SERVICE DRIVEN ASSET MANAGEMENT

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Abstract
Local governments are service driven rather than asset driven. Understanding this distinction is critical to ensuring that community needs are appropriately addressed. Translating community needs and desires into infrastructure is a complex yet little understood process. In this paper, we look at two case studies that explore the interface between service outcomes and the specification of performance requirements for the assets. The two case studies we look at are: a public health issue resulting from inadequate public amenities in a beach resort and the prioritisation of maintenance work in a world of increasing service demands and declining funding. The case studies all use the same investment logic mapping framework to establish clear drivers as to the problem that councils are responding to in delivering their services. The key to the framework is the separation of concern between service management and asset management.

Key Words: service, service framework, asset, management, requirements, community, local government, councils, investment logic

Introduction

Local governments are service driven rather than asset driven. Understanding this distinction is critical to ensuring that community needs are appropriately addressed. To provide the wide range of services that local governments provide, local governments manage a very large asset base. Local Government community assets in Australia are currently estimated to be worth over $170b. Decision making processes surrounding the ongoing and future investment in assets should be driven by a process of community engagement linked to meeting the needs and desires of the community. The focus should be on aligning the outcomes and benefits derived from the assets to the vision and goals set by the community. Best practice asset management frameworks frequently espouse the principle that ownership and management of assets should be driven by service needs. However, this principle is rarely implemented in practice with so called “service standards” being effectively asset standards. Translating community needs and desires into infrastructure that delivers these community needs and desires is a complex yet little understood process. Our research has shown there are very limited rigorous processes and procedures that support translating service needs into sustainable asset management. In fact, in most authorities responsible for managing community infrastructure there appears to be a disjoint between service management and asset management.

In this paper, we explore the inter relationship between services and assets through the use of an investment framework developed by the Department of Treasury and Finance Victoria (2008). This builds on our previous work to develop service ontology to drive requirements for public infrastructure and assets (Platt, Jordan, Kumar and Koronios, 2008) which trialled the use of this framework. We illustrate the application of the

framework using two case studies that explore the interface between service outcomes and the specification of performance requirements for the assets. To show the robustness of the framework we have chosen case studies in public health and road maintenance.

Types of Local Government Services

Local government services can be classified into two main service groups depending on whether the local government provides the infrastructure for service delivery by others e.g. roads and community buildings or whether the local government provides the service e.g. water, sewerage, drainage, library, child care etc.

For both service groups, local government establishes the service levels. For the first group the service delivery role (and the costs) is shared between the infrastructure provider (local government) and the infrastructure users. Users are very aware of the assets being used to provide the service. In contrast, for the second group of services, local government provides the service delivery strategy role and users are largely indifferent to the assets being used.

This grouping impacts on the way that local governments traditionally specify levels of service. For the first group, the emphasis is on specifying the assets e.g. road width, surface etc, while for the second group the emphasis is on the service e.g. water quality, response time to breakdowns etc. For the first group, the asset is driving the level of service provided while for the second group; the level of service drives the asset (which is how it should be). The level of service and service delivery strategy are more likely to be in balance for the second group of services rather than for the first group of services. This imbalance also flows across to cost recovery. The second group of services is normally funded by charges which are directly linked to the level of service. Level of service, funding and service delivery strategy is normally detached for the first group of services. This detachment of level of service, funding and service delivery strategy leads to misalignment of what is provided to what is desired and what can be afforded.

Investment Logic Framework

The requirement for a service oriented framework is driven by the need for local communities to manage their **renewal gap** (the gap between what should be spent maintaining existing services and the maintenance funds available) and to manage their **expectation gap** (the gap between the current level of service and the desired service levels). If we want to ensure that 'investment decisions are driven by agreed community needs' then we must provide a framework for translating community aspirations into service objectives and service delivery and defining the level of asset investment required to enable the required service delivery. As shown in

Figure 1 the adopted customer service standards need to be in balance with the services delivery strategy.

A suitable framework needs to be sophisticated enough to handle the complexity of multiple stakeholders, elegant enough to appeal to executives and simple enough to be repeated consistently. To this end we have been experimenting with the use of the Department of Treasury and Finance Victoria (DTF) Investment Logic Mapping (ILM) tool. The DTF ILM tool was developed to assist project investors and sponsors to clearly understand the problems they were solving which was in turn driving the need for investment. It is important that project sponsors clearly state the strategic intervention they would make to fix the problems and the benefits that they would deliver as a result of this investment. The key elements of the framework are illustrated in

Figure 2. For our research, we have applied this framework to two typical local government services namely public health and road maintenance.

Case Study 1: Beach Public Health

The Problem

The local paper and radio stations have been reporting the recording of faecal material in the sea and residents have been complaining of faeces in the vegetation and bushes surrounding the car park. The local press are declaring it an outrage and as usual have the answer; they are lobbying council to install new “Excel” style super loos. The full investment logic map is provided as Figure 3.

Service Drivers

The lack of appropriate toilet facilities is preventing growth of family orientated tourism in the area.
Increasing risk of health hazards caused by increased incidents of faecal material in public areas.
Hard won commercial investment along the foreshore is being undermined by unhygienic public toilet facilities.

Service Objectives

Provide strategically located appropriate public toilet services along the foreshore.
Improve the service regime to ensure that visitors feel comfortable in using the public toilets.

Service Benefits

Improved community well being through increased use of the recreational resources of the beach.
Improved sustainability and goodwill of the beach business community.

The Solution

The solution involves more than the assets. The solution involves a combination of appropriate assets, appropriate facility maintenance and ongoing service monitoring. The positioning and the design of the facilities will be based on an accurate profile of the service demand along the foreshore. The assets required could be provided directly by council or by local business through a service contract.

Service Delivery

Obtain an accurate profile of the service demand along the foreshore and identify strategic locations for facilities.
Establish toilet facilities in preferred locations that satisfy the usage requirements.
Establish a service maintenance program that ensures the facilities are healthy and comfortable for use.
Monitor the ongoing demand and service performance and adjust the response as required.

Service Enablers

Acquire public toilet facilities that are fit for purpose.
Establish and asset maintenance program that monitors and responds to the physical condition of the asset.

Case Study 2: Road Maintenance

The Problem

Council has been advised by its insurance broker that its public liability insurance premium will double because of increasing claims arising from road maintenance. The engineer says that more funding is required for road maintenance. Council responds saying that no more funding can be provided at this time. The full investment logic map is provided as Figure 4.

Service Drivers

Increasing risk to road users caused by a growing backlog of unaddressed defects.
Increasing litigation caused by a failure of the road maintenance process.
Declining network performance caused by a lack of road maintenance.
Unnecessary public frustration and economic loss caused by poor maintenance planning.

Service Objectives

Mitigate the risk to public safety caused by maintenance defects.
Strategic prioritised allocation of maintenance resources.
Minimise lost travel time due to maintenance road works.

Service Benefits

Reduction in road asset risk.
Safer travel environment.
Preserve the regional economic road transport competitiveness.

The Solution

The solution is to focus on minimising the risk and inconvenience to the travelling public. It is only when asset defects impinge on these two areas, that treatment is warranted. The solution is a combination appropriate monitoring and inspection regimes, appropriate intervention levels and treatment standards, appropriate prioritisation methodology, communication and an efficient and effective service delivery process.

Service Delivery

Identify maintenance issues and quantify the public safety risk.
Develop a culture of road maintenance based on service prioritisation.
Develop more efficient and effective road maintenance strategies.
Coordinate and plan regional network maintenance activity.
Communicate to the travelling public to minimise the impact of maintenance works.

Service Enablers

Appropriate monitoring and inspection routines.
Specify intervention levels and treatment standards.
Road network services maintenance prioritisation hierarchy.
Road maintenance service delivery.

Conclusion

Local governments are service driven rather than asset driven. Understanding this distinction is critical to ensuring that community needs are appropriately addressed. Translating community needs and desires into infrastructure is a complex yet little understood process. In this paper, we have used investment logic mapping to explore the interface between service outcomes and the specification of performance requirements for the assets.

The two case studies we looked at: a public health issue resulting from inadequate public amenities in a beach resort and the prioritisation of maintenance work in a world of increasing service demands and declining funding. These case studies are used to illustrate the difference between service and asset objectives. In the case of the public amenities case study, the service objective is to provide appropriately located and maintained public amenities that the public are comfortable to use and can afford. In contrast, the asset objective is to provide and maintain the public amenities to dispose of human waste at minimum whole of life cost. In the case of the road maintenance case study, the service objective is to minimise the risk to the travelling public. The asset objective is to preserve the asset and to minimise the whole of life costs. Focussing on asset objectives instead of service objectives can cause misalignment between desired service outcomes and assets. The investment logic framework proved to be a useful tool to determine the most appropriate solution for the defined problems.

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Appendix A Figures

Figure 1 Local Government Service Delivery

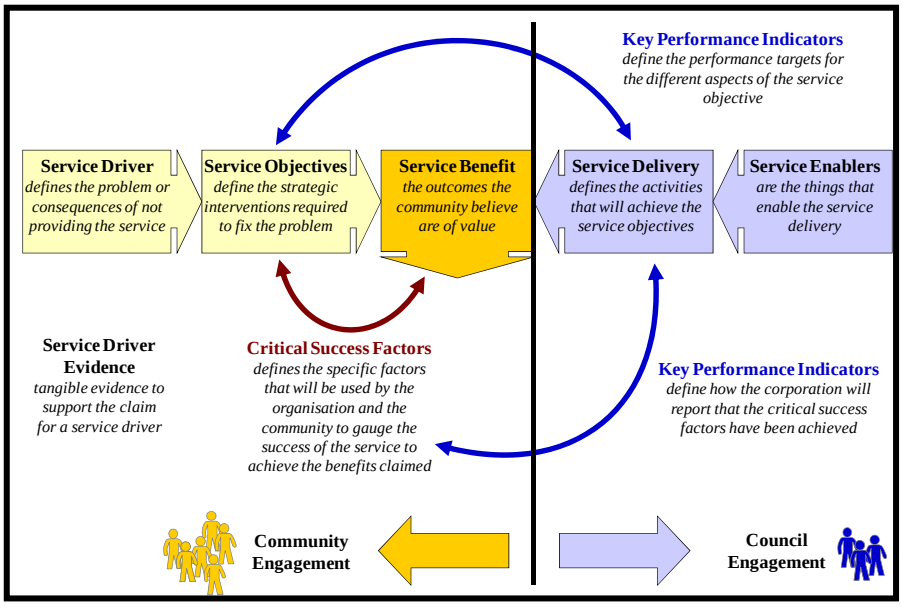

Figure 2 Investment Logic Framework

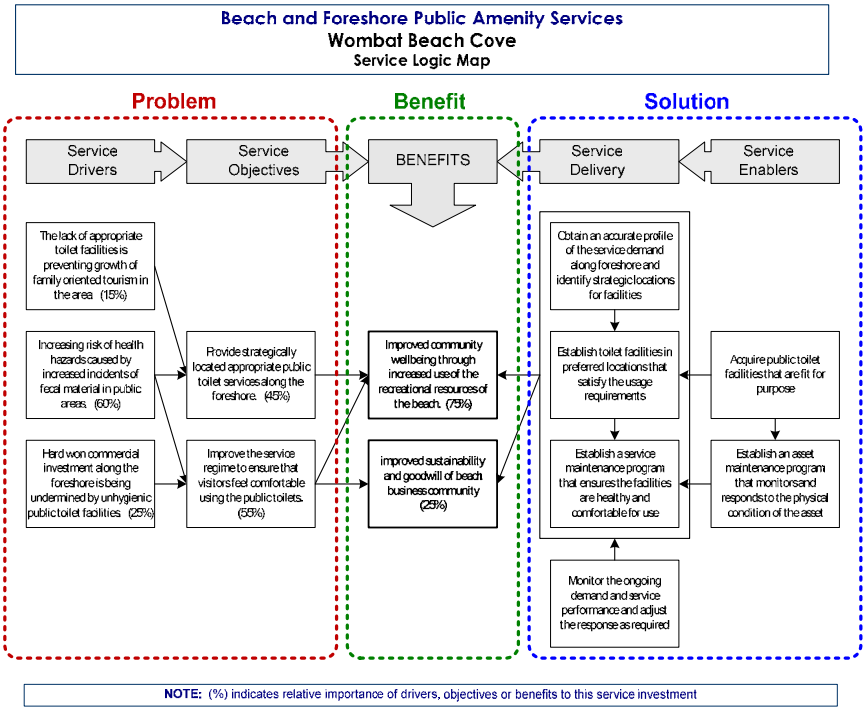

Figure 3 Public Amenity Service Logic Framework

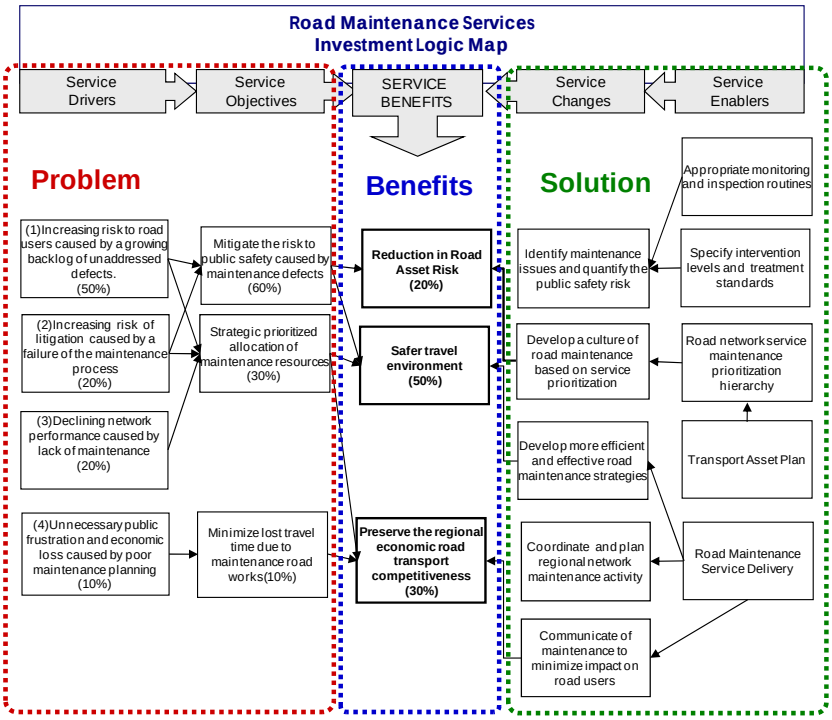

Figure 4 Road Maintenance Service Logic Framework

Biography

Graham Jordan has over 35 years experience in Australian infrastructure management. He has qualifications in civil engineering, economics and obtained a Master of Business Administration in 1992. Graham's professional experience includes state and local government and the private sector.
Within local government, Graham was at the forefront of the implementation of Asset Management to improve the delivery of infrastructure services Since 1996, Graham has worked as an independent consultant assisting clients to gain asset management skills through recent assignments for in Queensland and interstate. As part of the Queensland Roads Alliance project team, Graham has assisted with development of asset management and program development initiatives for the Roads Alliance.
In 2008 Graham was invited to become a Research Fellow with the Queensland University of Technology for the CRC for Research Fellow, Cooperative Research Centre for Integrated Engineering Asset Management.

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