

The Need for Asset Management Plans in the Water Industry

By Sandy Muir and Tahlia Griffin

What is an AM Plan?

The size of the investment in water and wastewater infrastructure and the importance of water and wastewater services to the community demands excellence in the management of these assets. The community expects the water and wastewater networks to be managed in such a way that costs are minimised while providing the levels of service that the community desires.

The AM plan is a tool combining management, financial, engineering and technical practices in an effort to ensure that the level of service required by customers is provided at the most economical cost to the community. The plan is also intended to protect the environmental and cultural values of the assets providing the service.

What is the Plan's Intended Purpose?

The ultimate purpose of an asset management plan is to ensure that assets are operated and maintained in a sustainable manner. It articulates how the authority will deliver the regulatory requirements; to define levels of service and how these levels of service will be provided with the supporting accounting and financial management requirements. The AM Plan:

- Provides the linkage between the strategic goals and the levels of service, which are targeted performance objectives for the water system;

- Describes the asset portfolio, the issues associated with the assets and the activities required to address the issues;
- Defines the level of service to be delivered. It defines performance measures and provides performance data to compare actual service provided with target levels of service;
- Articulates the impacts of demand on existing infrastructure and the need for future infrastructure;
- Provides a detailed description of the status of the assets;
- Identifies and examines the future capital and maintenance needs of the authority;
- Identifies the risks to the business and the actions needed to manage the risks;
- Provides a valuation of the infrastructure;
- Provides financial forecasts of expenditure based on the assessed condition and estimated future life of components, and includes maintenance, renewal, and capital expenditure; and
- Identifies opportunities for improvements that will ensure financial resources are used wisely.

The AM Plan is a tactical plan that translates broad strategic goals into specific goals and objectives relevant to a particular activity for

the Corporation. It may be regarded as a tactical plan for implementing infrastructure related strategies, which arise from the strategic planning process.

Tactical planning involves the development of separate sub-plans that allocate resources (natural, physical, financial, etc) to achieve strategic goals through meeting defined levels of service.

The plan is the medium by which a Corporation articulates its management of infrastructure to achieve the desired outcomes.

As identified in the figure below, a Corporation brings together its process, systems and knowledge as part of its planning practices to examine the direction of the business, address key issues and assist the business to move forward.



Figure 1: AM Plan Philosophy

The scope of the AM Plan relates to the four broad AM Plan inputs and outputs.



Figure 2: AM Plan Inputs/Outputs



Conceptually you can imagine the business and its supporting processes, data and systems as jigsaw pieces. What the AM Plan does is pull these jigsaw pieces together to provide direction to the business and establish clear direction for service delivery and for the assets required to support the services.

The key legislation relating to the management of water and wastewater infrastructure is considered in the AM Plan. As a minimum, under regulation the Corporation has certain obligations and performance measures to achieve. The plan enables areas of poor performance to be improved through targeted and focused management including monitoring and performance.

The AM Plan is designed to feed the Water Plan by providing the necessary inputs to support the future pricing and services provisions and at the same time allows the business to review the relationship between performance management and capital and maintenance expenditure.

The AM Plan provides direction for the business to examine itself and its internal AM capabilities. The production of the AM Plan will identify key gaps in AM functions and allow the business to focus on these gaps to improve the content of the AM Plan and the message being sold by the business to its stakeholders.

A requirement of the ESC is to audit AM Plans. The ESC has recognised the AM Plan as essential, and promotes its use and supports its production through their auditing process. AM Plans are accepted worldwide for demonstrating business infrastructure performance and capability.

Where does the plan fit in the Organisation?

The Corporation's planning process should be underpinned by a document that looks specifically at the infrastructure requirements in order to meet strategic objectives, service delivery, meet ESC requirements and its obligations, improve the operating costs of the business, strive to deliver a service that is reliable and proactive, and direct a business that is ahead of time not behind. All this can be documented in an AM Plan being a document that is tangible, "live", not on the shelf, and a document that is continuously used to improve and monitor infrastructure performance.

As a key document the AM Plan should be linked into the Corporation's planning processes and the following documents (as a minimum):

- Corporate Plan;
- Annual Plan;
- Water Plan;
- AM Policy;
- AM Strategy;
- Maintenance Plans; and
- Specifications.

Customers have input into the AM Plan through the customer charter, customer surveys and any other consultation undertaken by the Corporation. Risk is contributed through the corporate framework and risk registers where infrastructure risks have been identified. Demand impacts are analysed in line with planning documents, demographic profiles and demand strategies that allow the influencing demands on infrastructure to be understood and quantified.

The AM Plan brings all aspects and knowledge within the organisation together to allow appropriate infrastructure planning outcomes to be achieved that are in line with the Corporations strategic plan and direction.

Many water corporations are structured by function. As such it is easy for the business units to become polarised and only provide solutions that address their issues. The AM Plan provides the opportunity for business units to come together and holistically apply their knowledge to support the business.

How should the Plan be used?

The AM plan is a document that can be used to portray management improvements, provide justification for funding increases and identify the impact of cutting costs on the business in the long term. For example, what does it mean to the business in the future if they are not adequately funding consumption and the renewal gap? The plan considers all aspects of lifecycle planning and concentrates on the funding required to meet the desired levels of service, manage infrastructure risk and manage the pressures of demand.

The AM Plan is intended to demonstrate business capability to stakeholders and ensure them that the Corporation is managing the assets effectively, efficiently and responsibly. Key stakeholders include:

- Essential Services Commission;
- Board;
- Community;
- Visitors;
- Utilities/Developers;
- Employees/Volunteers;
- Contractors/Suppliers; and
- Insurers.

The AM improvement section of the plan allows improvement tasks to be identified and monitored, the timing of each task to be set and the status to be tracked through progress reviews. This process allows the user to agree, commit and track improvements ensuring progress is steadily achieved.

The most important thing is that an AM Plan is a working document that requires updating on a regular basis. It is a very useful tool if used correctly however effort up front is required to ensure the plan becomes output focussed rather than statement focussed.

The AM Plan needs to feed the infrastructure contents of the Water Plan, not the other way round. The analysis and effort put into the production of the AM Plan will allow the Water Plan process to come with ease. The 20 year financial forecasts established in the AM Plan that consider demand, risk and levels of service are a rolling prediction. Given the Water Plan has a five year horizon it should be quite simple to extract the information from the AM Plan and incorporate it into a 5 year plan for the Water Plan period.

Summary

In summary, an AM Plan is a significant document that when used correctly should drive business infrastructure decisions and planning.

An AM Plan is not intended to sit on the shelf and gather dust however time after time this seems to be the trend as the degree of effort required to produce the plan is often underestimated.

We encourage any organisation who is writing an AM Plan to allow for considerable effort to be instilled to achieve the best possible outcome for the business moving forward.