CHAPTER 4

Asset management overview

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Key highlights

- Powerlink is committed to sustainable asset management practices that consider and recognise our customer and stakeholder requirements.
- Powerlink's asset management practices provide safe, reliable and environmentally conscious services that are cost effective while supporting a sustainable energy market.
- Powerlink's approach to asset management:
  - delivers value to our customers by managing risk, optimising performance and expenditure on assets through whole of asset life cycle management
  - is underpinned by Powerlink's corporate risk management framework and good practice international risk assessment methodologies.

4.1 Introduction

Powerlink's asset management system captures significant internal and external drivers on the business and sets out initiatives to be adopted.

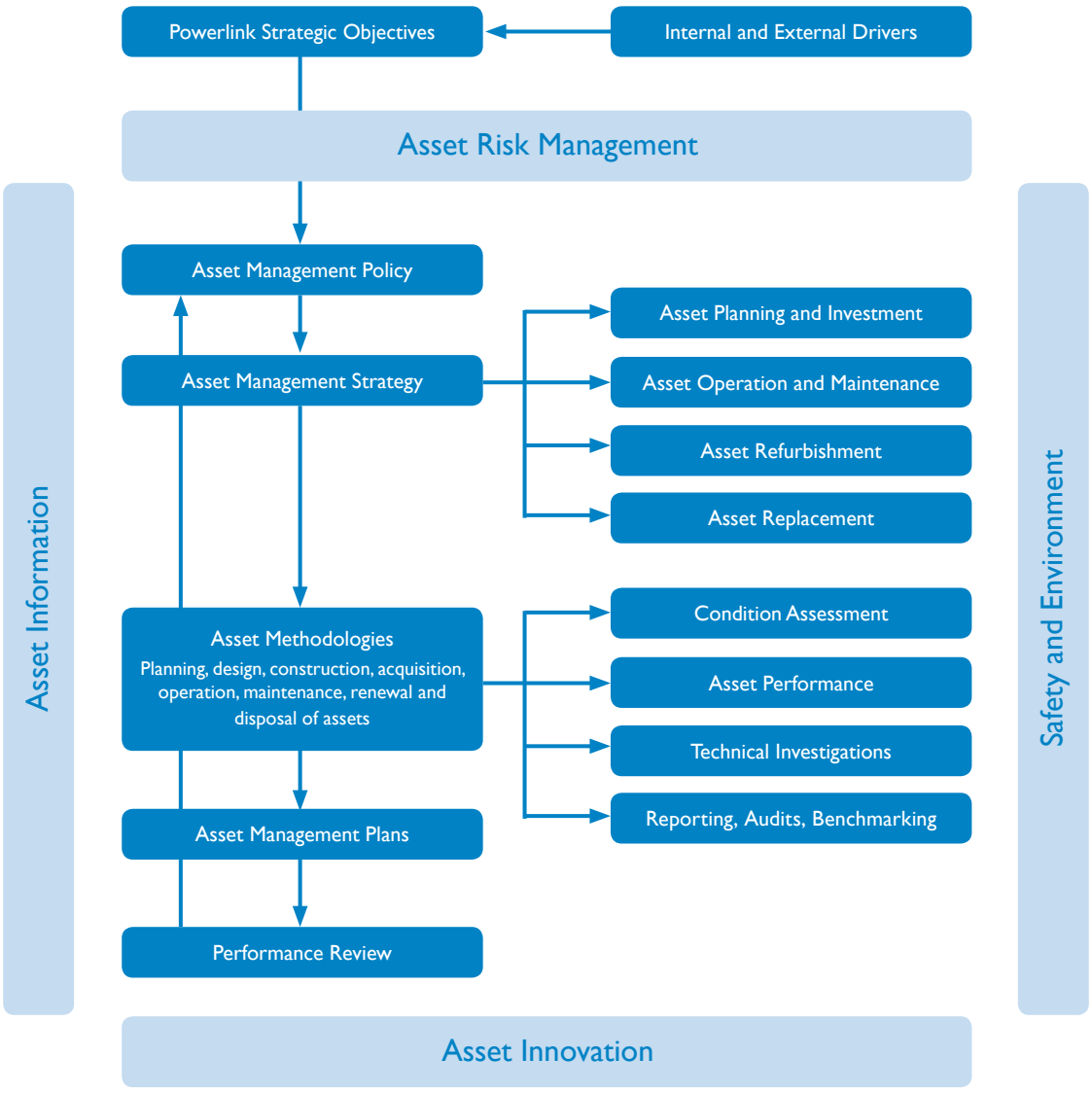
Other factors that influence network development, such as energy and demand forecasts, generation development (including potential generation withdrawal), and risks arising from the condition and performance of the existing asset base are also analysed collectively in order to form an integrated network investment plan over a 10-year outlook period.

4.2 Overview of approach to asset management

Powerlink's Asset Management System ensures assets are managed in a manner consistent with the Asset Management Policy and overall corporate objectives to deliver cost effective and efficient services. The principles set out in the Asset Management System (refer to Figure 4.1) and Asset Management Policy guides Powerlink's analysis of future network investment needs and key investment drivers.

Powerlink's asset management and joint planning approaches ensure asset reinvestment needs are not just considered on a like-for-like basis, rather the enduring need and most cost effect option are considered. A detailed analysis of both asset condition and network capability is performed prior to reinvestment and where applicable, a Regulatory Investment Test for Transmission (RIT-T) is undertaken, in order to bring about optimised solutions that may involve network reconfiguration, retirement and/or non-network solutions.

Figure 4.1 Asset Management System



4.3 Asset Management Policy

Powerlink's Asset Management Policy sets out a commitment to sustainable asset management practices that ensure Powerlink provides a valued transmission service to its customers by managing risk, optimising performance and managing expenditure on assets through the whole of asset life cycle. The policy includes principles that are applied to manage Powerlink's entire transmission network, including telecommunications and business infrastructure assets.

4.4 Asset Management Strategy

Powerlink's Asset Management Strategy identifies the principles and the approach that guide the development of investment plans for the network, including such factors as expected service levels, investment policy and risk management.

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Powerlink's Asset Management Strategy is based on two parallel aspects:

- Asset Life Cycle, which considers assets on a 'whole of life' basis
- Asset Management Cycle, which considers the broader business environment including continuous improvement from the review of evolving factors.

Together, these complementary systems:

- enable a process of continuous improvement which focuses on providing valued services to customers by taking into account evolving internal and external factors
- provide a framework to ensure Powerlink's obligations are able to be effectively and efficiently delivered.

4.4.1 Asset life cycle

A critical element of asset management is to consider the life cycle of assets. There are three primary timeframes in the life of an asset. These timeframes and the interaction between them over the life cycle of assets are shown in Figure 4.2.

Figure 4.2 Asset life cycle

4.4.2 Asset management cycle

Powerlink's asset management practices also consider the broader business environment. This includes operating and overarching business requirements such as safety and environment, risk and information management.

Powerlink manages these aspects by considering the asset management cycle and applying the four phases (refer to Figure 4.3).

Phase 1 – Strategic alignment

Assessing Powerlink's obligations across a wide range of legislation and market requirements and determining the expectations of relevant stakeholders.

This assessment enables Powerlink to responsibly deliver electricity transmission services that are valued by stakeholders, customers and the market.

Phase 2 – Asset management strategies

Considering the obligations and expectations identified under the strategic alignment phase and determining how Powerlink responds in meeting or managing those obligations and expectations.

By managing these obligations and expectations, Powerlink is aligning asset management processes and practices with AS ISO55000:2014[1] to ensure a consistent approach is applied throughout the life cycle of assets.

Phase 3 – Resource alignment

Ensuring resources are made available to achieve strategies which are to be implemented and that resourcing needs are taken into account in the development of asset management strategies.

Powerlink uses a range of tools to develop resource plans over medium to long-term forward planning horizons.

Phase 4 – Continuous review

Monitoring and reviewing network, asset and business performance outcomes continuously.

Powerlink focuses on:

- reviewing the implementation of strategies to identify and adopt improvements
- checking strategies deliver to Powerlink's obligations and the expectations of customers.

[1] AS ISO 55000:2014 is an international Asset Management standard.

Figure 4.3 Asset management cycle

4.5 Asset management methodologies

Powerlink's asset management methodologies are fundamental in supporting the appraisal of future reinvestment needs, particularly in relation to:

- the monitoring and analysis of asset health, condition and performance
- risk assessment methodology
- whole of life cycle planning.

The systematic appraisal of strategic value and business utility is also required to support investment decisions.

Powerlink employs a structured approach to risk management, applying contemporary and good industry asset risk management practices.

As reinvestment in assets approaching end of technical service life forms a substantial part of Powerlink's future network investment plans in the 10-year outlook period, the assessment of emerging risks arising from the condition and performance of these assets is of particular importance. In order to inform such risk assessments, Powerlink undertakes a periodic review of network assets which considers a broad range of factors, including physical condition, capacity constraints, performance and functionality, statutory compliance and ongoing supportability.

Risk assessments are underpinned by Powerlink's corporate risk management framework and the application of a range of risk assessment methodologies set out in AS/NZS ISO31000:2018 Risk Management Guidelines[2].

4.6 Integrated network investment planning

A fundamental element of the Asset Management System involves the adoption of processes to manage the life cycle of assets, from planning and investment to operation, maintenance and refurbishment, to end of technical service life.

[2] AS/NZS ISO 31000:2018 is an international Risk Management standard.

A range of options are considered as part of integrated network investment planning, which includes asset retirement, non-network alternatives, life extension, network reconfiguration and asset reinvestment, which may include replacement.

The purpose of integrated network investment planning is to:

- apply the principles set out in Powerlink's Asset Management Policy, Asset Management Strategy and related processes to guide the development of proposals for future investment and reinvestment in the transmission network
- provide an overview and analysis of factors that impact network development, including energy and demand forecasts, generation developments, network performance and the condition and performance of the existing asset base
- provide an overview of asset condition and health, life cycle plans and emerging risks related to factors such as safety, network reliability and obsolescence and
- identify potential opportunities for optimisation of the transmission network.

4.7 Asset management implementation

Powerlink has adopted implementation strategies across its portfolio of projects and maintenance activities aimed at efficiently delivering the overall work program including prudent design standardisation, program management and supply chain management.

One of Powerlink's objectives includes the efficient implementation of work associated with network operation, field maintenance and project delivery. Powerlink continues to pursue innovative work techniques that:

- reduce risk to personal safety
- optimise maintenance and/or operating costs and
- reduce the requirement for planned outages on the transmission network.

In line with good practice, Powerlink also undertakes regular auditing of work performed to facilitate the continuous improvement of the overall Asset Management System.

4.8 Further information

Further information on Powerlink's Asset Management System may be obtained by emailing networkassessments@powerlink.com.au.

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