



# ASSET MANAGEMENT DEFINITIONS

### **ADVANCED ASSET MANAGEMENT**

Asset management which employs predictive modeling, risk management and optimized decision-making techniques to establish asset lifecycle treatment options and related long term cash flow predictions. (IIMM)

### **ANNUAL PLAN**

A document produced annually by an organization to inform stakeholders of its objectives, intended activities, performance, income and expenditure required for a period of one financial year. It may also indicate anticipated future short-term income and expenditure. (IIMM)

### **ASSET**

An item, thing or entity that has potential or actual value or benefit to an organization. (Such as plant, machinery, buildings, etc.) (IIMM)

### **ASSET CLASS**

A collection of assets which share similar construction, maintenance, condition, and availability standards. Roadways, sidewalks, street signs, and water mains are all types of asset classes.

### **ASSET HIERARCHY**

A framework for segmenting an asset base into appropriate classifications. The asset hierarchy can be based on asset function; asset type or a combination of the two. (IIMM)

### **ASSET MANAGEMENT (AM)**

Coordinated activity of an organization to realize value from assets. (ISO 55000)

### **ASSET MANAGEMENT FRAMEWORK**

The overarching AM hierarchy including the AM Policy, Objectives, Strategy and the AM Plan. (IIMM)

### **ASSET MANAGEMENT INFORMATION SYSTEM (AMIS)**

A combination of processes, data, software, and hardware applied to provide the essential outputs for effective AM. (IIMM)

### **ASSET MANAGEMENT OBJECTIVES**

Asset management objectives capture the outcome or performance required from an asset in order to deliver (or support) achievement of these organizational objectives. [Government of South Australia, Department of Planning, Transport and Infrastructure, (DPTI)]

### **ASSET MANAGEMENT PLAN (AM Plan)**

Long-term plans (usually 10-20 years or more for infrastructure assets) that outline the asset activities and programs for each service area and resources applied to provide a defined level of service in the most cost effective way. (IIMM)

### **ASSET MANAGEMENT POLICY**

A high level statement of an organization's principles and approach to asset management that is applicable to all asset classes. (IIMM)

### **ASSET MANAGEMENT STRATEGY**

A high level action plan that defines AM objectives, and gives effect to an organization's AM Policy. A Strategic Asset Management Plan (SAMP) is a form of, and meets the requirements for, an AM Strategy. (IIMM, M)

### **ASSET MANAGEMENT SYSTEM**

A set of interrelated or interacting elements of an organization, including the AM policy, AM objectives, AM Strategy, AM Plans, and the processes to achieve these objectives. This includes comprehensive activities, documents, software, and resources directed toward implementing Asset Management within an organization. (IIMM, M)

### **ASSET MANAGEMENT TEAM**

The formal team appointed by an organization to monitor and assess the improvement of the organizations AM System

### **ASSET REGISTER**

A record of asset information typically held in a spreadsheet, database or software system, including asset attribute data such as quantity, type and construction cost. (IIMM)

### **ASSET RESILIENCE**

The ability of the asset / physical system(s) to perform to an acceptable/desired level when subject to a hazard event. (IIMM)

### **AVAILABILITY**

Availability defines the state and period for which an asset is available to meets its primary function and or the minimum stated level of service.

### **BENEFIT-COST ANALYSIS (BCA)**

A decision technique that quantifies the benefits and costs in monetary terms over the life of the decision (often the life of the asset involved), discounting these to current monetary terms (where non-monetary terms are used, this is called 'multi-critical' analysis). (IIMM)

### **BENEFIT-COST RATIO (BCR)**

The sum of the present values of all benefits (including residual value, if any) over a specified period, or the lifecycle, of the asset or facility, divided by the sum of the present value of all costs. (IIMM)

### **BUSINESS PLAN**

A plan produced by an organization (or business units within it) which translates the objectives contained in an Annual Plan not detailed work plans for a particular, or range of, business activities or program. (IIMM)

### **CAPABILITY (Workforce)**

An organization's ability to achieve its objectives through the knowledge, skills, abilities and competencies of its people. (IIMM)

### **CAPITAL EXPENDITURE (CAPEX)**

Expenditure used to create new assets, renew assets, expand or upgrade assets or to increase the capacity of existing assets beyond their original design capacity or service potential. CAPEX increases the value of asset stock. (IIMM)

### **CASH FLOW**

Inflows and outflows of cash and cash equivalents. (IIMM)

### **CONDITION**

The physical state of the asset. (IIMM)

### **CONDITION GRADE**

A measure of the physical integrity of an asset or component. (IIMM)

### **CONDITION-BASED PREVENTIVE MAINTENANCE**

Preventive maintenance initiated as a result of an asset reaching a specified condition. (IIMM)

### **CONDITION ASSESSMENT (CONDITION MONITORING)**

The inspection, assessment, measurement and interpretation of the resultant data, to indicate the condition of a specific component so as to determine the need for some preventive or remedial action. (IIMM)

### **CONTINUOUS IMPROVEMENT**

After the asset management plan is implemented, the effectiveness of the steps need to be evaluated. Are there changing parameters, new practices, improvements, etc., that can be adopted to increase the value of the steps and overall plan.

### **CORRECTIVE MAINTENANCE**

The remedial actions performed as a result of failure, to restore an asset or component to a specified condition. (IIMM)

### **CRITICAL ASSETS**

Those assets that are likely to result in a more significant financial, environment and social cost in terms of impact on organizational objectives. (IIMM)

### **CRITICALITY**

Asset criticality is the relative risk of failure of that asset. So criticality is the relative risk of an asset from a financial, environment and social cost, calculated in order to understand which assets deserve attention and money to achieve AM Objectives. (ICMA)

### **CRITICAL SPARES ANALYSES (CSA)**

Used to identify critical spares (equipment parts or replacement items) required for critical assets, and the most effective method to procure these spares taking into account their supply lead time, availability and the possibility of “pooling” these items with similar organisations.

### **CROSS-ASSET OPTIMIZATION**

The application of Optimized Decision Making techniques to compare and prioritize proposals across different assets or activities. (IIMM)

### **CURRENT ASSETS**

Those assets that are expected to be realized in cash, sold, or consumed within one year of an organization's balance date. (IIMM, M)

### **CUSTOMER**

Any person who uses the asset or service, is affected by it or has an interest in it either now or in the future. This definition does not necessarily require that payment is made for use of the asset. (IIMM)

### **CUSTOMER GROUP**

A set of customers that has been grouped for the purposes of levels of service review. Customers are generally grouped into those that have similar needs or wants in relation to the assets and services. (IIMM)

### **DECOMMISSION**

Actions required to take an asset out of service. (IIMM)

### **DEFERRED MAINTENANCE**

The shortfall in maintenance work required to maintain the service potential of an asset. (IIMM)

### **DEMAND MANAGEMENT**

Actions taken to influence demand for services and assets, often undertaken as part of sustainability initiatives and/ or to avoid or defer required asset investment. Demand management may be ‘SUPPLY-SIDE’ demand Management (for example minimizing wastage through pipe leak detection or customer DEMAND-SIDE management, to reduce demand for over-utilized assets or vice versa (for example through pricing, regulation, education and incentives). (IIMM)

### **DEPRECIATED REPLACEMENT COST (DRC)**

The Gross Replacement Cost (GRC) of an asset less accumulated depreciation calculated on the basis of such cost to reflect the already consumed or expired future economic benefits of the asset. (IIMM)

### **DEPRECIATION**

The systematic allocation of the depreciable amount of an asset over its useful life. (IIMM)

### **DETERIORATION RATE**

The rate at which an asset approaches failure (end of life). (IIMM)

### **DISCOUNTED CASHFLOW**

A methodology whereby the future cash flows over the analysis period are discounted to present values and then summed to yield the present value (PV) of the time stream of costs or benefits. (IIMM)

### **DISCOUNTING**

A technique for converting cash flows that occur over time to equivalent amounts at a common point in time. (IIMM)

### **DISCOUNT RATE**

A rate used to relate and compare future and present money values, taking Inflation and the cost of debt (interest) rates into consideration. (AWWA)

### **DISPOSAL**

Actions necessary to decommission and dispose of assets that are no longer required. (IIMM)



### **ECONOMIC LIFE**

The period from the acquisition of the asset to the time when the asset, while physically able to provide a service, ceases to be the lowest cost alternative to satisfy a particular level of service. The economic life is at the maximum when equal to the physical life, however obsolescence will often ensure that the economic life is less than the physical life. (IIMM)

### **EQUITY**

The residual interest in the assets of the entity after deduction of its liabilities. (IIMM)

### **FACILITY**

A complex comprising many assets (e.g. a hospital, water treatment plant, recreation complex, etc.) which represents a single management unit for financial, operational, maintenance or other purposes. (IIMM)

### **FAIR VALUE**

The amount for which an asset could be exchanged or a liability settled, between knowledgeable, willing parties in an arm's length transaction. (IIMM)

### **FINANCIAL STATEMENTS**

Balance sheets, profit and loss accounts, statements of changes in financial position, notes and other statements which collectively are intended to give a true and fair view of the state of affairs and profit or loss for an entity for a defined period. (IIMM)

### **FINANCIAL SUMMARY**

A high-level summary of the process to be followed to ensure that financial resources necessary for implementation are able to be provided. This is to address future operating and capital expenditure over the period of the plan- intended to draw attention to the need to link the AM System with long term funding requirements. OrganizationalResponsibilities,Steps,andScopeofServices(makethisthePre-Trip)OrganizationalResponsibilities,Steps,andScopeofServices(makethisthePre-Trip)

### **FINANCIAL STRATEGY**

A strategy for budgeting available resources to provide the defined level of service across the full lifecycle of all managed assets, typically through the funding and implementation of a long-range plan that emphasizes cost-effective periodic maintenance activities.

### **FOCUS GROUP**

A method of consulting with representative customers/ stakeholders. A focus group typically comprises 6 to 8 people, invited to participate in a discussion about a specified topic, product or service. (IIMM)

### **GAP ANALYSIS**

A method of assessing the gap between an organization's current AM practices and the future desirable AM practices. Also called AM 'needs analysis' or 'status assessment'. (IIMM)

### **GENERALLY ACCEPTED ACCOUNTING PRACTICES (GAAP)**

Approved financial reporting standards so far as those standards apply to a particular entity; or, where there are no approved standards, accounting policies that are appropriate to the entity and have authoritative support within the accounting profession. (IIMM)

### **HAZARD**

The potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems, and environmental resources. (IIMM)

### **IMPLEMENTATION**

Using the information laid out in the asset management plan, the individual steps are placed into action. Implementation occurs after the framework, the asset management plan, is ready to carry out.

### **INFRASTRUCTURE**

The system of fundamental facilities and structures necessary for a public works of a country, state or region to function. Examples include roads, railway, bridges, tunnels, water supply, sewers, electrical, telecommunications, signs, equipment, fleet, etc.

### INFRASTRUCTURE OPERATIONS

The people, equipment and methods used to maintain infrastructure.

### INFRASTRUCTURE PRESERVATION

Maintaining an agencies assets/infrastructure for usability, safety and improve or maintain condition.

### INTERNAL RATE OF RETURN (IRR)

The discount (or interest) rate which will equate the present value of the net cash inflows from a project with its initial cash outlay. The internal rate of return is the true yield and is expressed as the average rate of return per annum or other chosen period. (IIMM)

### INTERVENTION LEVELS

Identify the point where the performance against the level of service warrants intervention. (IIMM)

### LEVEL OF RISK

The level of risk is its magnitude. It is estimated by considering and combining consequences and likelihoods. A level of risk can be assigned to a single risk or to a combination of risks. A consequence is the outcome of an event and has an effect on objectives. Likelihood is the chance that something might happen. (IIMM)

### LEVEL OF SERVICE

A quantifiable measure of a combination of parameters that reflect social, economic and environmental outcomes that the organization delivers. Levels of service statements describe the outputs or objectives an organization or activity intends to deliver to customers. Parameters can be aspects or characteristics of a service such as accessibility, affordability/cost, efficiency, quality, quantity, reliability, responsiveness, safety. (IIMM, M)

### LIFECYCLE COST

The total cost of an asset throughout its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal costs. (IIMM)

### MAINTENANCE

All actions necessary to manage the physical condition of an asset until rehabilitation or replacement is necessary.

### MAINTENANCE STRATEGY

Identifies the objectives and resources that will be used to deliver the maintenance plan, as well as defining the maintenance roles and responsibilities. (IIMM, M)

### MARKET VALUE

The estimated amount at which an asset would be exchanged on the date of valuation, between a willing buyer and a willing seller, in an arm's length transaction and when the parties have each acted knowledgeably, prudently and without compulsion. Market value is based on highest and best use of the asset and not necessarily the existing uses. (IIMM)

### METADATA

Metadata comes in two forms. Structural metadata is detail particular to the asset in question, the physical attributes. Descriptive Metadata is particular to describing the content of the asset. Metadata standards, when applied, are used to impose uniformity and quality standards on data. (IIMM)

### MODERN EQUIVALENT ASSETS

Assets that replicate what is in existence with the most cost- effective asset providing an equivalent level of service. (IIMM)

### NET PRESENT VALUE (NPV)

The value of an asset to the organization, derived from the continued use and subsequent disposal in present monetary values. It is the net amount of discounted total cash inflows arising from the continued use and subsequent disposal of the asset after deducting the value of the discounted total cash outflows. (IIMM)

### OPERATION

The active process of utilizing an asset which will consume resources such as manpower, energy, chemicals and materials. (IIMM)

### **OPTIMIZATION**

The process or methodology for making something as functional or effective as possible.

### **OPTIMIZED DECISION-MAKING (ODM)**

ODM is a formal process to identify and prioritize all potential solutions with consideration of financial viability, social and environmental responsibility and cultural outcomes. (IIMM)

### **ORGANIZATIONAL RESILIENCE**

The capacity of an organization to make decisions and take actions to plan, manage and respond to a hazard event in order to achieve the desired resilient outcomes (IIMM)

### **PERFORMANCE GRADE**

A measure of the ability of the asset to achieve levels of service. (IIMM)

### **PERFORMANCE MEASURE**

A qualitative or quantitative measure used to report information regarding the performance of a system or component

### **PREDICTIVE MODELS**

Predictive Models are used for condition and performance deterioration curves to project the lifecycle costs of each asset for different maintenance or renewal strategies and identify the optimal treatment strategy. Predictive Models are also used to predict future capacity needs based on social, economic and environmental outcomes. (IIMM, M)

### **PROCESS**

A structured, measured set of activities designed to produce a specific output. (IIMM)

### **RECOVERABLE AMOUNT**

Is the greater of the assets fair value less costs to sell and its value in use. (IIMM)

### **RECOVERY**

Actions to support affected communities to restore damaged property and economic activity, as well as physical and psychological health and wellbeing. (IIMM)

### **REDUNDANCY**

The extent to which elements, systems, or other infrastructure units exist that are substitutable, ie capable of satisfying functional requirements in the event of disruption, degradation, or loss of functionality (IIMM)

### **REHABILITATION (REFURBISH)**

Works to rebuild or replace parts or components of an asset, to restore it to a required functional condition and extend its life, which may incorporate some modification. Generally involves repairing the asset to deliver its original level of service (i.e. heavy patching of roads, slip lining of sewer mains, etc.) without resorting to significant upgrading or renewal, using available techniques and standards. (IIMM)

### **RENEWAL**

Works to replace existing assets or facilities with assets or facilities of equivalent capacity or performance capability. (IIMM)

### **REMAINING USEFUL LIFE**

The time remaining until an asset ceases to provide the required service level or economic usefulness. (IIMM)

### **REPLACEMENT COST**

The cost of acquiring an asset to replace an existing asset with a new modern equivalent asset.

### **RESIDUAL VALUE**

The estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life. (IIMM)

### **RESILIENCE**

The concept of resilience is wider than natural disasters and covers the capacity of public, private and civic sectors to withstand disruption, absorb disturbance, act effectively in a crisis, adapt to changing conditions, including climate change, and grow over time (Ref 3/8). (IIMM)

### **RESOURCES (Human)**

A combination of workforce capability and capacity. (IIMM)

### **CONTINUOUS IMPROVEMENT**

After the asset management plan is implemented, the effectiveness of the steps need to be evaluated. Are there changing parameters, new practices, improvements, etc., that can be adopted to increase the value of the steps and overall plan.

### **RISK**

The effect of uncertainty on objectives by evaluating likelihood and consequence of a situation or event. Risk events are events which may compromise the delivery of the organization's strategic objectives. (IIMM, M)

### **RISK COST**

The assessed annual cost or benefit relating to the risk of an event. Risk cost equals the costs relating to the consequence of the event multiplied by the probability of the event occurring. (IIMM)

### **RISK MANAGEMENT**

Coordinated activities to direct and control an organization with regard to risk. (IIMM)

### **SENSITIVITY ANALYSIS**

Testing of the variations in the outcome of an evaluation by altering the values of key factors about which there might be uncertainty. (IIMM)

### **STAKEHOLDER**

A person or entity that can affect, be affected by, or perceive themselves to be affected by a decision or activity. (IIMM)

### **STANDARDS (INDUSTRY OR REGULATORY)**

Documents or references set by local municipalities or federal entities that identify requirements or guidelines to follow when planning, designing, operating, constructing or maintaining assets based on social, economic and environmental outcomes.

### **STRATEGIC ASSET MANAGEMENT PLAN (SAMP)**

Plan that documents and specifies how the organizational objectives are to be converted into AM objectives, the approach for developing AM Plans and the role of the AM system in supporting the achievement of AM objectives. (IIMM)

### **STRATEGIC PLAN**

A plan containing the long-term goals and strategies of an organization. Strategic plans have a strong external focus, cover major portions of the organization and identify major targets, actions and resource allocations relating to the long-term survival, value and growth of the organization. (IIMM)

### **SUSTAINABILITY**

Infrastructure that meets the needs of the present without compromising the ability of future generations to meet their own needs. In the context of AM it is about meeting the needs of the future by balancing social, economic, cultural and environmental outcomes or needs when making decisions today (IIMM)

### **UNPLANNED MAINTENANCE**

Corrective work required in the short-term to restore an asset to working condition so it can continue to deliver the required service or to maintain its level of security and integrity. (IIMM)

### **USEFUL LIFE**

The period over which an asset or component is expected to be available for use by an entity (IIMM,M)

### **VALUATION**

The process of determining the worth of an asset or liability. Assessed asset value which may depend on the purpose for which the valuation is required, i.e. replacement value for determining maintenance levels, market value for lifecycle costing and optimized deprival value for tariff setting. (IIMM)

### **VALUE**

The regard that something is held to deserve; the importance, worth, or usefulness of something.

### **VALUE ENGINEERING**

A systematic method with the objective of improving the "value" of products and services by assessing their function. (IIMM)