

National Manual of Assets and Facilities Management Volume 6, Chapter 3

Description and Definitions

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34

Description and Definitions

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Table of Contents

1.0	PURPOSE	5
	SCOPE	
	DEFINITIONS	
4.0	REFERENCES	17
5.0	RESPONSIBILITIES	17
6.0	PROCESS	20
6.1	Introduction	20
6.2	Maintenance Type definitions	20
	6.2.1 Expro Maintenance Definitions	20



1.0 PURPOSE

The facilities management industry, which operates within the Kingdom and across all Entities, is closely aligned to the construction and maintenance industries.

Both industries have adopted, numerous terms to describe various principles, concepts and approaches relating to maintenance management within the built environment. It is not uncommon for similar terms to be used across different industries which, occasionally may have more than one meaning.

The purpose of this document is to provide the Entity with a consistent set of descriptions and definitions that they may adopt throughout their facility.

Consistency of terminology and their meaning will assist the Entity, and their contractors, supply chain, to strengthen their facilities management through continuous improvement though the development of a common language and understanding

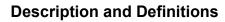
2.0 SCOPE

The scope of this document is to provide a glossary of terms frequently used within the National Manual of Assets & Facilities Management. The document also provides a description of and discussion on the terms listed.

Implementation of the guidance given within this document will contribute to ensuring that maintenance operations are conducted through the application of 'Good Practice' in a more consistent and reliable manner.

The use of these descriptions and definitions should complement and respect the associated Reference sections within documents in other Volumes.

The guidance given is applicable across varying types of contracts and operating models, including multisite contracts, different delivery models and specialist environments. It is applicable to all sectors within a hard and soft services maintenance environment.





3.0 DEFINITIONS

Definitions	Description
Asset Management Software (AMS)	A dedicated software application used to record
, ,	and track an asset throughout its life cycle, from
	procurement to disposal
(Asset) Criticality	The relative risk of cost or disruption arising from
	a less than acceptable level of performance (or
	failure) of that asset where two or more Assets
	reside within a given financial control boundary
Asset Register	A list of Assets owned by an Entity. Specifically,
	relevant details about each maintainable Asset.
	The Register may identify the location,
	description, value, and age of the Asset
Atmosphere	The gaseous envelope surrounding the earth
	(outside conditions)
Authority	Government Entity
Basis of Design (BOD)	A mandatory pre-construction document based on
	American Society of Heating, Refrigerating and
	Air-Conditioning Engineers (ASHRAE),
	Leadership in Energy and Environmental Design
	(LEED), and National Fire Protection Association
	(NFPA) to prepare Mechanical, Electrical, and
	Plumbing (MEP) systems manual, and
Duilding Englooure	commissioning documents
Building Enclosure	Any part of a building that physically separates the external environment from the building
	interior. It is often referred to as the 'building
	envelope', although 'enclosure' is considered to
	be the more precise term
Building Fabric	Interior and exterior materials such as insulation,
Ballaling Fabric	cladding and finishes but not limited to columns,
	walls, and beams
Building Non-Structural Components	Building components such as mechanical,
Ballating Notificational Components	electrical, and architectural elements which
	directly serve human needs and do not contribute
	to the performance of load bearing components
Building Structural Components	Elements that are load bearing within a building
Built Environment	Any structure that involves construction of any
	description, regardless of its purpose, design or
	materials, where the aim is to keep the building
	contents (of any description including people)
	under different conditions to those that would
	otherwise exist, if that structure had not been built
Campaign Maintenance	Maintenance of an asset, sub-system, or system
	that includes all disciplines (mechanical, electrical,
	control, and structural) simultaneously, with the
	intention of limiting outage duration, or frequency.
	Can also refer to a particular asset type that is
	numerous across an estate (lifts, pressure relief
	valves), motivated by availability of specialist
	contractor. Sometimes referred to as Lean
	Maintenance
Change Management	The process, tools and techniques to manage the
	people side of change to achieve the required
011111111111111111111111111111111111111	business outcome.
Child Work Order (WO)	A Work Order (WO) created from another WO, as
	part of Corrective Maintenance



Clooping Harizantal/Vartical	Cleaning and maintenance activities involved with
Cleaning Horizontal/Vertical	Cleaning and maintenance activities involved with a facility comprising of:
	Horizontal – the surfaces and facilities accessible
	by staff and cleaning equipment from ground or
	surface levels
	Vertical – The cleaning of inaccessible areas
	requiring the use of specialist services or
	equipment (glazed external surfaces requiring use
	of Building Maintenance Units)
Condition Assessment	The collection of data about the condition of an
	asset, assessing this against a pre-defined
	standard to identify actions necessary to achieve
	and maintain a standard over a specified time
	horizon
Condition Based Maintenance (CBM)	A philosophy of planned maintenance
	interventions based on quantifiable asset
	condition rate of deterioration.
Construction Phase Plan CPP (taken from	A document that is required for every
Construction Design and Management)	maintenance project (referred to in CDM under
	'construction'). It outlines the key Health and
	Safety (H+S) issues of the maintenance project
	and is used to ensure compliance with the law
Client	Single or multiple staff who are allotted as the
	Authority's appointed representative(s) to oversee
	the awarded contract delivery and authorized to
	execute payment or penalty options in
Office t Decree and office	accordance with that contract
Client Representative	An individual or organization as representative of
	the building or contract owner. See "Site
	Custodian". Interchangeable with "Facilities Manager" "Puilding Manager" or similar
Compatance	Manager", "Building Manager", or similar The measure of ability to perform a specific task
Competence	based on knowledge, experience and skill
Concealed Exterior	Concealed from view, or access and protected
Concouncy Externol	from weather conditions and physical contact by
	building occupants but subject to outdoor ambient
	temperatures
Concealed Interior	Concealed from view, or access and protected
	from physical contact by building occupants
Conditioned	Spaces directly provided with heating and cooling
Conditional Fields	Fields within a Personal Digital Assistant (PDA)
	that must be populated with information before the
	PDA operator can progress to the next step
Confined Space	A space permitting limited entry and egress due to
•	restricted spatial geometry or potentially toxic air
	quality. Requiring special access arrangements
Consumable	Material resources that are required for planned
	maintenance and reasonably expected for
	unplanned maintenance and fall under the
	financial threshold of responsibility of the
	maintenance contractor.
Continuous Improvement	An ongoing effort to improve products, services or
	processes.
Contractor	Company (or companies) undertaking the
	maintenance activities on behalf of the Entity. May
	also be considered as Consultant providing
	advice, guidance, inspection services
Corrective Maintenance (CM)	Activities performed upon a system, equipment,
	structure resulting from a partial or material failure.



	For instance, that reported to a maintenance facility
	such as defective lighting or blocked toilet.
Criticality	Typically, a 4-5 level ranking system that
	categorizes the importance of the component,
	asset, or maintenance task. Refer to the National Manual of Assets and Facilities Management:
	Volume 2 - Asset Management
Customer	The end user of a product or service
Data Point Schedule	A table format which shall show the monitoring
	and control points for the equipment and system.
	Points such as control and monitoring as I/O
	points (Input and Output point to and from the
	controller)
Deferred Maintenance	Maintenance that was not performed when it
	should have been or was scheduled to be and
	which, therefore, is put off or delayed for a future
Detailed/In-depth Inspection	period. A close-up inspection by one or more specialist
Dotaliou/III-depti1 III3peotioi1	members to identify any deficiencies not readily
	detectable using routine inspection procedures
Development	The activity that is carried out as a response to a
·	need for change. Development is applied to an
	existing procedure
Development Matrix	A matrix of categories with specific entries used to
	structure and convey the development plan; a
[4]	type of Action Plan
Ethylene Tetrafluoroethylene	'Teflon' like material used as a roof covering
Emergency Maintenance	Any (unplanned) maintenance activity that requires immediate repair due to potential/direct impact on
	public safety or business operation.
	pasas carety or assumes speranera
Emergency Operating Procedure (EOP)	A plan of actions to be conducted in a certain
	order or manner in response to a reasonably
	foreseeable emergency. Used to safely reinstate
	a system, or equipment into functional use
Entity	following outage. Government Entity, authority, or ministry
Litury	responsible for the Operations & Maintenance
	(O&M) works
Envelope	The outer skin of the building starting with the
'	outer walls and all externally placed components
	attached to or supported by the outer walls plus
	any external supports required by the outer walls
	of the stand-alone structure. May form part of the
	physical weather proofing structure (such as
Equipment	curtain walling systems) An item or items necessary or recommended, that
Lquipment	enable or allow a task to be undertaken or made
	safer or easier (such as special
	tools/apparatus/gear used in the maintenance
	activity)
Exposed Exterior	Exposed to view outdoors or subject to outdoor
	ambient temperatures and weather conditions
Exposed Interior	Exposed to view indoors (not concealed)
Facilities Management (FM)	The organizational function which integrates
	people, place, and process within the built
	environment with the purpose of improving the quality of life of people and the productivity of the
	core business



Facility	Building(s) situated within a site, or complex, in
Facility	which Entity services, processes, and plans are
	executed
Failure Class	Example failure classes are fail-safe, dangerous,
Tallare Olass	catastrophic, consequential, and systematic
Fields	A pull-down menu, free text, or format-controlled
1 icidə	entry box in a computerized system which
	prompts the user for required information
Finished Space	Space other than mechanical rooms, electrical
Timoned opace	rooms, furred spaces, pipe chases, unheated
	spaces immediately below roof, space above
	ceilings, unexcavated spaces, crawl spaces,
	tunnels, and interstitial spaces
Frequency (FQ)	Refers to a cyclic time period i.e. (weekly,
	monthly, quarterly)
Indoors	Located inside the exterior walls and roof of the
indoord .	building
Infratech	The deployment or integration of digital
	technologies with physical infrastructure to deliver
	efficient, connected, resilient, and agile assets
Inspection	The evaluation of the condition of an asset(s)
·	through a formally defined and controlled process.
	The process shall include all relevant information,
	site inspection surveys, and analytical
	assessments where required by this document or
	any other standard
Intelligent Maintenance	Maintenance system that utilizes the assets'
	historical collected data in order to optimize the
	maintenance operations between planned and
	unplanned activities (data-driven approach)
Load Bearing	Building components such as walls, columns, and
	beams that support the load or weight of the
	overlying parts of the building/structure
Long life Assets	An asset that is reasonably expected to have an
	economic life equal to its design life
Maintenance	The undertaking of preventive or corrective action
	or both, including repairs to ensure that the
	condition of asset continues to meet the required
	duty over the service life
Maintenance Levels	The complexity of maintenance activity. For
	example, level 1: reset, level 2: Predicative
	Maintenance, level 3: monthly related to the
	skillset/competence level, and experience of the
	operative. Sometimes referred to as Task Level
Maintenance Philosophy	A 'mix of strategies that ensure assets, sub-
	systems and systems operate as expected when
	needed'
Maintenance Program	An agreed and defined sequence of operations
	upon plant, equipment, structures to maintain an
	asset to a high level based upon
	recommendations from the manufacturer, installer
	or statutory compliance
Maintenance Strategy	Defines the rules for the selection and sequence
	of planned maintenance work
Maintenance-to-Replacement Ratio	The ratio of maintenance costs associated with an
	asset over its service life, the cost of replacing the
	asset at the end of its life
Maintenance Type	A grouping of variations or versions of
	maintenance, namely 'planned' and 'unplanned '.



Managing Party Where an Entity devolves responsibility for monitoring of activities to a managing Ager has the authority to act by the Entity. Mechanical Systems Plant and equipment used to provide service Entity that rely upon, but not exclusively to conventilation, utilities or sewage. Monitor/Head end Personal Computer (PC) See engineering equipment's, systems' state monitoring and control the operations A CMMS work status, sometimes referred to "Pending". Operation An active process, task, or discharge of a further pressure of the equipment. Parameter Permit to Work (PTW) A safety management system to ensure activities are performed in a safe management of activity to ensure stakeholds aware and have a direct input prior to mainter or activity, for permissions.	s to an ooling, us for o as netion
Entity that rely upon, but not exclusively to c ventilation, utilities or sewage. Monitor/Head end Personal Computer (PC) See engineering equipment's, systems' state monitoring and control the operations On-Hold A CMMS work status, sometimes referred to "Pending". Operation Operative Parameter Final user/operator of the equipment The name of a unit or metric. For example, 'pressure', 'hertz', 'temperature' Permit to Work (PTW) A safety management system to ensure activities are performed in a safe manner controlled by an Entity to ensure stakeholder aware and have a direct input prior to mainter	us for o as nction e that
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	ers are
Personal Digital Assistant (PDA) An electronic device that connects the Work Management Center (WMC) and other apprusers with the Technician	
Plan A detailed proposal for doing or achieving something	
Planned Maintenance (PM) Scheduled maintenance routines, set out to ensure machinery, services and equipment maintained at regular intervals	
Plant General term that includes built environmen assets and engineering systems equipment.	
Point of Work Risk Assessment (POWRA) A short checklist that operatives refer to at the following start of the control of the	ne
Predictive Maintenance (PdM) Utilizes technology and devices in order to for the failures and/or when the maintenance be performed.	
Primary Structural System The elements of a structure or building such beams, columns, load bearing walls, and foundations, that provide load bearing capacithe structure	
Procedure Documents which provide information about to preform interdepartmental activities and processes consistently. Plans are used to manage and control activities such as tasks performed across different groups or function such as engineering, procurement, and documents.	ns
Process and Instrumentation Diagram (PID) A schematic presentation which shows the equipment field devices and input/output mo and Direct Digital Controller (DDC) to comprehend the functional logic of the equipment and system	ment
Quality Assurance Method by which to assess that quality standare being met. Further details can be found the principles of ISO 9001 Quality Managem Systems	within
Quality Control Quality Standards to be attained	



Regime	The collective noun for the Maintenance Plan
	applied to an asset, system, facility, or building
Rehabilitation	Rehabilitation restores parking infrastructure to its usable condition and ceases the deterioration and ensures the safety of the public. Rehabilitation includes addressing the cause of the problem itself and rehabilitation lasts significantly longer
Repair	Repair techniques are used to restore the damaged portion of the parking asset/facility such as carrying out crack filling of asphalt, touchup painting of line markings or rectifying a defect of a parking meter
Restricted High Place (RHP)	Location(s) on site designated as requiring additional access control for operational or safety reasons; Different from Working at Height as working in RHP can mean working from a non-elevated surface
Run to Failure (RTF)	A maintenance strategy where the asset is deliberately not maintained but allowed to run until it fails
Safety Group	An internal organization of an Entity responsible for ensuring that activities are undertaken in a controlled and safe manner, that meets with a prescribed charter.
Secondary Structural System	The elements within a building such as heavy internal partitions, curtain wall framing systems, building ornaments, and precast panels
Sequence of Operation (SOO)	A written explanation and description on the MEP systems how the systems are intended to work
Service life	The service life of an asset, element or component is the total period during which the asset remains in use. Maintenance can extend service life of the asset
Single Point of Failure (SPOF)	A critical component which can stop an entire system from working in the event of its failure; Refers most commonly to a skillset but also applies to tangible resources such as vehicles, tools, technology, and systems
Site Custodian	Represents the client on site. May be a technical person or team or may refer to a non-technical 'Facilities Manager' type role. The Site Custodian is responsible for liaising with other stakeholders to ensure that the client's interests are represented and protected.
Skills Register	A database held by a contractor or client that contains information about persons considered competent to work on specific plant or system items, or locations with particular risks
Soft Services	Non-technical services that enable facilities to run efficiently
Spare part	Material resources required for planned and unplanned maintenance that are in excess of the financial threshold that the maintenance contractor is responsible for.
Stakeholder	An internal or external maintenance contractor that contributes to and may be impacted by an activity or action



Ctandard Operating Duck - June (COD)	A set of written instructions that describe
Standard Operating Procedure (SOP)	A set of written instructions that document a
	routine or repetitive activity followed by an
	organization.
Statutory Inspection	The mandatory periodic inspection that shall be
	carried out by the employer, service providers, or
	contractor of any equipment in a building which
	can result in dangerous situations. This is a legal
	requirements as per legislations
Strengthening and Renewal work	Strengthening and Renewal work shall be
	corrective action to address life-expired assets or
	elements in accordance with the supplier's
	program for lifecycle management or a change in
	use, function or duty of the asset or element
Success Factor	An element that is necessary for an organization
	or project to achieve its mission
Substantial Damage	The damage to a structure caused by natural
- Sassianiai Banago	disaster such as flooding or an earthquake,
	resulting in repair costs of more than 50% of the
	net present value of the asset immediately prior to
	the disaster. The percentage is based on generic
Tomporony Works	rule-of-thumb which can vary among jurisdictions
Temporary Works	Site installations, not forming part of the
	permanent works that are necessary for the
	progress of the work in safety
Test	Verifying by means of observation or
	measurement that the system meets the expected
	and/or acceptable requirements against
	predefined standard or requirement
Threshold	Numerical value of a parameter at which a
	decision is made
Total Maintenance Costs	The sum of Unplanned Maintenance Costs and
	Planned Maintenance Costs based solely on
	maintenance costs (not business interruption
	impact costs)
Unplanned Work	Any piece of work that requires emergency or
	urgent response, or that is prompted when a
	'Quick Work' opportunity arises. May include
	defects associated with reported failures.
Visual Inspection	Close inspection of all components of the parking
'	infrastructure carried out within touching distance
Work Control	Work Control of operations and maintenance
	activities refers to the management of planning
	and execution of resources to meet the needs of
	planned and unplanned contractual and customer
	requirements.
Work Management Center (WMC)	Team/office responsible for the management of
VVOIR WAIIAGEMENT OFFICE (VVIVIO)	planning and execution of resources to meet the
	needs of planned and unplanned contractual and
	· · · · · · · · · · · · · · · · · · ·
	customer requirements. Refer to Volume 7 for
Mode Order (MO)	more details.
Work Order (WO)	Formal, uniquely identifiable, documented
	instruction to work



	Abbreviations
ACH	Air Change per Hour
ACI	American Concrete Institute
ACOP	Approved Code Of Practice
ACR	Asset Condition Reporting
ACS	Access Control System
AISC	American Institute of Steel Construction
AMS	Asset Management System
ANSI ASCE	American National Standards Institute
ASCE	American Society of Civil Engineers
	Authorizing Engineer
AE (V)	Authorized Engineer (Ventilation)
AHJ	Authority Having Jurisdiction
AHRI	Air-Conditioning Heating and Refrigeration Institute
AHU	Air Handling Units
AM	Asset Management
ANPR	Automatic Number Plate Recognition
ANSI	American National Standards Institute
AP (1/)	Authorized Person
AP (V)	Authorized Person (Ventilation)
ASME	American Society of Mechanical Engineers
ASPE	American Society of Plumbing Engineers
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
ASHRAE	American Society of Heating, Refrigeration, and Air-Conditioning
	Engineers
ATS	Auto Transfer Switch
BACNet	Building Automation and Control networks
BESA	Building Engineering Services Association
BIFM	British Institute of Facilities Management
BIM	Building Information Modelling
BMS	Building Management System
BOD	Basis of Design
BOM	Bill of Materials
BREEAM	Building Research Establishment's Environmental Assessment
	Method
BS	British Standard
CAFM	Computer-Aided Facility Management
CAPEX	Capital Expenditure
CAS	Condition Assessment Survey
CAS	Constant Air Volume
CB	Capacitor bank
СВАНІ	Saudi Central Board for Accreditation of Healthcare Institutions
CBS	Central Battery System
CCTV	Closed-Circuit Television
CE	Civil Engineer
CIBSE	Chartered Institution of Building Service Engineers
CIM	Continuous Improvement Model
CM	Corrective Maintenance
CMS	Competence Management System
CMMS	Computerized Maintenance Management System
CO ₂	Carbon dioxide
CO	Carbon monoxide
COSHH	Control of Substances Hazardous to Health
COTS	Commercial off-the-Shelf
CP	Competent Person
OI	Competent reison



OD (A)	(
CP (V)	Competent Person (Ventilation)
	Central Parking Management System
CPU	Central Processing Unit
CRAC	Computer Room Air-Conditioning Unit
CRAH	Computer Room Air Handling Unit
CSSD	Central Sterile Services Department
D/S	Downstream
DB	Distribution Board
DCP	District Cooling Plant
DIS	Door Intercom System
DSP	Distribution Service Provider (electrical generation entity)
DSRP	Dam Safety Review Panel
DVR	Digital Video Recorder
DX	
EAP	Direct Expansion
	Emergency Action Plan
ECRA	Electricity & Co-Generation Regulatory Authority
ECV	Exhaust Control Volume
EDA	Energy Dissipation Arrangement
EE	Electrical Engineer
ELV	Extra Low Voltage (classified as below 50V)
ELV	Extra Low Voltage
EMP	Emergency Management Plan
EN	European Norms
EPA	Environmental Protection Agency
EPDS	Emergency Power Distribution System
EPS	Emergency Power System
EPSS	Emergency Power Supply System
ESS	Electronic Security Systems
ETFE	, ,
EV	Ethylene Tetrafluoroethylene
FCU	Electric Vehicle
	Fan Coil Unit
FDD	Fault Detection and Diagnostics
FEMA	Federal Emergency Management Agency
FIST	Facilities Instructions, Standards and Techniques
FM	Facilities Manager
FMC	Facilities Management Company
FOC	Facility Operating Company
FOM	Facilities Operations Management
FQ	Frequency
GUI	Graphical User Interface
H+S	Health and Safety
HBN	Health Building Note
HC	Healthcare
HF	Harmonic Filter
HSE	Health and Safety Executive
HTM	Health Technical Memorandum
HV	High Voltage {classified as above 13.8KV (an allowable variance of
	between 13.1kV to 14.5kV is applicable}
HVAC	Heating, Ventilation, and Air Conditioning
IAHSS	International Association for Healthcare Security and Safety
	, , , , , , , , , , , , , , , , , , , ,
IBC	International Building Code
IC	Instrumentation and Control Engineer
ICC	International Code Council
ICODS	Interagency Committee on Dam Safety
ID	Identity
•	



F.= =	
IDS	Intruder Detection System
IEC	International Electric Code
IEEE	Institute of Electrical and Electronic Engineers
IET	Institution of Engineering & Technology
IFC	International Fire Code
IMC	International Mechanical Code
I/O	Input/output
IP	Internet Protocol
IPS	Isolated Power Supply
ISO	International Organization of Standardization
IT	Information Technology
JHA	Job Hazard Analysis (see Point of Work Risk Assessment (POWRA))
KPI	Key Performance Indicators
LEED	Leadership in Energy and Environmental Design
LED	Light Emitting Diode
LEV	Local Exhaust Ventilation
LMR	Lift Motor Room
LOTO	Lock Out Tag Out
LPHW	Low Pressure Hot Water
LV	Low Voltage (classified as being above 50V and below 600V)
MC	Maintenance Contractor
MDB	Main Distribution Boards
ME	Mechanical Engineer
MEP	Mechanical, Electrical, and Plumbing
MEWP	Mobile Equipment Work Platform (Scissor/Boom Lift)
MGCP	Medical Gas control panels
MHOR	The Manual Handling Operations Regulations
	<u> </u>
MHSWR	The Management of Health and Safety at Work Regulations (1999)
MOF MOT	Ministry of Finance
MRL	Ministry of Transportation Machine-Room-Less
MRR	Maintenance-to-Replacement Ratio
MS	Method Statement
MSDS	Materials Safety Data Sheet
MV	Medium Voltage (classified as being above 600V and below 13.8KV)
MVS	Medium Voltage Substation
MVSN	Medium Voltage Supply Network
NAE	Network Automation Engine
NCLOM	National Committee for Legislation and Standardization of Operation
INGEGINI	and Maintenance
NCP	Nurse Call Panels
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NIST	National Institute of Standards and Technology
NMA & FM	National Manual of Assets and Facilities Management
NSF	National Standards Foundation
O&M	Operations and Maintenance
OE	Operations Engineer
OEM	Original Equipment Manufacturer
OOH	Out of Hours
OSHA	Occupational Safety and Health Administration
P&ID	Process and Instrument Design
PAR	Periodic Automatic Replenishment
PARCS	Parking Access and Revenue Control System
PAT	Portable Appliance Test



PAVA	Public Address and Voice Alarm
PC	Personal Computer
PCN	Procedure Change Notice
PDA	Personal Digital Assistant
PDCA	Plan-Do-Check-Act
PdM	Predictive Maintenance
PDS	Pneumatic Delivery Station
PF	Power Factor
PGIS	Parking Guiding and Information System
PIR	Passive Infrared
PM	Planned Maintenance
PME	Plant, Machinery and Equipment
PMP	Preventive Maintenance Plan
PMT	Post Maintenance Testing
POE	Power Over Ethernet
POWRA	Point of Work Risk Assessment
PPE	Personal Protective Equipment
PPEWR	Personal Protective Equipment at Work Regulations (1992)
PRB	Procedure Review Board
PTAC	Packaged Terminal Air-Conditioning unit
PTW	Permit to Work
PTZ	Pan, Tilt, and Zoom
PUWER	Provision and Use of Work Equipment Regulations (1998)
QA	Quality Assurance
QC	Quality Control
QPM	Quarterly Preventive Maintenance
RA	Risk Assessment
RAMS	Risk Assessment & Method Statement
RCA	Root Cause Analysis
RFID	Radio-Frequency Identification
RFP	Request for Proposal
RH	Relative Humidity
RHP	Restricted High Place
RICS	Royal Institute of Chartered Surveyors
RIDDOR	Reporting of Injuries, Diseases and Dangerous Occurrences
	Regulations (2013)
RMU	Ring Main Unit
RO	Reverse Osmosis
RP	Responsible Person
RTF	Run to Failure
RTU	Roof Top Units
SASO	Saudi Standards, Metrology and Quality Organization
SBC	Saudi Building Code
SC	Statutory Compliance
SE	Specialist Engineer
SEC SEI	Saudi Electrical Company Structural Engineering Institute
SFG	Structural Engineering Institute Services and Facilities Group
	•
SG	Safety Group
SLA	Service Level Agreement
SMC	Saudi Mechanical Code
SMDB	Sub-Main Distribution Board
000	0
SOO SOP	Sequence of Operation Standard Operating Procedure



SPOF	Single Point of Failure
SS	Substation
STP	Sewage Treatment Plant
TMS	The Masonry Society
TR	Transformers
UL	Underwriters Laboratories, Inc.
UM	Unplanned Maintenance
UPS	Uninterruptible Power Supply
US	United States
UV	Ultra Violet
VAV	Variable Air Volume
VCV	Volume Controlled Ventilation
VDU	Visual Display Unit
VESDA	Very Early Smoke Detection Apparatus
VFD	Variable Frequency Drive
VMS	Variable Message Signs
VRF	Variable-Refrigerant Flow
WHSWR	The Workplace (Health, Safety and Welfare) Regulations (1992)
WMC	Work Management Center
WO	Work Order
WTS	Water Treatment Systems

4.0 REFERENCES

- International Facilities Management Association (IFMA)
- EPM-KPP-PR-000001 White Book Volume 7, Chapter 4: Project Planning and Scheduling Definitions and Concepts Procedure
- EPM-KE0-GL-000011 White Book Volume 6, Chapter 2: Definitions and References
- ENT-E00-GL-000001 Expro Definitions and Acronyms Guideline

5.0 RESPONSIBILITIES

Role	Description
Authorizing Engineer	A Chartered Engineer or Incorporated Electrical Engineer with appropriate experience and the necessary degree of independence from local management who is appointed in writing by office facility management to implement, administer and monitor the safety arrangements for low voltage electrical supply and distribution systems. This appointed individual shall be responsible for ensuring compliance and assessing the suitability of candidates to be Authorized Persons
Authorized Person (AP)	A person who has been appointed by the Authorizing Engineer (AE) (or by an authorizing body within the entity); who is trained, competent, skilled, experienced, responsible, and has gained the necessary site knowledge, to operate and maintain the system in a controlled and safe manner. The AP is responsible for work or testing carried out on the system
Bid Writer	Responsible for ensuring that the content of the bid meets the requirements of the client.
BMS Operator	An authorized individual who operates BMS/EMCS
Operations and Maintenance Person (BMS)	A member of engineering staff, BMS manufacturer or operations maintenance organization employed by management to carry out BMS/EMCS related duties



Control Room Staff Closed- Circuit Television (CCTV)/Access Control	Are responsible for the issuing of ID badges, cards, and security passes. Monitoring of Access control and Intruder Detection Systems (IDSs). Reporting and back up of the security system databases and
Operators Competent Person (CP)	production equipment A person with the necessary training, and who has been appointed by an Authorized Person (AP) (or by an authorizing body within The Entity), after conformation of competence, knowledge, skill, and
	experience. The CP can execute the required actions within a PTW and or other directional document as may be assigned to him
Contracts Manager	will likely have key responsibility for presenting the required responses to the Entity/client. The Contracts Manager will likely rely on the Work Management Center for the provision of evidence to support the responses.
Duty Holder	A person on whom the Electricity at Work Regulations impose a duty in connection with safety
The Responsible Person (Director of Facilities)	The Responsible Person is employed directly by the Entity and is the "Duty Holder" of the Engineering systems and the staff who operate those systems and is overall responsible and accountable for their design, installation, Operation and Maintenance (O&M), and ensuring control of those systems. The Responsible Person has a legal responsibility for ensuring that the Entity has complied with the relevant legal regulations pertaining to those engineering systems and the staff involved. The Responsible Person shall ensure that the systems are kept up to date with the latest relevant legal regulations. The Responsible Person should not be the Authorizing Engineer (AE).
Designated Responsible Person Multi-disciplines	The Responsible Person is employed directly by the Entity/FOC and is the "Duty Holder" of the engineering systems and is responsible and accountable for their design, installation, operations, maintenance and ensuring control of those systems.
	The Responsible Person has a legal responsibility (within the UK) for ensuring that the Entity has complied with the relevant legal regulations / decree pertaining to those engineering systems. The Responsible Person shall ensure that the systems are kept up to date with the latest relevant legal regulations / decrees.
Designated Person (Electrical)	An individual who has overall authority and responsibility for the premises containing the electrical supply and distribution system within office facilities and has a duty to prepare and issue a general policy statement on health and safety at work
Electrical Safety Group	Committee appointed by and representing the Facilities Operating Client The requirement for this committee is not mandated other than under the HTMs' for Healthcare, but should be considered as "best practice" See the National Manual of Assets and Facilities Management volume 6 Chapter 21
Mechanical Safety Group	Under the Health Technical Memorandum (HTM), there is a requirement for a Mechanical Safety Group. The role of the group is to discuss current issues, solutions and forthcoming potential problems (i.e. with new projects or dealing with new legislation), to assist in avoiding project clashes, outages, and taking formulating mitigating actions.
Chief Executive of Entity (Facilities Operating Client or FOC)	Chief Executive of the Entity having overall management of the facility



Entity	Governmental Entity having Jurisdiction over the Municipal Facility
Entity Representative (Facilities Operating Client or FOC)	Entity Representative having overall management of the facility
Entity client	A senior manager responsible for delivering cost effective, contract compliant facilities management. This person is knowledgeable and competent in the technical and contractual aspects of the maintenance contract and senior enough to provide awareness to the most senior level of management within the client organization.
Ministry	Governmental Entity having Jurisdiction for the region. Setting Governing Standards
Maintenance Contractor (MC)	The MC is the individual or organization responsible for the supply of the equipment, its installation, and maintenance
Facilities Operations Management (FOM)	Discipline Certified Managers and Engineers appointed by FOC to oversee any appointed Facilities Management Company (FMC) activities
Facilities Management Company (FMC)	The FMC is an appointed Client representative who in collaboration with the client controls the Maintenance Engineering departments; and who is responsible and accountable for the APs and CPs as well as the site Engineering systems, Maintenance, and ensuring control of those systems is in line with the Client Standard Operating Procedure (SOP) for the maintenance activities
HSE Manager	Has responsibilities for the performance assurance management of key parts of the maintenance operation from a Health, Safety and Environmental perspective.
Quality Assurance Manager	Will have key responsibilities for ensuring that the required and presented information is complete, compliant, correct and effective.
HV Qualified Person	A FOC Approved Persons. Certified HV specialist service provider/operative who is qualified, competent and experienced. Has the necessary site knowledge to formulate the necessary client SOP documentation? Oversees the FMC's activities on behalf of the FOC
LV Qualified Person	A FOC Approved Persons. Certified LV specialist service provider/operative who is qualified, competent and experienced. Has the necessary site knowledge to formulate the necessary client SOP documentation? Oversees the FMC's activities on behalf of the FOC
MV Qualified Person	A FOC Approved Persons. Certified MV specialist service provider/operative who is qualified, competent and experienced. Has the necessary site knowledge to formulate the necessary client SOP documentation? Oversees the FMC's activities on behalf of the FOC
Qualified Person	A FOC/FMC Approved Persons. Certified, competent and experienced.
MV / LV / ELV Electrical	Possess the necessary site knowledge to formulate and or follow the necessary FOC SOP documentation. Oversees the FMC's activities
Qualified Person	A FOC/FMC Approved Persons. Certified, competent and experienced.
Mechanical / HVAC / Plumbing	Possess the necessary site knowledge to formulate and or follow the necessary FOC SOP documentation. Oversees the FMC's activities



System Security Manager/Officer	The individual responsible for the Entities overall security strategy
Security Manager	The local appointed representative for the day to day operation of the security systems in place
Security Supervisor	The individual responsible for monitoring and reporting occurrences and ensuring operators follow the Standard Operating Procedures (SOPs) and Issue of Identity (ID) cards
Security Maintenance Supervisor	An individual engaged in the maintenance and ongoing repairs to the security system and is responsible for the control and supervision of site staff. This may be a 3 rd part specialist service provider company or Maintenance Supervisor holds essential knowledge and experience in Extra Low Voltage (ELV) systems

6.0 PROCESS

6.1 Introduction

The National Manual of Assets and Facilities Management recommends the adoption of terms being harmonized and used consistently across each Entity and all their stakeholders. Expro recommends the adoption of terms quoted by the International Facilities Management Organization (IFMA). The IFMA sometimes adopts definitions created by other international organizations, many of which are based in the United States of America.

The level of success in applying this Procedure to the maintenance operation is determined by the attention to detail when observing and removing the use of non-Expro terms from all documentation and communications.

In writing the National Manual of Assets and Facilities Management, Expro recommends a structure and range of terms that is rationalized and published in this document from the plethora of terms used by the various institutions and organizations across the world. In writing the National Manual of Assets and Facilities Management, Expro acknowledge that there may be duplication of terms used within other Expro publications, specifically the references in Section 4. These duplications are considered not to present a concern because the context that any would be used in would clarify any potential misunderstanding that could arise from the use of the term. Section 3 and 4 of the associated chapter should be used as the reference for the terms used within the document and associated guidance, as this will be specific to the subject matter contained therein.

6.2 Maintenance Type definitions

The Expro recommended structure and range of terms is summarized here:

PLANNED MAINTENANCE

- Preventive
- Predictive

UNPLANNED MAINTENANCE

- Corrective
- Emergency

The boundaries and relationship of the above terms with others not uncommonly used and referred to at an international and national level is also discussed in this chapter.

6.2.1 Expro Maintenance Definitions

6.2.1.1 PLANNED MAINTENANCE

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- Preventive Maintenance: An asset maintenance type based on preplanned programmed/scheduled maintenance at fixed time intervals.
- Predictive maintenance: Utilizes technology and devices in order to forecast the failures and/or when the maintenance should be performed.

6.2.1.2 UNPLANNED MAINTENANCE

Unplanned Maintenance may also include the terms of Reactive, Corrective and emergency. Moreover, both Reactive and Corrective terms serve the same purpose in general, which is any maintenance activity that is required to correct an unanticipated failure. The terms refer to the following activities:

- Corrective Maintenance: Activities performed upon a system, equipment, structure resulting from a partial or material failure. For instance, that reported to a maintenance facility such as defective lighting or blocked toilet.
- Emergency Maintenance: Any (unplanned) maintenance activity that requires immediate repair due to potential/direct impact on public safety or business operation.

6.2.1.3 INTELLIGENT MAINTENANCE

Intelligent Maintenance, a Expro endorsed term and maintenance philosophy, is defined as 'Maintenance system that utilizes the assets' historical collected data in order to optimize the maintenance operations between planned and unplanned activities (data-driven approach)'.

Maintenance philosophy can be defined as a 'mix of strategies that ensure assets, sub-systems, and systems operate as expected'.

The goal is to achieve Intelligent Maintenance. A secondary aim is for the Entity client and maintenance contractor to work together to achieve an agreed maintenance philosophy and shared vision that is sustainable long term.

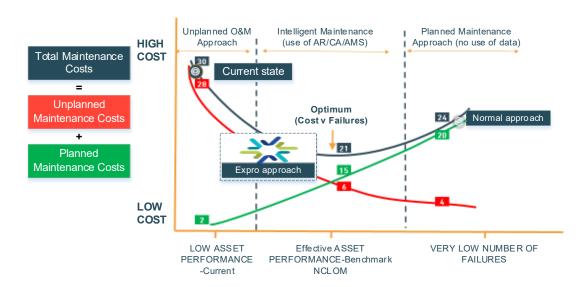


Figure 1: Intelligent Maintenance Philosophy

Figure 1 (above) illustrates the relationship between planned and unplanned maintenance and the Expro Intelligent Maintenance Philosophy.