National Manual of Assets and Facilities Management

Volume 3, Chapter 1

Condition Assessment Introduction Guideline

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1.0 PURPOSE

The purpose of Volume 3 in conjunction with other volumes of the National Manual of Assets and Facility Management is to provide an instruction of the condition assessment (CA) process and procedures to enable the standardization of Condition Assessment across all Government Entities setting the foundation for the effective, efficient and high quality management of their assets and facilities.

The intention is to provide a clear and concise reference for all levels of the Entity and maintenance contractor organizations to use when creating or developing their own procedure documents and processes.

Condition Assessment is a structured means by which the Entity can establish the current condition of its priority assets. The assessment reports provide the Entity with accurate data to provide understanding on not only the assets condition, but also the means with which to make suitable lifecycle supporting choices. This will provide an Entity with clear direction and input for their full lifecycle management of their assets.

Volume 3 of the National Manual of Assets and Facility Management covers the 3 major phases as mentioned in section 2.0 below within the Condition Assessment Flow Process that should be followed in their entirety for the results to be credible and meaningful to the recipients of the information and data.

The Entity should use the documents within Volume 3 as the basis for the Entity's own Condition Assessment Standards, Practices, Plans, Templates and Checklists.

2.0 SCOPE

Chapters 2, 3, and 4 provide the guidance for Entities to develop procedures and checklists for Condition Assessments in an efficient and practical manner, culminating in a process whose output of data and information fully supports cyclic strategic Asset management decision making.

The guidance contained within each chapter explains the principles and best practices to be imbedded when undertaking condition assessments.

This Volume contains chapters in order as follows:

- Chapter 1: Introduction
- Chapter 2: Condition assessment Planning
- Chapter 3: Condition Assessment Survey (CAS)
- Chapter 4: Condition Assessment Analysis and Report (CAA & CAR)

Table 1 in Section 3 offers definitions for terms and acronyms specifically used within this Introduction Chapter. For a comprehensive list of definitions, the user should consult the "Expro Definitions and Acronyms Guideline" Document No. ENT-E00-GL-000001 Rev 001.

3.0 DEFINITIONS

Term	Definition
Asset	An Asset is an item, thing, or Entity that has potential or actual value to an organization. The value will vary between different organizations and their stakeholders, and can be tangible or intangible, financial or non-financial.
Asset Management	The coordinated activity of an organization to realize the full potential of any asset
Asset Management System	Set of interrelated or interacting elements to establish Asset Management Policy, Asset Management Objective and processes to achieve those objectives. (i.e. management systems for the management of assets).
Asset Lifecycle	The phases an Asset transitions through from planning to disposal
Asset Management Software (AMS)	Also known as an asset management tool or solution, is a dedicated application that is used to record and track an asset throughout its life cycle, from procurement to disposal.
Condition Assessment (CA)	The process of periodic physical inspections, assessments, measurements and interpretation of the resultant data to indicate the condition of a specific asset.
International Standards Organization (ISO)	The international standard-setting body composed of representatives from various national standards organizations.
Quality Management	Quality management is the act of overseeing all activities and tasks needed to maintain a desired level of excellence

Table 1: Definitions

4.0 REFERENCES

The various documents within Volume 3: Condition Assessment have been prepared using the latest relevant Codes, Standards, Legislation and Best Practice at the time of production. The reader should refer to the specific document for the appropriate and applicable references.

Standards and Legislation referenced may become superseded due to any Royal Decree; Regulatory changes; revised standards; innovative practices or new technologies.

Expro should be consulted by each Entity during any change process, to ensure that the most up-to-date and accurate information is used.

5.0 RESPONSIBILITIES

Role	Description
Entity	A Saudi Government organization that is responsible for the management of government funded facilities management.

Table 2: Responsibilities

6.0 PROCESS

This volume contains 4 Chapters as mentioned in section 2.0. Chapter 1 (this Chapter) is the Introduction to the Volume and provides a brief overview regarding the benefits Condition assessments can bring to the Entity as well as where Condition assessments fit within the wider Asset Management process.

6.1 An Introduction to Condition Assessment

6.1.1 Asset Management Structure

To provide Government Entities with an introduction to the importance of Condition Assessments (CA) and the key elements to acquire meaningful reports.

Condition Assessment is one of three elements essential to initiating and stabilizing a cost-effective Asset Management System that focuses primarily on Operations and Maintenance (O&M) costs within Entities. There are three essential elements that form component parts of the Asset Management Structure.

Information and guidance is provided within The National Manual of Assets and Facility Management volumes;

- Asset Management Volume 2
- Condition Assessment Volume 3
- Financial Planning Volume 4

International Standard, ISO 55000: 2014 2.5.3.7 states that every organization should evaluate the performance of its assets, its Asset Management (AM) and its Asset Management System; these measures can be direct, indirect, financial or non-financial. Organizations should measure the performance of their assets and utilize this information to enable credible decisions for managing specific Asset Lifecycle Plans and that the process as a whole is subject to continuous improvements.

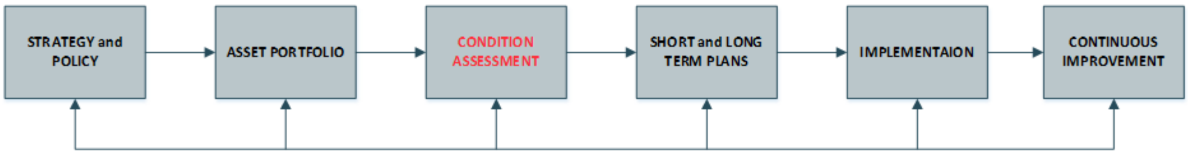

Figure 1. Condition Assessment in the Asset Management Structure

The output from the combination of systematic management activities, including CA, is designed to optimize the full asset lifecycle potential in the most cost effective way for Operation & Maintenance (O&M).

6.1.2 Condition Assessments

Condition Assessment (CA) is a structured means by which to establish the current condition of assets. It guides an Entity through a process to determine suitable lifecycle supporting direction and subsequent activities enabling them to have direction in the interest of asset value. As with the majority of configured procedures the process sequences must be followed in their entirety for the results to be credible and meaningful to the recipients of the information and data.

Condition Assessment will provide that data and information to determine the direction in which Asset lifecycle plans shall take when compared to the performance, cost, risk profile for each Entity.

The benefits of conducting Condition Assessments as part of the Asset Management can be summarized as:

- Compliance with Regulatory requirements
- Improved financial performance and efficiencies
- Organizational sustainability
- Managed risks
- Enhanced reputation
- Compelling business cases to justify asset investment
- Better evidence-based decision making
- Improved execution
- Higher productivity and engaged competent staff
- Reduced life cycle costs
- Increase the asset life cycle span.
- Increased asset reliability
- Better transparency and line-of-sight
- Improved information management

6.1.3 The Condition Assessment Process Flow

The CA Process follows the same basic sequence irrespective of the asset type being assessed. The process elements that make up the sequence are Plan, Data Collection (CAS), Analyze (CAA) and Report (CAR). Figure 2 below demonstrates the contributing factors to the three elements. The process concludes with accurate measures of specific assets condition set against a set of bespoke and standardized parameters.

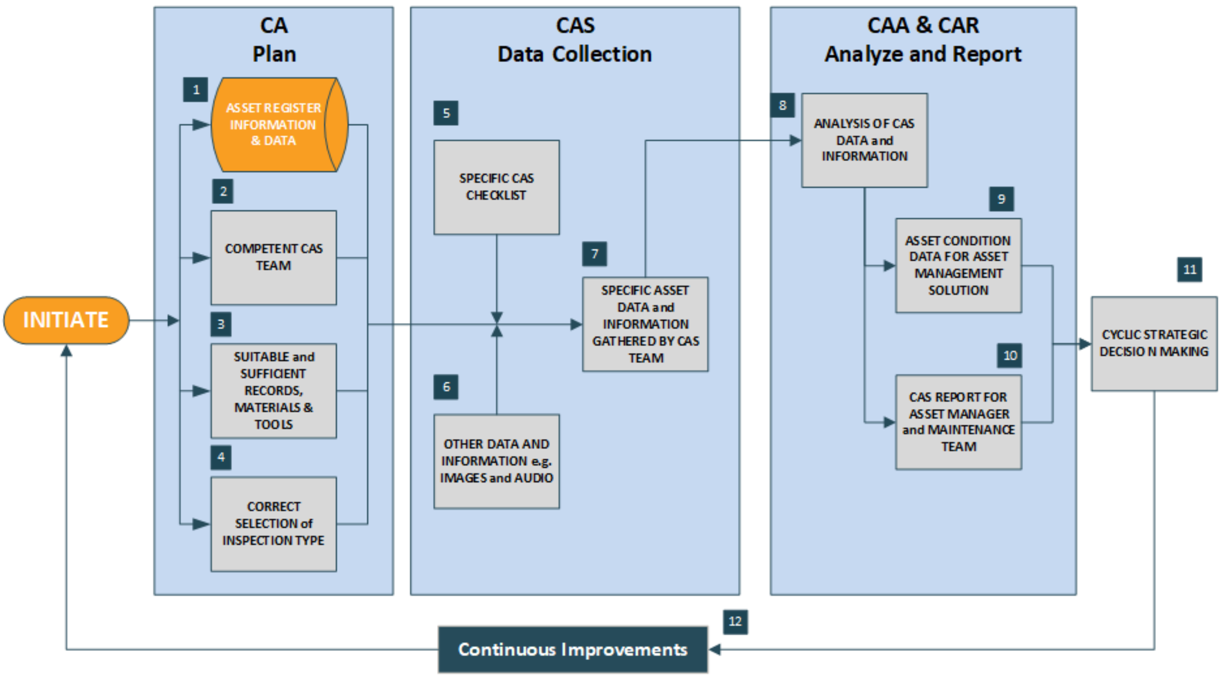

Figure 2. The CA Process Flow

6.2 Condition Assessment Requirements

6.2.1 Condition Assessment Planning

The document within this chapter features information and guidance for the development and content of the Planning phase required within the Condition Assessment Process flow.

The requirements outlined pertain to the substantial need to score critical asset condition against a standardized scoring matrix, whilst identifying the most suitable actions/outputs (Maintenance or Otherwise). The intention being to stabilize degeneration and reduce the level of risk to an acceptable level.

These Condition Assessment Planning instructions are intended to be carried out by Asset Managers, Maintenance Managers, Engineers and Technicians.

6.3 Condition Assessment Survey (CAS)

The document within this chapter features information and guidance for the development and content of the Condition Assessment Survey (CAS) phase required within the Condition Assessment Process flow.

The purpose of Condition Assessment Surveys (CAS) is to provide a means of capturing Asset conditions. By clearly setting out the generic methodology, on which to base the design of a Checklist that captures the information and data required, to ensure the requirements of the analysis phase will be satisfied.

A CAS procedure is required to capture Asset condition data and information across the full scope of selected CAS Assets and present that data and information in a format and units of measurement suitable for transposing into Asset condition analysis.

This Chapter details the key aspects to be addressed by the Entity in order to develop their CAS policy, procedures and checklists. Continuous review and improvement of Procedures and Checklists is therefore crucial to the success of the AMS.

6.4 Condition Analysis and Reporting (CAA & CAR)

The document within this chapter features information and guidance for the development and content of Condition Analysis and Reporting (CAA & CAR). This is the final phase within the Condition Assessment process flow. This chapter provides guidance to enable an Entity to develop a procedure that will produce:

- A well-informed Condition Assessment Analysis (CAA)
- A meaningful and succinct Condition Assessment Report (CAR)
- A basis to inform and direct credible Asset Management decisions relating to Asset lifecycle plans.
- A method in which to maintain a continuous quality and improvement Asset Management structure.

This document will provide the guidance to the Entity to enable them to evaluate the output from the stage 2 of the flow Condition Assessment Survey (CAS) in the form of a package of data and information, analyzes that data and information to produce evaluated data and meaningful reports for accountable Asset managers to compile cyclic strategic decisions for the future.

The data and information should be evaluated and measured against Asset classification standard parameters.

7.0 METHODOLOGY

Each Volume of the National Manual of Assets & Facilities Management has been created by a team of World-Class experts in their field, using latest Standards and best-practice knowledge based on decades of experience.

To ensure that the Entity is compliant with Royal Decrees, Local Standards, and Regulations and to support the Entities decision-making Process associated with the operation and maintenance of facilities, four tiers of linguistic classification have been used within the National Manual of Assets & Facilities Management as follows:

Shall. This is a mandated instruction which must be followed or adhered to (e.g., a Royal Decree, in country standards such as the Saudi Building Code).

Should. This is an instruction or piece of information which is important and, while it may not be mandated to follow the advice, it is advisable to follow (e.g., international standards which are considered legislation in other countries).

Consider. This refers to advice or an instruction which is considered to be important, is worth following, and fits well for the purpose intended.

Advise. This generally refers to good practice and entails practical advice intended to raise standards and enhance quality.

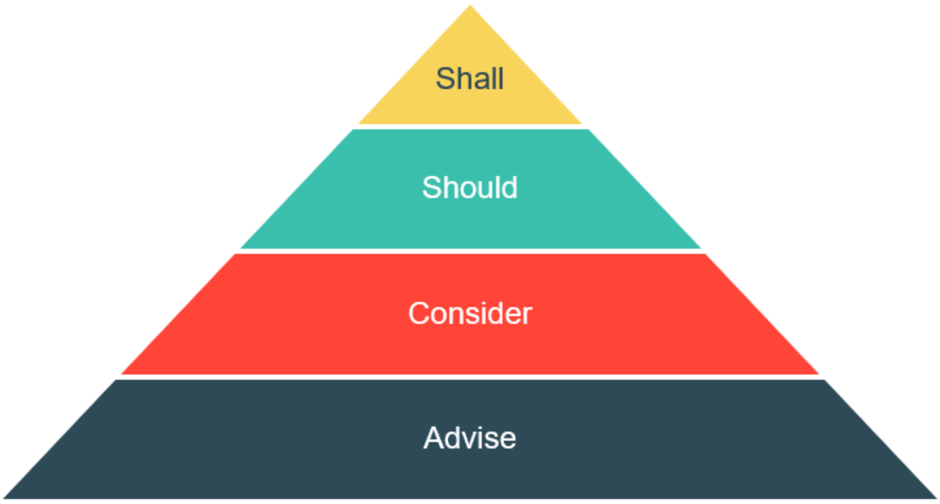

Figure 3 Four Tiers of Linguistic Classification

8.0 ATTACHMENTS

1. National Manual of Assets and Facility Management Volume 3, Contents List.

Attachment 1 – National Manual of Assets and Facilities Management Volume 3, Contents List