

# KEEP IT SIMPLE, SENSIBLE ASSET MANAGEMENT

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## **Abstract**

Local Governments (LG) throughout Australia have been practicing and applying Asset Management (AM) for decades however in the past 5-7 years AM in Local Government has entered a new phase and there appears to be a lot of hype, discussion and uncertainty about implementing **Strategic Asset Management (SAM)**

What makes SAM so complex and perhaps overwhelming? Is it Asset Data - quality and currency of data? Is it understanding, or lack of understanding of levels of service, especially customer expectation? Is it because we are unsure of the future demand and relevance of the assets in twenty years time?

I believe that if you try to find answers to all the questions at the same time it does become overwhelming.

## **Keep It Simple and Sensible (KISS) Approach to SAM:**

At City of Charles Sturt we pondered over the questions and came up with an age old saying 'How do you eat an elephant?'

We decided to eat it one bite at a time and did the following:

1. Categorized assets into manageable functional groups (20+)
2. Created small teams with a nominated Asset Officer to develop AM plans
3. Developed AM plans using the KISS principle (30 pages + appendices)
4. Used the AM plans to list AM improvements

Outcomes:

- Core AM plans for 8 asset groups (Over 70% of Assets in value) completed in 18 months
- AM improvements, gaps and asset risks listed and prioritised
- Staff ownership towards assets and SAM principles
- Understanding of contemporary AM principles at wider staff level
- Move from 'depreciation based' funding to 'need based' financial projection
- Improved communication between operations and finance functions
- A plan, a direction with the journey commenced right earnest
- Easily adopted and adapted

**Key Words:** Keep it Simple Sensible Strategic Asset Management

## Introduction

Municipal engineers and public servants in Local Government have been practicing Asset Management for several decades in one form or another. During the pre computer age in particular, people in Local Government used their personal hard drive (the brain) and volumes of paper to prioritise projects and maintenance programs as part of the asset management process. The Asset Management (AM) processes, priorities and sophistication across Local Governments in the past varied based on many different factors including:

- Type of Council – urban, regional, rural
- Type of population growth – rapid, steady or negative.
- Type of commercial activities
- Change in transport
- Demographics & lifestyle changes
- Sustainability
- Social, legal, and political environment
- Management priority / focus
- Accountability and risk management

So what is new? What has changed? Why has AM become more important in the last decade or so? Why does AM appear to be daunting, and uncertain for some and overwhelming for others?

AM is evolving with time, technology, economy, need and legislative drive.

Local Governments are currently thinking and planning strategically and moving towards 'Strategic Asset Management'. Strategic Asset Management will assist Local Government in sustaining, improving and rationalising the services that it provides today to ensure that future generations enjoy the same, if not improved, services. It appears that the "Strategic" aspect of modern Asset Management is what is newer and therefore creates a degree of uncertainty, and makes it overwhelming or daunting.

This paper will not dwell upon "if" or "why" Strategic Asset Management is important. Much has been spoken on the subject over

the last decade and for the sake of the information presented in this paper it is given that 'Strategic Asset Management' is important and a 'Must' for long term planning in Local Government.

Accordingly this paper will discuss methods by which Strategic Asset Management can be made simple, sensible and practical. The paper draws on the experiences, paths, hurdles and tactics used by the City of Charles Sturt in South Australia in practicing – Keep It Simple, Sensible Asset Management.

## Overview on City Of Charles Sturt and its AM planning

The City of Charles Sturt is a fully developed urban city comprising of suburbs predominantly west of the Adelaide CBD and has 13 kilometres of coastline.

The City provides some 30 plus services to its community and these services are supported by vital community infrastructure ([Appendix A](#)).

As the first step in improving AM practices in the City, an Asset Management Policy, Strategy and Implementation plan was developed over a nine month period and adopted by Council in September 2004.

The strategy includes:

- A broad structure for the Implementation of AM strategy ([Appendix B](#))
- An evaluation of the systems, processes and practices against benchmarks and gap analysis.
- Identification of a staged program for improvement with roles and responsibilities.
- Identification of resources required achieving the improvements.

## ***Perceived Road Blocks to Implementing AM Improvements***

Like many Local Governments, our City was faced with some issues during the early days

following the adoption of the strategy including:

- Lack of asset data including condition of assets
- Available asset data was in various forms and in different systems and not readily available as corporate data (Refer [Appendix C](#))
- Information was disparate
- AM processes and service levels adopted by various teams were different with little integration
- Lack of awareness and understanding of AM principles
- AM improvement exercises were considered as an additional burden to the day-to-day work
- AM was considered another 'new system' or 'jargon' placed upon the troops. Council had just implemented at least three new corporate systems since 2003 (new rates and property data management system, a new financial system and a new corporate records management system.)
- Concern about loss of power by individuals as knowledge becomes corporatised (rather than previous situations where it was individualised)
- Lack of understanding of the demand for infrastructure assets.

### ***The Keep It Simple and Sensible Process***

In spite of the perceived hurdles, there was **commitment** at all levels towards the AM improvement process if it could be kept simple, and if it made sense to the teams. Involvement of front line management including work group leaders, team leaders and middle level management, was considered to be vital in the improvement process. Through this involvement, it was recognised that the teams needed assistance to 'pull the stuff together' and 'make the improvements happen'.

Based on the feedback received from the teams the following was concluded:

- Asset data: If data was to be collected for all assets prior to implementing any improvements, it would take at

least 24 months before the Council ventured into any type of improvements. Although asset data and data collection was an important aspect of AM, the committee resolved to commence improvements with available data. Essentially, this would enable asset managers with higher quality asset data to proceed with AM improvement initiatives.

- For example – Council has had a Road Asset Management system since the mid 1980's. Road Assets are regularly assessed for their condition and managed using the Road Asset Management System. However condition data on some engineering assets such as drains and footpaths was incomplete. Similarly, there was little data in an analysable form for buildings and in the case of irrigation assets there was minimal data available.
- The importance of preparing AM plans: The committee also decided that AM improvements could be commenced by nominated Asset Managers preparing AM plans with data that was already available. AM plans were used as a tool for assisting Asset Managers to document the current status of the assets (that is levels of service, demand forecasting, risk analysis, life cycle costing and long term financial planning). The Plan was also used as a tool for identifying an 'Action Plan' for specific assets.
- How do you eat an elephant? Traditionally AM plans are prepared separately for road assets, drainage assets, building assets and open space assets (at asset class level). The teams felt the task could be overwhelming and daunting. For example, there is little in common in managing playgrounds and irrigation systems even though the assets are located next to each other. The maintenance practices, life cycle costs, risks and the skills of staff managing the assets are quite different. It was through brainstorming that we came up with

the saying 'How do you eat an elephant... One bite at a time!

A proposal was placed to the AM Steering Committee to undertake AM plans at ASSET GROUP level instead of 'asset class' level. The AM Steering Committee and the department managers agreed to the proposal.

The entire portfolio of assets was classified into 20 plus asset groups ([Appendix A](#)), and an officer was made responsible for preparing AM plans for each asset group. Based on the availability of resources, teams agreed upon a program for producing the AM plans.

### **Pilot AM plan**

A pilot AM plan for playground assets was initially prepared. Available data on 110 playgrounds across the city was reviewed and updated for condition data, replacement values, estimated remaining life etc.

The International Infrastructure Management manual (2002 edition) was used as a guide in preparing the background data/information for the AM plan. In brief, the AM Co-ordinator and the nominated Asset Manager for playgrounds prepared an AM plan incorporating the following:

- Documentation of available asset data (e.g. inventory, condition data, estimated remaining life, replacement value etc.)
- Documentation of current levels of service.
- Demand forecasting: Specific information on future demand for playgrounds was not available and therefore the AM plan was prepared based on sustaining current service levels.
- Risk analysis: Through a workshop involving key officers of Council, a comprehensive risk assessment of playgrounds was conducted with the risks ranked accordingly.
- Life cycle costing (LCC): Based on service levels, operation and maintenance cost information (that

was available from the accounts and finance system at the time), a broad base LCC was developed

- Financial forecasting: A 20 year financial forecast for operations and maintenance, renewal and upgrades was prepared based on asset data, LCC and risk analysis
- AM Improvement Plan: This section of the AM plan was used to identify and document grey areas, opportunities for improvements with responsibilities and time frames.

The first draft of the plan was prepared in approximately six weeks and finalised over a further eight-week period in June 2005. The document consisted of 32 pages and six appendices.

### ***Being Inspired - Outcomes from preparing the playgrounds' AM plan:***

The team had a road map to follow for managing playgrounds.

- The document was easy to read and understand. The document was circulated amongst the AM Steering Committee, several managers and team leaders and was accepted as a 'GOOD START'.
- There was consensus that an AM plan should be readable in 20 Minutes (30-40 pages maximum).
- Better understanding of the principles of AM through the process of writing an AM plan (Hands on experience).
- The AM plan is used as a quick reference document for various purposes including the preparation of annual budget bids.
- Keep it simple analysis and reports (eg. core LCC, core financial forecasting are prepared in simple excel work books that can be easily followed by staff and can be easily reviewed/ and updated by the asset managers in the future).
- Provide training to staff in practical risk analysis and risk management.
- An improvement plan containing prioritised actions.

The organisation has come to the realisation that straight line depreciation is not applicable to many of our assets and there are peaks and troughs in asset replacement.

Preparation of the pilot plan, its simplicity and ease of adapting the template to other assets, inspired the asset managers in the various teams to play their part in preparing AM plans and to undertake AM improvement practices. Also having an AM Co-ordinator to drive the preparation of the plans has assisted in the AM improvement initiatives.

**Estimated Time and Resources Taken to prepare Draft AM plan:**

The following table illustrates the resources that were required to prepare the pilot AM plan for playgrounds

	<b>TITLE AND ROLE PLAYED IN PREPARING THE AM PLAN</b>	<b>Estimate Number of Hours</b>
	<b>AM Co-ordinator</b> (research, collation of existing data and corporate information, writing AM plan, co-ordinating risk workshop, one on one discussions in improving the plan).	100
	<b>Recreation Project Officer (Asset Manager Playgrounds)-</b>  Reviewing asset data including replacement value and renewal programs, providing vital local information on the asset, participating in risk assessment, life cycle analysis and costing and financial forecasting exercises.	30
	<b>Contracts Administrator-</b> Ensuring data related to annual operating contract and annual structural audits are reflected in the plan, input in to the AM improvement plan.	10

<b>Manager Open Space-</b> Overall review of the plan, amendments to the plan at various stages and overall responsibility for the asset.	15
<b>Risk Management Officer-</b> conducting the risk analysis as per Council's risk management strategy.	6
Note: The hours indicated above are direct staff hours and do not include the time spent by various other teams such as finance and accounts, AM Steering Committee etc	

The AM plan for playgrounds was accepted as a successful first step in a long-journey.

The AM plan template was approved for use with other AM plans.

**AM plans Roll-Out**

As part of the corporate training program, over 30 officers were provided training in AM. The officers were able to understand and apply the principles of strategic asset management to the assets they managed in their daily lives.

A Gantt chart was developed to show who the responsible officer was, and the timeframes involved in completing the core AM plans over a two year period.

Between June 2005 and March 2007, core AM plans were prepared for the following Asset Groups:

- Road: pavement and seal
- Kerb and gutter
- Stormwater drains
- Stormwater pumping stations
- Community Centre buildings
- Community halls
- Irrigation systems
- Civic administration buildings (nearly complete)
- Commercial buildings (in progress)

Teams are committed to completing core AM plans for all asset groups by November 2008 which will assist Council in meeting the new legislative requirements.

The asset manager is also responsible for updating the core AM plans and to ensure the capital budget bids are linked back to the AM plans.

### **Achievements - Beyond AM Plans**

Preparing the AM plan template was considered a primary step in improving AM practices. The AM Steering Committee and the Asset Managers have undertaken several other initiatives to progress strategic asset management. Some of the initiatives and the outcomes are noted below:

#### ***Integrated Planning of Works:***

In the past few years there has been a significant segregation in works programs undertaken by the various teams. The segregation had resulted due to various reasons, including client /provider split, a large capital works program which has kept staff focussed on delivering the project rather than looking at how it can be done differently and better (this takes more precious time). There have been instances in which one team was programming works in the same street (eg: maintenance team replacing/repairing footpaths/ pram ramps) not knowing another team was planning other works (eg: footpath reconstruction/road reconstruction in the same section).

As part of the AM improvement program, teams are required to plan and prepare a four year capital works and operating program. Each team then presents its program to other teams during a workshop resulting in a conscious attempt being made to achieve better integration of works. As a result some projects are brought forward and others deferred with a goal of providing improved outcomes to the community.

This has resulted in

- Improved communication between teams

- Improved scheduling of works and minimising re-work
- Improved outcomes for the community.

The critical success factor is that the integrated plan has been:

- Driven by the General Manager
- Supported by Managers
- Is timely – it commences in August / September about 1-2 months before the budget cycle begins
- Includes staff from across the entire organisation involved in delivery of services via assets (not just Asset Managers)

#### ***Improved Risk Management***

A prioritised risk action plan has been developed for each asset group and this has assisted the teams in deploying resources in the areas of greater needs including:

- Improvement to operational processes and procedures to minimise risks,
- Preparing business plans/budget bids to seek funds to implement actions.

#### ***Personnel Development***

Over the last 24 months several officers of the Council have been trained and involved in the process of preparing an AM plan or more. The plans are providing them valuable information in a simplistic and concise form resulting in a sense of ownership of the assets amongst the officers. There is a sense of achievement amongst the team in the improvements they have made so far.

### **What we did not achieve (Limitations & Constraints):**

#### ***Corporate AM System:***

The AM strategy identified the need for a corporate AM system that will assist the organisation to capture asset data and

provide vital information for operations, maintenance and capital planning. Through a series of workshops team leaders and managers developed a broad level system definition of what is expected from a new AM system. Neither the teams nor the AM Steering Committee are convinced that one system or product would suit all asset categories and introducing another system may adversely affect staff morale and performance.

### ***Documenting Customer Expectation and Demands Analysis:***

Service level expectations and forecasting future demands are key aspects of AM plans. Council has a fair idea on the level of satisfaction of its residents and community on various services provided by Council and it is included in the AM plans. However, there is no clear indication on the service level expectation of its residents, or the future demand for services as indicated in the examples below:

- Roads: Network condition in terms of road roughness, acceptable timeframes for repairing faults;
- Community Centres: Accessibility, building lay out (fit for purpose), ambience etc.
- Retirement housing, Halls – should council be in the business?

Similarly, there is little information on the long-term demand for services to be provided by community assets. Therefore most AM plans have been prepared on the basis of sustaining existing service levels and data that is readily available.

The City of Charles Sturt Open Space Strategy has been recently adopted and a strategy for sporting facilities is being finalised. Council has recently commenced development of a Community Plan which will provide the community's vision for the future of city. It is anticipated that these strategic documents will provide important information for the preparation of future AM plans and updating the core AM plans that have been recently completed.

### **Conclusion & Lessons Learnt**

Since September 2004, Council has made significant progress in implementing Strategic AM practices. We have learnt some important lessons along the way which have been summarised below:

- Strategic AM is a journey not a destination;
- Strategic AM improvements should occur in unison and not in isolation;
- Strategic AM can be made as complex or as simple as you need it to be. AM improvement practices need to inspire and involve the teams and not alienate them;
- Sophisticated systems are desirable (provided you can afford and support them) but not a MUST;
- Success is directly proportional to the continued support strategic AM receives from all levels of the organisation;
- Involving middle level managers and front line staff in strategic AM initiatives is important;
- Strategic AM training at all levels assists in improving the understanding, and therefore the involvement, of the teams in the initiatives and creating a sense of ownership;
- Asset managers should understand the crucial link between physical assets and the service provided via the assets and therefore the involvement of service providers in strategic AM is vital;
- Strategic AM principles need to be reviewed, revisited and updated regularly otherwise the efforts could soon become out dated and redundant;
- Developing AM plans has assisted all of us in 'looking ahead' as much as 'learning from the past'.

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## **References**

1. International Infrastructure Management Manual 2006.
2. IPWEA – Asset Management training and workshop papers.
3. IPWEA – web site and ask your mates forums
4. AM plans of various Australian and New Zealand Councils.
5. AMQI - web site and newsletters

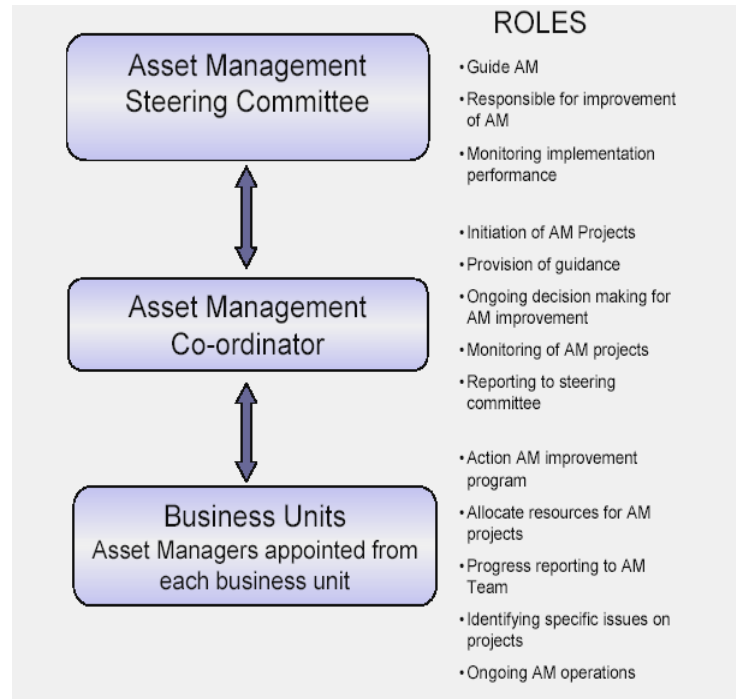
## Appendix A

### Assets in the City of Charles Sturt –A snapshot

	Asset Group	Inventory
Engineering Assets	Road Pavement & Seal	550 Kilometres
	Kerb and Gutter	1100 Kilometres
	Footpaths	800 kilometres
	Traffic Control Devices	300+ Numbers
	Car Parks	300+ numbers
	Street Signs and Furniture	To be Determined
	Storm Water Drains	400 Kilometres
	Storm Water Pumping stations	11
	GPTS	6
	Water Retaining Structures (basins etc.)	To be determined
Building Assets	Civic Administration buildings	4
	Community centres	6
	Halls for Hire	6
	Sporting Club Buildings	50+
	Aged Care Accommodation (Including complexes)	4 (Over 50 units)
	Public toilets	39
Open Space Assets	Commercial & Non Commercial Buildings	20+
	Playgrounds	110
	Reserve Furniture	To be determined
	Irrigation Systems	620
	Playing Surfaces	To be determined
	Street Trees	45,000+
	Reserve Trees	To be determined
	Other Outdoor Infrastructure	To be determined

## Appendix B

### AM implementation- Structure



## Appendix C

### Asset Data Quality- An Overview

Asset Class	Asset Group	Asset Inventory	Condition Data	Replacement Value	Life Cycle	System
ROAD ASSETS	Road Pavement and Seal	√	√	√	√	RAMS
	Kerb and Gutter	√	√?	√	√	RAMS
	Footpaths	√	√?	√	√?	RAMS
	Traffic Control Devices	√?	X	X	X	Excel
	Car Parks	X	X	X	X	Access
	Street Signs and Furniture	√?	X	X	X	Excel
	DRAINAGE ASSETS	Storm Water Drains	√	X?	√?	X
Storm Water Pumping stations		√	√	√	√	Excel
GPTS		√	√	√	√?	Excel

Asset Class	Asset Group	Asset Inventory	Condition Data	Replacement Value	Life Cycle	System
	Water Retaining Structures (Basins etc)	X	X	X	X	
BUILDING ASSETS	Civic Administration buildings	√	√	√	X	Excel
	Community centres	√	√	√	X	Excel
	Halls for Hire	√	√	√	X	Excel
	Sporting Club Buildings	√	√	√	X	Excel
	Aged Care Accommodation	√	√	√	X	Excel
	Public toilets	√	X	X	X	Excel
	Commercial Buildings	√	√	√	X	Excel
	Non Commercial Buildings	√	X	X	X	Excel
OPEN SPACE ASSETS	Playgrounds	√	√	√	X	Excel
	Reserve Furniture	√	√?	√?	X	Excel
	Irrigation Systems	√?	X	X	X	Excel
	Playing Surfaces	√?	X	X	X	Excel
	Street Trees	√	√	√	X	Access
	Reserve Trees	X	X	X	X	X
	Other Outdoor Infrastructure	X	X	X	X	X

**Legend:**

√	<b>Available</b>	X	<b>Not available</b>
√?	<b>Available but not up to date or incomplete</b>	X?	<b>Available by exception</b>

## About the Author

### Murali K G

A Civil Engineer by profession, Murali is passionate about strategic asset management and project management. Murali has completed a Masters in Financial Management that has greatly assisted him in speaking the technical language with accountants and the accounting language with engineers in Local Government. Murali started practicing asset management from the year 2000 with Mildura Rural City Council in Victoria and more recently at the City of Charles Sturt in South Australia.

