# Introduction to Strategic Asset Management Information System (SAMIS)

## EXECUTIVE OVERVIEW

### 1. Objectives

#### 1.1. Primary Objective

The primary objective of the spatially oriented, SAMIS, is to deliver a system that will support the Government's Strategic Asset Management (SAM) Framework published in 1996.

In particular, in line with the Framework, SAMIS is aimed at assisting agencies:

- match their assets with business service objectives
- optimise performance throughout the useful life of the asset.

As its introduction states, the SAM Framework has been, 'designed to assist people who manage agencies and other authorities to adopt best practices for asset management'.

The Framework defines asset management as 'a process to manage demand and guide acquisition, use and disposal of assets to make the most of their service delivery potential, and manage risks and costs over their entire life'.

The major objectives of the SAM Framework are encapsulated within the statements of its benefits, as described in the Framework document:

- It provides a structure for strategic planning and management of the State's infrastructure to best sustain economic development and delivery of services to the community.
- It ensures minimisation of costs over the life of the asset for providing, maintaining and operating assets to support service and program delivery at specified standards.
- It ensures that investment in assets is at a level commensurate with service delivery requirements and encourages the consideration and adoption of non-asset based options for the delivery of services.
- It ensures that capital works programs, priorities and asset risk management practices are consistent with government policies.
- Finally, the Framework sets the basis and standards which can assist people in the public sector best apply sound business principles, analytical, rational and effective decision making to their asset management practices.

Although a significant component of the benefits from adopting the SAM Framework will come from implementation of appropriate asset management practices and the development of associated skills and competencies within government, the benefits cannot be fully realised without the development of appropriate asset information systems.

To reiterate, both the SAM Framework and SAMIS are aimed at **assisting agencies to adopt best practices for asset management.**

SAMIS is concerned mainly with meeting strategic asset management objectives rather than the requirements of day-to-day asset maintenance and operations activities.

### 1.2. Whole of Government Considerations

Although SAMIS has been developed essentially to support decision-making from an agency's perspective, opportunity exists to present a whole of government view of the State's infrastructure assets.

Requirements that may relate to a state-wide view of certain strategic asset policy matters are currently being pursued with Senior Management Council.

### 1.3. Spatial Attributes Expand Functionality

The development of SAMIS is predicated on the creation of a world-class strategic asset management system built on a spatial model and will be one component of a spatially referenced systems environment within government.

From a spatial data perspective, the intention is that, once implemented, SAMIS will be able to participate in the government's Spatial Information Industry Program. It will, therefore, be possible to view (eg. on a map) the location of the infrastructure assets in conjunction with other spatial data sets, such as natural features, demographic data, land use data, transport routes, earthquake zones, etc.

With respect to its contribution to the wider spatial community, therefore, the objectives of SAMIS are to ensure:

- the location of infrastructure assets are defined spatially
- the spatial definition of the location is stored in such a way that it facilitates further access to that data by those who have a need
- a right to view the data

## 2. System functionality

### 2.1. SAMIS consists of two key parts:

- The asset register – the repository of data that identifies and physically describes the assets
- The asset management functionality - that operates against assets defined in the register.

The **Asset Register** is the heart of SAMIS. It provides for the identification and description of all assets to the level deemed appropriate.

The **Asset Management Functionality** includes the major functions of asset valuation, asset life cycle, and performance assessment of assets.

### 2.2. Asset Valuation/Depreciation

SAMIS will provide for the recording of various valuations of an asset and account for their associated appreciation or depreciation.

For constructed assets, particular emphasis will be given to replacement cost, which will be calculated on the basis of unit rates which are widely accepted in the construction industry. Appropriate links between SAMIS and other sources of asset valuation data eg, agency financial asset registers will be established.

### 2.3. Life Cycle Costing

SAMIS will provide access to actual and forecast costs (and revenues) over the useful life of assets. Data on significant capital and recurrent costs will include, acquisition, maintenance, operations, refurbishment and disposal activities.

The source of much of this data will be data sets established / maintained by other business processes (eg. works management, resource / energy utilisation).

### 2.4. Performance Assessment

The primary aim of performance assessment of assets is to provide the ability to predict when an asset is likely to fail to meet its required levels of service – and hence when intervention action is needed so that service levels can continue to be met.

Performance should be measured for any critical stress factors that are likely to lead to asset failure. Examples of such factors are as follows:

- Physical condition of the asset
- Level of asset utilisation
- Environmental factors (eg. health and safety, disability access, fire safety)
- Currency of the asset's technology
- Level of investment required to keep the asset operational

Performance ratings will be determined using a risk management approach to identify consequences of variations from agreed benchmarks and assessed in the context of their likely occurrence.

Where performance assessment indicates that an asset is likely to fail, SAMIS will provide a means of assigning priorities to identified intervention actions.

## 3. Key Outcomes

### 3.1. Asset Management Plans

Agencies will use SAMIS to assist with the generation of Strategic Asset Management plans and associated budget forecasts to sustain service levels.

These plans are, in effect, forward works programs for the agency's assets over the defined planning horizon. These forward 'treatment plans' will include identified actions (eg. asset replacement / refurbishment / disposal) to address any predicted failures of assets to deliver required levels of service (for whatever reason), as well as ongoing regular maintenance and operation of assets.

The end results of implementing SAMIS will include:

- Assets that better match agencies' business service requirements
- Optimised intervention actions
- Extension of asset life
- Managed deferral of expenditure
- More informed and better disclosure in decision-making at both agency and whole-of-government levels.

### 3.2. Integrated Asset Planning Environment

The definitional standards and conventions of the SAMIS Asset Register and its asset management functionality will allow aggregation of data and establishment of the environment to permit consistency and hence comparative analysis of asset performance at an agency level and across government.

### 3.3. Spatial Data

A further key outcome of SAMIS is the contribution that a spatial definition of agencies' assets can make to users of spatial data in South Australia.

There are significant benefits in being able to view (on a map) the location of one agency's assets relative to those of other agencies, and relative to other data sets (eg. demographic data, transport routes).

For example, the ability to view the location of agencies' assets in high flood or earthquake risk areas provides a very powerful tool in areas such as insurance, risk management and emergency services planning.