

Transport Infrastructure Asset Management Policy

Version November 2021



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Policy Statement

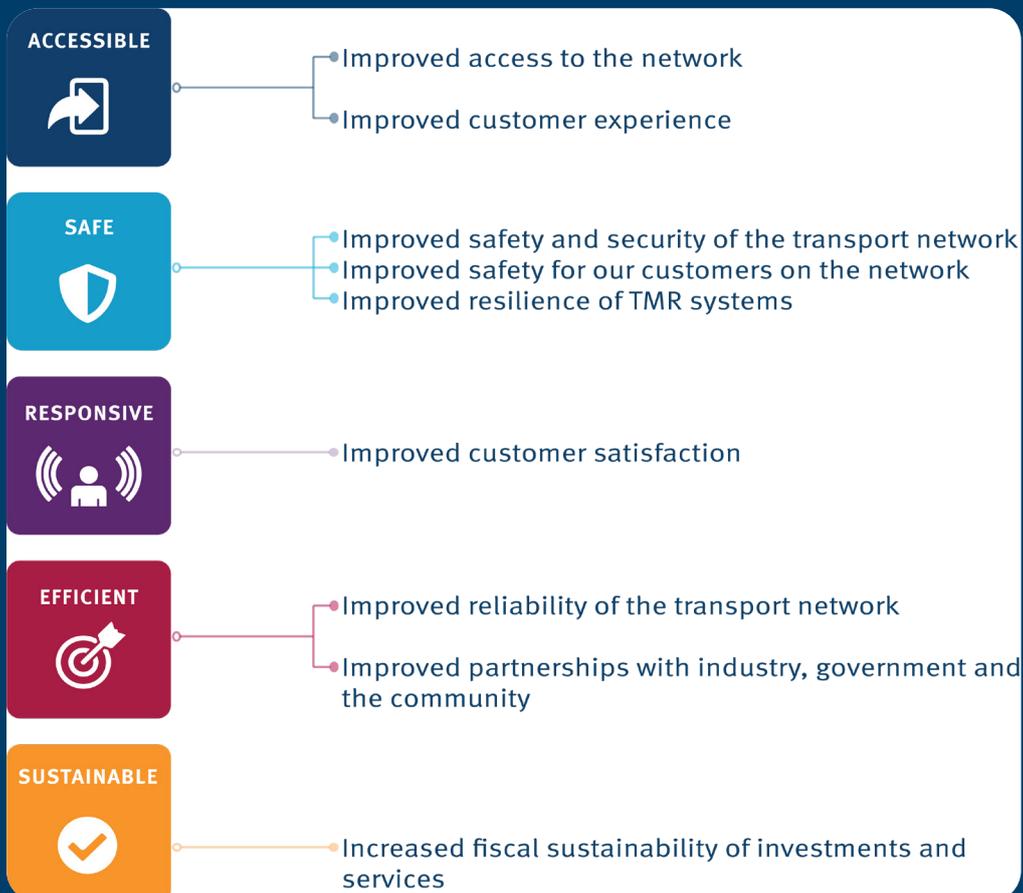
The Department of Transport and Main Roads (TMR) will manage the state transport infrastructure assets sustainably over the long term.

TMR has a strategic role in leading a safe and accessible transport system that contributes to our economic development and enhances the quality of life for all Queenslanders. Long-term sustainable asset management is essential to fulfilling this role and delivering cost-effective transport infrastructure and services.

This policy outlines TMR's approach to asset management and demonstrates how transport investments will be maximised to ensure Queenslanders receive value for money.

This policy supports the department's vision of ***Creating a single integrated transport network accessible to everyone.***

Effective asset management contributes to the department's strategic objectives in the following ways:



Context

This policy introduces integrated Asset Management Systems (AMS) across all transport asset classes and transport infrastructure as shown in **Table 1**.

Table 1: Asset Management Policy: Asset Classes and Transport Infrastructure

Asset Sub-Classes	Asset Type	Asset Class			
		Road Infrastructure 	Maritime Infrastructure 	Active Transport Infrastructure 	Passenger Transport Infrastructure 
Roads	Pavement	✓			✓
	Surfacing	✓		✓	✓
	Earthworks	✓			✓
	Line Marking	✓		✓	✓
	Traffic Management Devices	✓		✓	✓
Drainage	Open Drains	✓			✓
	Kerb and Channel	✓			✓
	Pits	✓		✓	✓
	Minor Culverts	✓			✓
Mechanical and Electrical	ITS Assets	✓	✓		✓
	Mechanical and Electrical	✓	✓		✓
	Lighting	✓	✓	✓	✓
	Traffic Signals	✓	✓		✓
Roadside	Signs	✓			✓
	Slopes	✓			✓
	Fences (noise barriers)	✓			✓
	Pathways			✓	
	Road barriers	✓			✓
Structures	Bridges	✓		✓	✓
	Major Culverts	✓			✓
	Retaining Walls	✓			✓
	Other Structures	✓	✓		✓
	Tunnels	✓			✓
Light Rail				✓	



The AMS adopted for each asset class will be consistent with international standards and commensurate with the size and importance of those asset classes.



Navigational aid

Policy Principles

The following principles collectively guide the current management and future development of TMRs' transport infrastructure assets.

Implement international best practice benchmarks for asset management

Utilising the international standard ISO 5500x suite of documents, guided by the Austroads Guide to Asset Management (2018)

Deliver a 'fix it first' approach

Utilising the full potential of existing assets by proactively operating, repairing or rehabilitating networks rather than replacing them

Provide fit for purpose transport solutions

Maintain existing assets sustainability and define appropriate, affordable levels of service which balance performance, costs and risks throughout an asset's life

Ensure whole-of-life costs are considered in transport infrastructure investment option assessments

Programs and projects will be accompanied by a clear position on the ongoing funding required to maintain and operate the new assets and services



Bruce Highway

Policy Implementation

TMRs' senior management will oversee the development, implementation and continuous improvement of all components of the integrated AMS with annual reporting of progress.

TMR will measure and report on the Asset Sustainability Ratio as a key performance indicator on an annual basis. The department will also benchmark its progress against ISO 5500x, or relevant guidelines, requirements on a regular basis.

The General Manager (Portfolio Investment and Programming) is responsible for the overall design, maintenance, documentation, review and improvement of TMRs' integrated AMS.

In alignment with the ISO5500x series and the Guide to Asset Management, the department will develop and bi-annually review a strategic asset management plan, which will establish line of sight from TMRs' Corporate Objectives through asset management objectives to asset objectives.

The asset management strategy for each Asset Class will be implemented through the Investment Program which has the vested responsibility for asset management for that particular Asset Class, shown in **Table 2**.

Table 2: Group Support for Asset Management

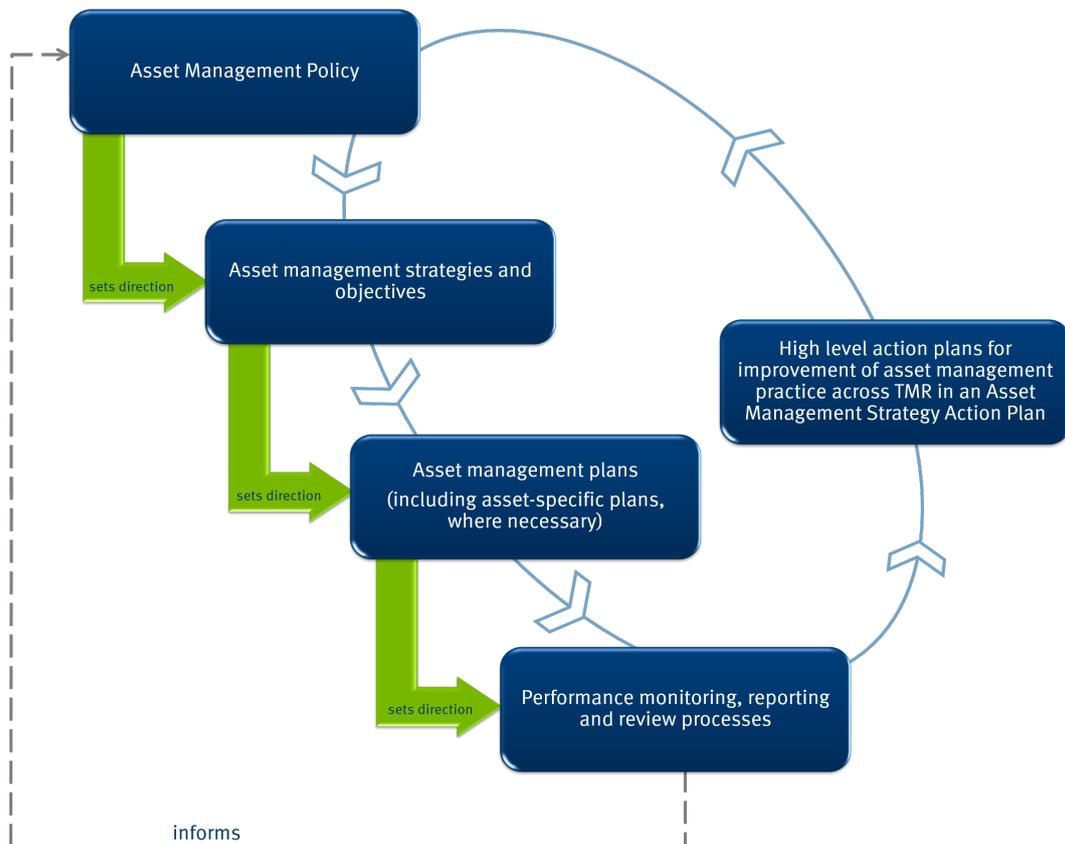
Group with Lead Asset Management Responsibility	Asset Class	Investment Program
Maintenance, Preservation and Operations Steering Committee	Road Infrastructure	Maintenance, Preservation and Environment
	Active Transport Infrastructure	
	Passenger Transport Infrastructure	Road Operations
Marine Infrastructure Investment Steering Committee	Maritime Infrastructure	Maritime Infrastructure
Out-of-scope (QR have lead asset management responsibility)	Rail Infrastructure	NA

Note that there are multiple investment programs covering the asset management functions of development and upgrade for these asset classes, however the investment programs nominated have prime responsibility for operation, maintenance and renewal of these assets.

The components of the AMS include:



The key outputs of the AMS include:



Background

Infrastructure asset management is defined as the systematic and coordinated activities and practices through which the Department optimally and sustainably manages its assets and asset systems to derive value for Queenslanders.

Queensland is a vast decentralised state with the longest SCR network of any Australian state/territory. To support the management of the state's largest public asset, TMR has well-developed asset management processes which target the highest priority needs and maintain the safety of the state's road network. TMRs' 'run-maintain-build' philosophy supports the prioritisation of investment in maintenance, preservation and operations to get as much as possible out of the existing network.

Queensland's Asset Management Challenge



International Asset Management Standard and Austroads Guide to Asset Management (2018)

International asset management specifications highlight the importance of corporate asset management policies as part of an integrated suite within an Asset Management System. The contents of this policy conform to the direction and intent of the ISO 55000 suite of international asset management standards.

ISO 55001 specifies that an organisation shall establish, implement, maintain and continually improve an asset management system, including the processes needed and their interactions. In addition, an organisation shall develop a Strategic Asset Management Plan which includes documentation of the role of the asset management system in supporting achievement of asset management objectives.

The Austroads Guide to Asset Management (2018) has been structured to provide road agencies with industry-specific practical advice to align organisational practices to ISO 55001.



Legislative Requirements

This policy will align TMR with international best practice and conforms to requirements of the:

- Financial Accountability Act 2009
- The Queensland Government's Financial and Performance Management Standard 2019
- Transport Infrastructure Act 1994
- Professional Engineers Act 2002.





Cannonvale Breakwater and Floating Walkway

Scope

This policy covers the physical assets that comprise the state-owned transport infrastructure network and the integrated asset management system including data, processes, information system, governance, knowledge and capability.

The Department's transport infrastructure asset classes covered by this policy include:



Road Infrastructure - including earthworks, pavements, road furniture, traffic control and intelligent transport systems, minor culverts and surfaces, including bridges (concrete, timber, steel; deck unit, girder/beam, box girder), tunnels, major culverts (box culvert, arch, slab deck, pipe)



Maritime Infrastructure - such as vessels, hydrographic surveying equipment, boating infrastructure, including physically smaller assets such as buoys and beacons.



Active Transport Infrastructure - including on-road, roadside, bridges, tunnels, lighting, data counters, etc.



Passenger Transport Infrastructure - including busways (roads, structures, ITS and electrical), light rail and passenger facilities (busway stations, park'n'ride facilities)

This policy does not apply to heavy rail or to non-transport infrastructure assets such as buildings, plant and cash or equivalent assets. TMR's role, as part of administering the Transport Planning and Coordination Act 1994, seeks to influence the transport effectiveness and efficiency of the overall transport system, through strategic planning and management of transport resources, and therefore the principles of this policy provides guidance where TMR is delivering assets for other parties.

Although human factors such as leadership, motivation and culture are not directly addressed within the scope of this policy, they are critical to successfully achieving optimised and sustainable asset management and require due consideration. This is applicable to the Department's managers, employees, contractors and suppliers.



Objectives

The objective of this policy is to set the direction and framework required for infrastructure asset sustainability, and to include:

- ensuring that the Department's transport infrastructure assets are managed in a sustainable manner, with appropriate levels of service that balance the needs of customers and the environment within available funding and consistent with the Department's risk framework
- safeguarding the Department's transport infrastructure assets and employees by implementing effective asset management strategies and providing the necessary financial resources for those assets
- meeting legislative requirements for asset management
- ensuring resources required and operational capabilities are identified and responsibility for asset management is allocated
- assigning clear responsibilities and accountabilities for the ownership and control of the Department's transport infrastructure assets and the associated reporting responsibilities
- maximising value-for-money, taking into account the full costs of providing, holding, using, maintaining and disposing of assets throughout their lifecycles
- optimising the infrastructure solutions through improved management and economies of scale
- demonstrating transparent and responsible asset management processes that align with established best practice.



Beames Brook Bridge

Benefits

The benefits to the Department of implementing this policy include developing of a comprehensive asset management system that provides optimised lifecycle asset management across the transport system. This will enable quantifiable outcomes as detailed in **Table 3**.

Table 3: Transport Infrastructure Asset Management Policy Outcomes

Outcome	How will this be measured?
Deliver a 'fix it first' approach utilising the full potential of existing assets by proactively operating, repairing or rehabilitating network rather than replacing them	Investment in Maintenance, Preservation and Operations of the state-controlled road network increases over time
Ensure whole-of-life costs are considered in transport infrastructure investment option assessments. Programs and projects will be accompanied by a clear position on the ongoing funding required to maintain and operate the new assets and services.	Proportion of transport infrastructure projects (>\$50 m) with approved options assessments
Sustainable asset management systems and practices accord with international asset management standards	Benchmarked through independent assessment (target three to five years)
Transport infrastructure assets managed in a sustainable manner with an appropriate level of service to provide for present and future generations	Asset Sustainability Ratio

Risk Management

All components of the Asset Management System shall be developed in line with the principles of the Department's Risk Management Framework.





Performance Assessment and Improvement

TMR is committed to continual improvement in asset management practices and asset management performance.

TMR will define, through its Asset Management Strategy Action Plan (AMSAP), mechanisms for performance assessment and continual improvement of asset management system and practices that will include a reporting and review framework managed through TMR senior management including:

- performance and condition monitoring
- investigation of asset-related failures, incidents and non-conformities
- evaluation of compliance
- audit
- improvement actions
- records.

TMR will develop Asset Management Plans for each of its asset classes that will:

- define performance measures for the asset based on corporate objectives, TMR priorities, asset management objectives and recognised best practice
- review available resources
- identify performance gaps, if any
- define options to close the gaps based on sustainability principles and risk
- outline improvements to the asset required to achieve sustainability
- integration with other departmental frameworks including risk, environmental, sustainability and safety management.

References

References include, but are not limited to:

- Australian Accounting Standard AASB116 compiled June 2014 – property, plant and equipment
- Austroads Guide to Asset Management (2018) and subsequent revisions
- Austroads Research Report AP-R577-18: Minimum Levels of Componentisation for Road Infrastructure Assets Guideline
- International Organisation for Standardisation (ISO), ISO 55000, 55001 and 55002
- IPWEA International Infrastructure Management Manual 2011 version 4
- Professional Engineers Act 2002
- Queensland Financial Accountability Act 2009
- Queensland Government Financial and Performance Management Standard 2019
- Queensland TMR Risk Management Framework 2020 version 3.5
- Transport Infrastructure Act 1994.





Approval



This policy has been approved by the Director-General on 17 January 2022.

Policy Review



This policy shall be reviewed on a biennial basis. The next review of this policy is due on 31 July 2023.

