost estimates of the remedial work identified (at a level of detail agreed with individual departments)
- advice about the longer term maintenance needs of the building to assist in planning and decision making (e.g. any anticipated major replacements or upgrades).

**Competencies and Quality of Outcomes**

Integrity and quality of outcomes from the assessments depends, amongst other things, on ability to match, where possible, the appropriate competency of assessors with building elements being assessed. A competent assessor is a person that has relevant training, qualifications, ability, aptitude, experience and where required by law, the appropriate license or registration, to undertake a building condition assessment as defined by the MMF.
Table 2 - Condition Index

This table sets out the ratings to be used by the assessor to represent the general condition of building assets.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Status</th>
<th>Definition of Rating/ Condition of Building Asset</th>
</tr>
</thead>
</table>
| 5      | Excellent    | • no defects  
          | • as new condition and appearance                                                                                                                                                    |
| 4      | Good         | • minor defects  
          | • superficial wear and tear  
          | • some deterioration to finishes  
          | • major maintenance not required                                                                                                                                                    |
| 3      | Fair         | • average condition  
          | • significant defects are evident  
          | • worn finishes require maintenance  
          | • services are functional but need attention  
          | • deferred maintenance work exists                                                                                                                                                    |
| 2      | Poor         | • badly deteriorated  
          | • potential structural problems  
          | • inferior appearance  
          | • major defects  
          | • components fail frequently                                                                                                                                                         |
| 1      | Very Poor    | • building has failed  
          | • not operational  
          | • not viable  
          | • unfit for occupancy or normal use  
          | • environmental/contamination/ pollution issues exist                                                                                                                                  |
Table 3 – Condition Assessment Priority Ranking Scale

This table sets out the rankings to be used by the assessor undertaking Condition Assessments to provide an indication of recommended maintenance work.

<table>
<thead>
<tr>
<th>Priority ranking</th>
<th>Definition</th>
</tr>
</thead>
</table>
| 1                | Works needed to:  
|                  | • meet maintenance related statutory obligation and due diligence requirements  
|                  | • ensure the health and safety of building occupants and users  
|                  | • prevent serious disruption of building activities and/or may incur higher costs if not addressed within 1 year |
| 2                | Works that:  
|                  | • affect the operational capacity of the building  
|                  | • are likely to lead to serious deterioration and therefore higher future repair costs if not addressed between 1 to 2 years |
| 3                | Works that:  
|                  | • have minimal effect on the operational capacity of the building but are desirable to maintain the quality of the workplace  
|                  | • are likely to require rectification within 3 years |
| 4                | Works that:  
|                  | • can be safely and economically deferred beyond 3 years and reassessed at a future date |

7.2.2 Policy Requirement 6 – Assess maintenance demand

Ministries must assess and financially quantify the demand for maintenance as the initial step in the planning and delivery of annual maintenance work programs.

It is likely that a department’s maintenance budget will exceed the recommended minimum threshold of 2% of the ARV if the portfolio has:

• unfunded or deferred maintenance projects  
• ageing or deteriorating buildings  
• heritage or iconic buildings

or

• highly critical or complex facilities.

Conducting a maintenance demand assessment will ascertain the total maintenance requirements of the building portfolio. The scope of maintenance work in the demand assessment process will be a combination of:

• preventative maintenance which takes into account expert advice and manufacturers’ recommendations  
• condition-based maintenance works identified in maintenance assessment reports  
• deferred (backlog) maintenance  
• maintenance to meet mandatory statutory and health and safety requirements  
• reactive maintenance estimates based on historical information.
7.2.3 **Policy Requirement 7 – Allocate an adequate maintenance budget**

Ministries must allocate sufficient funding in their maintenance budget to enable the buildings in their portfolio to be maintained to the Condition Standard Ratings identified and documented in the departmental maintenance policy.

**Setting the Annual Ministerial Maintenance Budget**

Ministries must formulate an annual maintenance budget which is a realistic calculation of the quantum of funding required to address the ministry’s maintenance needs. This relies upon reliable data extracted from:

- the ministerial Maintenance Strategy
- the Strategic Maintenance Plan
- the maintenance assessment reports
- current state and age of the ministry’s building portfolio
- analysis of maintenance demand
- deferred maintenance levels.

When developing the annual maintenance budget, consideration should also be given to opportunities for cost-effective improvements in building performance through the adoption of innovative technologies such as energy efficient lighting, products that reduce water use, products that improve air quality, etc.

Where the funding allocated is less than the amount required for undertaking the identified maintenance tasks, departments may wish to explore the following options:

- seek more funding from within their funding source
- ensure that maintenance is not considered a discretionary item when funding is being determined
- reviewing the performance of building assets to identify any opportunities for disposal
- with the exception of statutory and health and safety requirements, defer some maintenance works after considering value for money factors and all the risks of doing so.

The MMF recommends a minimum funding benchmark of **2 % of the building asset replacement value (ARV) of the ministry’s building portfolio.**

The ARV for buildings is the best estimate of the current cost of constructing (for its original use) a new facility providing equivalent service potential as the original asset. It does not include the value of the furnishings or other items not permanently part of the facility, nor does it include design and project management costs.

Ministries should view this 2 % funding recommendation as the **minimum** threshold for annual maintenance expenditure for the building portfolio, **not** as the optimal funding level.

*Example: If a ministry has a building portfolio with a current ARV of N$ 800 million then (subject to many variables) it is reasonable to expect a minimum of N$ 16 million for that year’s maintenance budget.*

**Allocating Maintenance Funds to Individual Buildings**

Maintenance funding for individual buildings within the portfolio should reflect actual maintenance demand for each facility.

**Risks Associated with Under funding Maintenance**

In many instances, ministries will not have sufficient funds available to allow all identified maintenance tasks to be completed. It is, therefore, important that ministries carefully evaluate priorities and risks and focus on condition standards and the most cost effective solutions to maintain the desired building standards.
Deferred maintenance is defined as maintenance work that is postponed to a future budget cycle, or until funds become available. It excludes work earmarked in anticipation of a level of deterioration that did not occur (e.g. forecast repainting).

Ministries need to have a strategy in place to keep deferred maintenance to a manageable level. Some maintenance activities can be postponed without immediately having a noticeable effect on the functionality of the building. However, ministries that allow their building portfolios to decline through inadequate maintenance are not only failing to meet their legislative responsibilities, they are potentially exposing themselves and the Government to risk.

A policy of continuing deferred maintenance will result in higher costs than if normal maintenance had occurred. Insufficient funding to perform needed repairs will lead to a backlog of maintenance projects which will adversely impact on future maintenance budgets.

7.2.4 Policy Requirement 8 – Develop an annual Maintenance Works Program

Departments must produce an annual Maintenance Works Program based on condition assessments, existing programs, historical data and their Asset Strategic Plan.

All ministries are required to develop an annual Maintenance Works Program covering all building assets as part of their maintenance planning process. The Maintenance Works Program should support the departmental Maintenance Strategy and consist of a balance of planned and unplanned maintenance (refer to Table 4 Maintenance Work Classification and Sub-Categories). It should focus on service delivery obligations, maintenance priorities, availability of resources and performance management. The scheduling, delivery and control of maintenance work projects should be in accordance with the Maintenance Works Program.

Planning horizons should be at least three years. However, as the aim of the program is to identify maintenance activities for each year in the planning period, the minimum duration of a Maintenance Works Program is one financial year. Formulation of a Maintenance Works Program allows ministries to plan, prioritize and allocate sufficient resources and funds for maintenance. Systems and processes should be set up to manage the Maintenance Works Program and monitor its outcomes.

In planning and approving work programs, ministries should mitigate, as far as possible, the impact on industry of fluctuating demand on maintenance resources, especially in regional and remote areas. Ministries should work closely with their maintenance service provider so that their programs are prepared with due attention to market conditions and reasonable timeframes.

The engagement between ministries and their maintenance provider will contribute to ensuring:

- an adequate standard of environmental measures is implemented (e.g. to assist in increasing water and energy efficiency)
- timely maintenance of buildings, especially for buildings designed to achieve a particular environmental performance (for example, once a building has achieved an environmental rating - either at the design stage or at completion - it is important to ensure this rating is maintained during operation)
- better coordination of maintenance and inspection activities (including periodic inspections of asbestos containing material) in remote locations, focusing on:
  - optimum use of resources
  - review of opportunities for integrating and leveraging of works with other departments
  - better coordination of purchasing materials.
Table 4 - Maintenance Work Classification and Sub-Categories

This table illustrates the elements that should be incorporated in a balanced Maintenance Works Program.

<table>
<thead>
<tr>
<th>Category</th>
<th>Sub-Category</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned Maintenance</td>
<td>Preventative Service Maintenance</td>
<td>Prevents asset failure by systematic inspection and monitoring to detect and avoid deterioration or failure. It also entails testing to confirm correct operation.</td>
</tr>
<tr>
<td></td>
<td>Condition-Based Maintenance</td>
<td>Programmed maintenance work, based on Condition Assessment or other priorities, that returns an asset to an acceptable standard.</td>
</tr>
<tr>
<td></td>
<td>Statutory Maintenance</td>
<td>Compulsory maintenance to meet requirements mandated in Acts, Regulations and other statutory instruments. This includes standards and codes referred to in an Act, Regulation or statutory instrument.</td>
</tr>
<tr>
<td>Unplanned Maintenance</td>
<td>Corrective and Breakdown Maintenance</td>
<td>Restores an asset to operational condition following an unforeseen failure.</td>
</tr>
<tr>
<td></td>
<td>Incident Maintenance</td>
<td>Brings an asset back to an operational or safe condition following damage caused by storms, fire, forced entry or vandals.</td>
</tr>
</tbody>
</table>

7.2.5 Policy Requirement 9 – Arrange for the provision of maintenance services

Ministries are required to enter into appropriate arrangements with the Department of Works (DOW) or other maintenance service providers for the provision of maintenance services in accordance with Government policy.

Engagement of appropriately registered maintenance service providers through open tender of Government for building industry contractors (administered by the Department of Works) is required where:

* the value of individual maintenance work projects exceed the threshold requirements stipulated in the respective Annual Tenders (*Civil, Electrical and Mechanical*)

or

* the total package of maintenance services from demand assessment through to delivery is outsourced to a private sector maintenance or facilities management organization.

Monitoring and reviewing maintenance performance is crucial to accomplishing maintenance outcomes which are in accordance with government policy and underpin departmental service delivery. The following aspects should also be periodically reviewed by each ministry:

Outsourced maintenance services should be delivered through a Service Level Agreement (SLA) or other suitable instrument which complies with the MMF. The use of SLAs (or other compliant instruments) allows ministries to formally instruct their maintenance provider about specifications and expectations.

Procurement of maintenance services must be in accordance with the Procurement Policy of the Government of Namibia and give due regard to:
• opportunities for economy of scale in purchasing
• employment opportunities and impact on regional and remote areas in Namibia
• efficiency and effectiveness of services
• best practice and innovative use of technology
• retaining adequate ministerial capacity to manage maintenance
• achieving maintenance outcomes at the most economical cost to Government
• minimizing administrative transactions to enhance transparency and accountability.

7.2.6 Policy Requirement 10 – Monitor and review maintenance performance
Ministries must monitor and review maintenance performance in accordance with the provisions of this Framework.

Maintenance Program Management

• expenditure against budget
• achievement of planned maintenance program (time, cost and quality)
• unplanned and planned maintenance as percentages of total expenditure
• level of deferred maintenance.

Maintenance Service Provider

• efficiency and effectiveness of:
  – people
  – processes
  – systems
  – management

• compliance with the MMF
• achievement of key performance indicators in the SLA.

Maintenance Outcomes

• total maintenance expenditure as a percentage of building portfolio replacement value
• building occupant satisfaction with overall condition and reliability of building services
• Facility Condition Index

The Facility Condition Index (FCI) is a complementary measure of performance which is a generally accepted method of comparing relative building condition over a period of time. It can be used at portfolio level to increase understanding of the condition of assets, which can in turn facilitate long term strategic decision making and potentially give more credibility to requests for increased maintenance funding.

The FCI is calculated by dividing the existing Cost of Deferred Maintenance by the Asset Replacement Value (ARV). It provides a quantitative measure of an asset’s condition, stated as a percentage.

\[ \text{FCI} = \frac{\text{Total Deferred Maintenance (N$)}}{\text{Asset Replacement Value (N$)}} \times 100 \]

<table>
<thead>
<tr>
<th>FCI</th>
<th>Condition of building portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2%</td>
<td>Excellent</td>
</tr>
<tr>
<td>2-5%</td>
<td>Good</td>
</tr>
<tr>
<td>5-10%</td>
<td>Fair</td>
</tr>
<tr>
<td>10-15%</td>
<td>Poor</td>
</tr>
<tr>
<td>&gt; 15%</td>
<td>Very Poor</td>
</tr>
</tbody>
</table>

Interpretation of the FCI
(The higher the percentage, the poorer the condition of the asset)
7.3 Maintenance Information and Systems

7.3.1 Policy Requirement 11 – Collect and retain relevant asset information

Ministries, or their service providers, must have protocols and processes in place for the proper collection, custodianship, updating and use of technical and asset information. The MMF requires that departments gather data pertaining to maintenance of their buildings, services and site improvements. Technical and asset information related to maintenance should be retained in a useful format/medium and protected as Government intellectual property.

Critical to making informed and strategic decisions is ministries’ ability to view and analyze information about:

• their building portfolio
• the condition of buildings
• maintenance expenditure
• functionality
• compatibility with service delivery objectives
• buildings’ environmental performance (e.g. water and energy consumption, and, where relevant, levels of pollutant emissions including CO2).

7.3.2 Policy Requirement 12 – Ensure proper capturing of information from commissioning and handover

New buildings being phased into operation or use must be commissioned and handed over in an appropriate manner.

Ministries will be better informed about their building assets and generally improve maintenance practices if comprehensive commissioning and handover processes are instituted. This is fundamental to responsible building maintenance and operation.

Handover of technical and asset information (e.g. manuals, warranty information, specifications) is necessary for maintenance and safe operation of buildings. There should also be an emphasis on thorough training and orientation of facility managers, maintenance personnel and plant operators.

Ministries must have in place adequate systems and processes for the acceptance and retention of technical and asset information from the building contractors. Such systems must enable ready access to the information for officers responsible for operating and maintaining the facility.

7.3.3 Policy Requirement 13 – Utilize a computerized maintenance management system

Ministries must use an effective computerized maintenance management system that adequately facilitates maintenance planning, implementation and reporting.

Ministries using the Department of Works as their maintenance service provider may use, or interface with, the computerized maintenance management system it operates. Ministries not part of this arrangement may use another system that adequately accommodates the requirements of the MMF.

Such a system should reinforce maintenance and ministerial service delivery objectives and facilitate:
• planning
• Condition Assessments
• operational maintenance work scheduling and control
• resource allocation
• program management
• reporting.

7.3.4  **Policy Requirement 14** – Establish *maintenance reporting* capability

Ministries must be capable of reporting on maintenance and the condition of their building portfolio to promote transparency and accountability.

In addition to promoting transparency and accountability, reporting on maintenance and the condition of a building portfolio facilitates effective management of maintenance and drives improvements.

SLAs (or other suitable instruments for procurement of maintenance services) should clearly specify that service providers must furnish maintenance reports which comply with the minimum reporting requirements of the MMF.

**Minimum Reporting Requirements**

For consistency and to facilitate benchmarking, departments should be capable of reporting on:

• the condition of the building portfolio relative to the condition applicable for service delivery
• financial year maintenance expenditure in the following categories:
  - planned maintenance
  - unplanned maintenance
  - maintenance management
• deferred maintenance
• annual maintenance expenditure as a percentage of ARV
• projected future repairs or replacements over the planning period specified for Asset Strategic Plans
• significant maintenance issues that impact on the capability of the building portfolio in relation to service delivery.

8.0  **Policy Implementation and Review**

As part of its whole-of-Government policy role in the monitoring of maintenance outcomes and asset performance, the Department of Works (DOW) will evaluate implementation progress and conduct periodic reviews of the MMF. Ministries may be requested to supply the Department of Works (DOW) with information (described in the minimum reporting requirements) as part of this process.

Ministries are responsible for implementing the MMF. The Department of Works (DOW) will, however, assist ministries with advice and additional resource materials (e.g. guidelines and policy advice notes).

By reviewing the MMF and its implementation, the Department of Works (DOW) will gain a better understanding of ministerial maintenance issues, which will lead to a more practical and comprehensive policy and improve whole-of-Government maintenance outcomes.