January 2026

Powerlink 2027-32 Revenue Proposal

Strategic Asset Management Plan

Strategic Asset Management Plan (SAMP) - Strategy

Management System	Asset Management	
Authored by	Manager Asset Management System	
Reviewed by	Asset Management Committee	Asset Management Committee Core Members, Relevant Managers and General Managers
Approved by	General Manager Asset Management	

Version History

Version	Date	Section(s)	Summary of amendment
1.0	21/01/2026	All	This standard replaces ASM-FRA-A2400335- Asset Management Framework and A969433-ASM-STR- Asset Management Strategy

Table of Contents

1. Introduction

1.1 Purpose

The Strategic Asset Management Plan (SAMP) provides the overarching framework that guides how Powerlink Queensland manages and will manage its assets in alignment with its risk appetite, corporate strategy, regulatory requirements, and the ISO 55001:2024 standard. It ensures asset management activities are aligned with organisational objectives.

The SAMP provides a consistent and coordinated approach to asset management, aligning strategic goals with day-to-day operations. This integrated plan supports the delivery of reliable, safe, cost-effective, and sustainable services and drives ongoing improvement.

SAMP informs functions across finance, IT, procurement, governance, environment, and safety:

- Asset management decisions impact financial outcomes and risk exposure.
- IT/OT systems and data management support decision-making and analytics.
- Procurement strategies influence lifecycle cost and reliability.
- Environmental and safety outcomes are integrated into asset performance expectations.

The SAMP promotes cross-divisional collaboration and shared responsibility. It is imperative that key stakeholders from various departments engage in asset management processes to ensure that their expertise and perspectives contribute to comprehensive decision making.

1.2 Scope

The scope of the SAMP covers all physical and supporting assets used for electricity transmission across Queensland, including substations, lines, secondary systems, telecommunications network assets, IT/OT systems, and supporting infrastructure. Non-network assets are not included in the scope. Appendix D provides further information about the asset classes covered by this strategy.

1.3 References

Document code	Document title
Corporate Strategy	Our Strategy
A982962	Asset Management Policy
A537590	Transmission Line Asset Methodology Framework
A542372	Substation Asset Methodology Framework
A968358	Land Asset Methodology Framework
A968388	HV Underground Cable Plant Methodology Framework
A3164096	Risk Management Framework
A6012758	Network Portfolio Plan – Procedure
A2412648	Asset Planning Criteria Procedure
A2338088	Powerlink Joint Planning Framework
A3356633	Reinvestment Criteria- Framework

Document code	Document title
A588431	Asset End of Life Strategy
A1055515	Asset Maintenance Standard
A515409	Asset Refurbishment Standard
A2103734	RAIDE-C Decision Rights Framework
Health, Safety and Environment Policy	Health and Safety Policy
ASM-PLN-A2298555	Operational Technology Development 2020-2027 - Plan
ASM-STR-A2296977	Operational Technology Business Strategy 2020-2027
A5867641	Operational Technology Asset Management - Strategy
A2331811	Secondary Systems Business Strategy 2020-2027 – Strategy
A2331814	Secondary Systems Asset Strategy 2020-2027 – Strategy
A3370989	Telecommunications Business Strategy 2020-2027 – Strategy
A3385809	Telecommunication Asset Strategy 2020 - 2027 - Strategy
A2407358	Digital Asset Management Framework
A5781223	Strategy Management – Framework

1.4 Defined Terms

Terms	Definition
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AESCSF	Australian Energy Sector Cyber Security Framework
AMC	Asset Management Committee
AMS	Asset Management System
AMOs	Asset Management Objectives
ARCC	Audit, Risk and Compliance Committee
CIRMP	Critical Infrastructure Risk Management Program
DNAs	Designated Network Assets
EMS	Energy Management System
ERP	Enterprise Resource Planning
ESG	Environment, Social, and Governance

Terms	Definition
ESMS	Electrical Safety Management System
GFMAM	Global Forum on Maintenance & Asset Management
GIS	Geographic Information System
IUSAs	Identified User Shared Assets
IoT	Internet of Things
ISMP	Information Security Management Programme
ISP	Integrated System Plan
IT	Information Technology
MSP	Maintenance Service Provider
NEM	National Electricity Market
NER	National Electricity Rules
NGNO	Next Generation Network Operations
NIO	Network Investment Outlook
OT	Operational Technology
PDCA	Plan–Do–Check–Act
PLS-CADD	Power Line Systems – Computer Aided Design and Drafting
PQ	Powerlink Queensland
PRS	Portfolio Risk System
RACI	Responsible, Accountable, Consulted, Informed
RAS	Risk Appetite Statements
RCM	Reliability Centred Maintenance
RIT-T	Regulatory Information Test for Transmission
SAMP	Strategic Asset Management Plan
SAP	SAP (Enterprise software system)
SCADA	Supervisory Control and Data Acquisition
SDx	Hexagon SDx (Document Management System)
SOCI Act	Security of Critical Infrastructure Act
STPIS	Service Target Performance Incentive Scheme
TAPR	Transmission Annual Planning Report
TBD	To be determined

1.5 Roles and Responsibilities

The following roles are responsible for reviewing, updating and approving this strategy:

Table 1.5. Roles and responsibilities

Role	Responsibility
Manager Asset Management System	Author. Responsible for periodic review and subsequent iterations
Manager Asset Strategies	Reviewer. Ensure alignment across Asset Strategies
Asset Management Committee Members	Reviewer. Ensure alignment across Asset lifecycle stages
General Manager Asset Management	Approver. Supports implementation of this framework and its associated plans

1.6 Monitoring and Compliance

The SAMP will be reviewed and updated every two years to ensure associated asset management activities and new strategic initiatives are kept current. Ongoing reporting will be provided through divisional reports and the Asset Management Committee (refer to Appendix G).

1.7 Risk management

The SAMP supports effective asset risk, governance and compliance requirements; ensuring asset management activities are aligned with organisational objectives and risk appetite.

2. Context of the Organisation

Powerlink Queensland is a Government Owned Corporation responsible for the transmission of high voltage electricity across Queensland. Our transmission network spans approximately 1,700 kilometres from north of Cairns to the New South Wales (NSW) border, operating at voltages of 330kV, 275kV, 132kV, and 110kV. This network forms the backbone of Queensland's electricity supply, interconnecting major generation hubs with key industrial, commercial, and residential load centres.

Historically, Powerlink's asset development was driven by steady load growth. The energy landscape has evolved, requiring adjustments in operational strategies.

Many Powerlink assets constructed during the 1960s and 1970s are approaching the end of their technical service lives, prompting a transition from network augmentation to asset reinvestment and renewal strategies to maintain reliability and operational efficiency.

Powerlink's asset management is also influenced by global trends such as climate change, decarbonisation, and energy market transformation. Regulatory frameworks are evolving to support sustainability, resilience and affordability, requiring Powerlink to adapt strategies to remain compliant.

Stakeholder expectations continue to shape Powerlink's asset management approach, with growing emphasis on cost-efficiency, safety, reliability, social license and environmental performance.

2.1 Challenges and Opportunities

This section outlines Powerlink's operating environment, highlighting the key external and internal factors that influence strategic decision-making and asset management planning. Understanding these challenges and opportunities ensures our asset management remains aligned with corporate objectives and is responsive to change.

2.1.1 External Context

Powerlink's external environment consists of complex and interdependent factors that influence strategic decisions, investment priorities and lifecycle planning. The factors change in response to policy updates, market conditions, technology developments, and customer needs. For the latest information, refer to 'Our *Strategy'*.

Energy policy and regulatory environment:

- The Australian Government has set a target to reduce emissions to 62–70% below 2005 level by 2035.
- The Queensland Energy Roadmap 2025 provides direction on the future energy mix, including the continued role of coal-fired generation, targeted transmission investment, and increased storage deployment.
- Regulatory expectations are increasing with a focus on AER transparency, customer engagement, cyber security, safety, SOCI and ESG obligations.

Transmission system needs and priority projects:

- The Queensland Government's Energy Roadmap, including reinforcing Central Queensland, installing synchronous condensers, progressing new generator connections and making targeted investments to ensure sufficient transmission capacity.
- Powerlink is focused on optimising existing corridors, reinforcing substations, delivering scalable upgrades, installation of system security devices such as synchronous condensers to manage system strength and inertia shortfalls.
- Major projects face deliverability challenges driven by rising costs and complexity related to factors such as global competition, environmental approvals, land access, supply chains, and workforce availability.

Energy transition dynamics:

- Balanced energy mix of coal, gas, renewables, storage and firming stabilises system planning parameters and reduces immediate reliability risk.
- Pace and scale of renewable generation and new load (industry electrification, mining) uncertainties, requiring agile modelling and scenario-based planning.
- Integration of large-scale storage (pumped hydro, battery energy storage) creates new connection opportunities and requires coordinated transmission timing.
- Gaining more from our existing assets to realise cost savings to customers and reduce social license challenges in building new lines.
- Changes in network demand and connectivity to the network make the transmission system more complex. Key drivers are wider gaps between maximum and minimum demand, and increasingly dispersed generation.

Environmental changes and resilience:

- Frequency and intensity of severe weather events (heatwaves, storms, bushfires) heighten risks to network reliability, asset integrity and safety.
- Weather reliant generation, including roof top solar.
- Consider climate change impacts on Powerlink assets and the need to invest in network resilience, severe weather mitigation and robust emergency preparedness.

Community expectations and social licence:

- The Queensland Government's Energy Roadmap Regional Energy Hub approach encourages early and coordinated engagement with communities, supporting more acceptable land-use outcomes.
- Social licence remains a critical factor influencing project delivery timeframes and cost certainty,
- Increased expectations for environmental stewardship, transparency and cultural heritage management continue to shape project planning.

Technology and innovation:

- Artificial Intelligence (AI) investment is increasing, with a focus on operational scalability, real-time intelligence and physical applications.
- Integration of new digital and operational technologies requires secure, affordable, and effective compatibility with existing asset management systems.
- Energy storage technology continues to advance with an increase in grid-scale batteries registered on the network.

2.1.2 Internal context

Powerlink's internal environment influences its capacity to respond to strategic drivers and external market conditions.

Asset base and lifecycle position

- A substantial proportion of the asset fleet, including lines, transformers and secondary systems is approaching or at end-of-life and requires renewal investment.
- Managing ageing assets while maintaining a safe and reliable network requires ongoing attention.

Organisational capability and workforce

- Powerlink has deep transmission engineering expertise, but faces increasing competition for skilled personnel in planning, protection, environmental management and project delivery.
- Workforce capability uplift is required to support new technologies, data analytics and evolving operating models.

Digital maturity and asset information

- Digital transformation (analytics platforms, data governance improvements, asset health modelling, digital substations) presents opportunities for performance improvement.
- Legacy systems, inconsistent data quality and integration gaps constrain decision-making and risk quantification.

Financial and investment parameters

- Rising capital costs, long equipment lead-times and supply chain pressures require prioritisation and cost–benefit assessment.
- Internal funding constraints require balancing renewal, augmentation, compliance and innovation initiatives.

Risk management

- Powerlink risk appetite is defined in the Board-approved Risk Appetite Statements (RAS) which specifies the amount and type of risk Powerlink accepts in pursuit of strategic objectives.
- Careful consideration will be required to balance and trade off competing risk profiles.

Governance, processes and alignment

- Powerlink's ISO 55001 aligned Asset Management System provides a strong foundation.
- Improvements to risk frameworks, lifecycle processes and decision-support tools are essential for effective governance and oversight.
- Organisational alignment between planning, operations, maintenance, environment and community functions is increasingly important as network complexity grows.

2.2 Powerlink's Strategic Objectives

Powerlink's strategic objectives support operational efficiency and reliability while evolving with the dynamic energy market. The primary objectives are summarised in Table 2.2.1.

These strategic objectives are aligned with Powerlink's purpose to '*Connect Queenslanders to a world-class energy future*'.

Table 2.2.1: Powerlink's strategic objectives

Key objective	Outcomes
Drive value for Queenslanders	Deliver safe, reliable and cost-effective electricity to Queenslanders while creating lasting benefits for communities.
Guide the market	Help the energy sector to succeed by driving a whole-of-system, flexible and cost-effective approach, and guide the location and characteristic of future connections.
The right grid for tomorrow	Optimise the transmission network to meet the energy market's changing dynamics and to maximise the use of existing network.
Unleash our potential	In a complex and uncertain environment, it is important to empower staff, work collaboratively and leverage technology and innovation.

2.3 Alignment of Asset Management with Organisational Context

Powerlink's asset management system is designed to proactively respond to the challenges and opportunities identified in the organisational context. By aligning asset management objectives, decision-making processes, and lifecycle activities with the broader business environment, Powerlink ensures its assets continue to deliver safe, reliable, and cost-effective electricity transmission services.

Asset management supports this alignment by:

- translating strategic objectives into actionable asset strategies and plans;
- ensuring long-term service continuity through risk-based asset decision-making;
- driving efficient and innovative management of ageing infrastructure;
- being adaptable to regulatory, technological, and environmental change; and
- enhancing stakeholder trust through transparent and evidence-based practices.

Diagram 2.3.1 illustrates the role of asset management in achieving Powerlink's strategic objectives. Asset management objectives, decision-making processes and lifecycle activities will be explained in the following sections as part of the asset management system.

Diagram 2.3.1 Relationship between asset management strategic objectives and Powerlink's strategic objectives
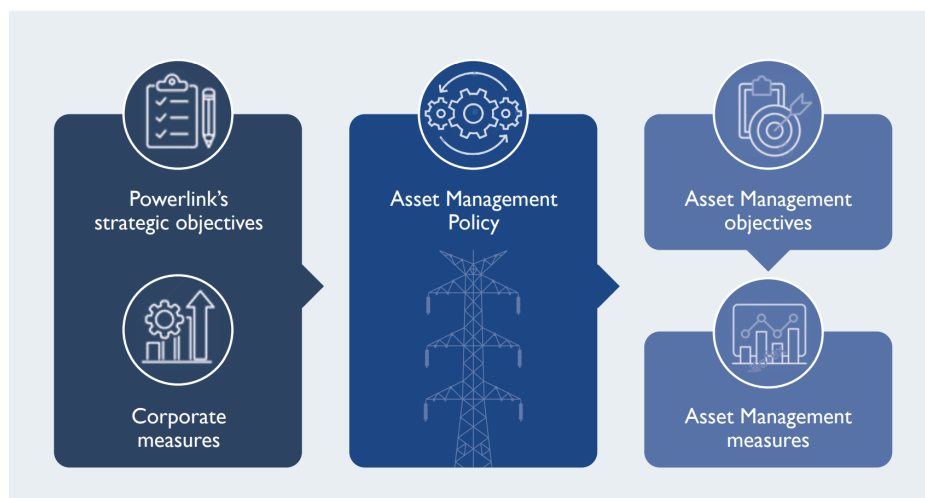
3. Stakeholder Management

Identification and integration of stakeholder needs into asset management activities is a key part of asset management. Powerlink has engaged with relevant stakeholders to determine priority areas for the transmission industry.

Appendix B summarises the priority areas identified by stakeholders. Powerlink monitors these areas and works closely with stakeholders to address their expectations. We are committed to this process, as we recognise the vital role stakeholder requirements play in the success of achieving our organisational objectives.

4. Powerlink Asset Management System

Powerlink's Asset Management System (AMS) integrates policy, planning, execution, and monitoring elements. It is governed through a tiered structure, incorporating ISO 55001:2024 principles represented in Figure 4.1.

The AMS diagram illustrates the correlation between SAMP and other vital components of the asset management system. The AMS aims to ensure efficient asset management and optimal utilisation of resources.

Figure 4.1. Asset Management System
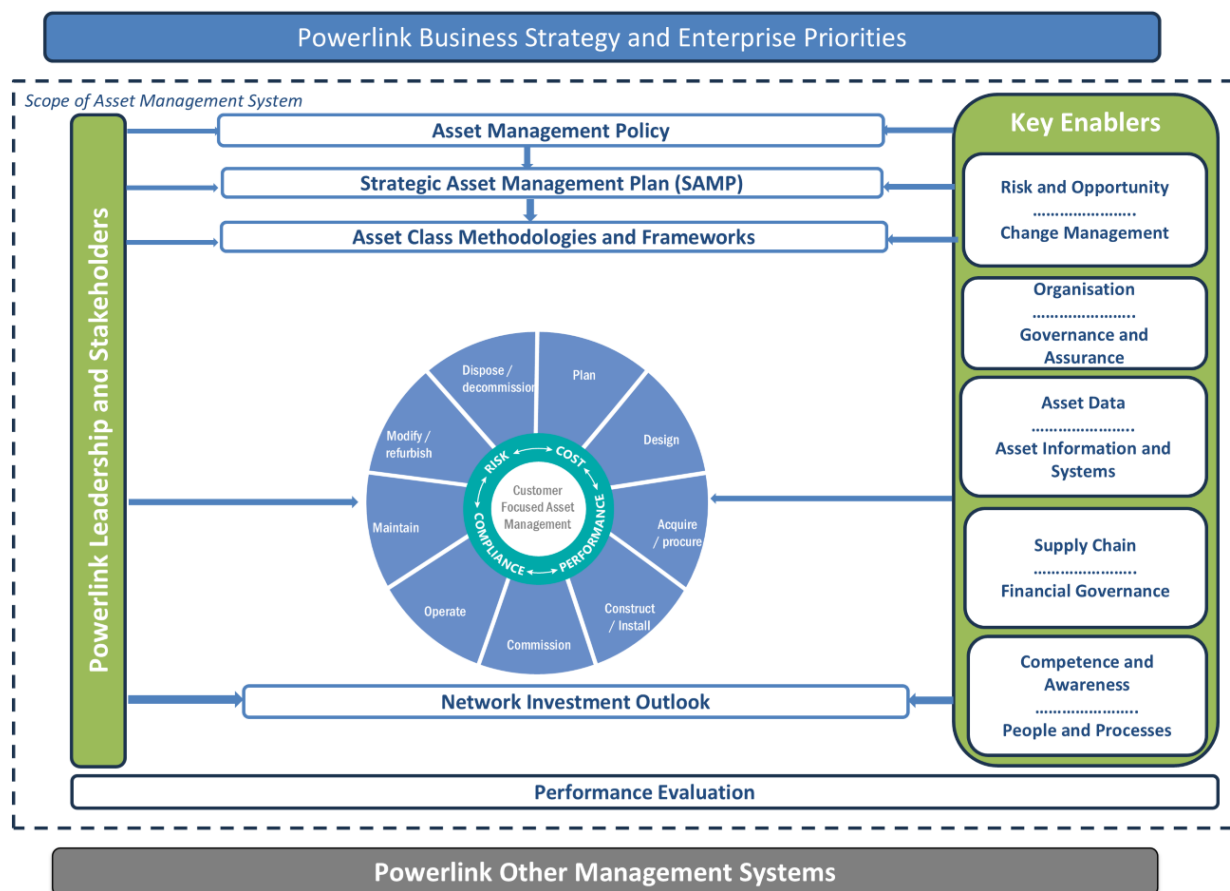
4.1 Scope of Asset Management System

Powerlink's AMS provides a structured and integrated approach to manage network assets throughout their lifecycle. The AMS aligns asset management activities with the organisation's Business Strategy and Enterprise Priorities and is governed through a hierarchy of asset management elements that drive informed, risk-based, and performance-driven decisions.

The AMS includes a range of elements based on the Asset Management Policy and the SAMP, which align asset objectives with enterprise goals and stakeholder expectations.

This system incorporates well defined methodologies and frameworks, that establish standards and technical principles across the asset lifecycle. These methodologies and frameworks guide planning, design, acquisition, operation, maintenance, and disposal.

The Customer Value Lifecycle Delivery model is central to the AMS, supporting consideration of whole-of-life performance, risk, cost, and sustainability in all asset-related decisions.

Figure 4.2 demonstrates the lifecycle stages and outlines the steps and requirements for implementing decisions throughout the lifecycle.

The nine-stage process provides a structured approach for managing and maintaining assets in alignment with Powerlink's strategic goals.

Figure 4.2: Powerlink asset lifecycle stages
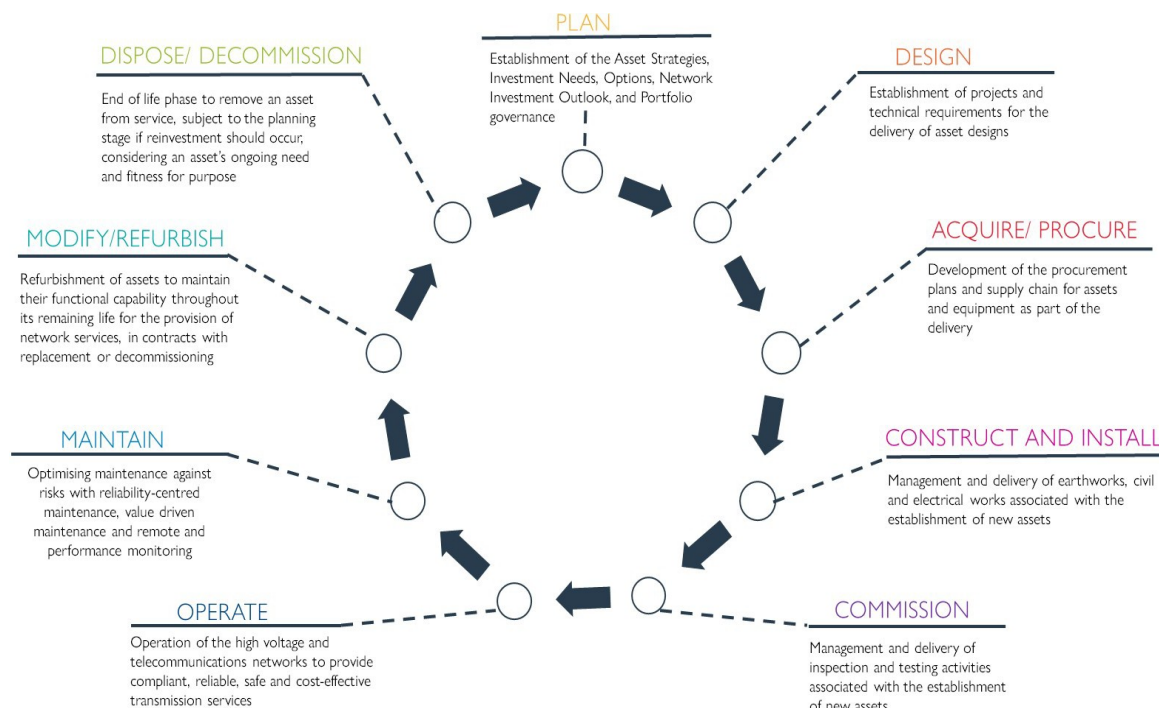
The AMS also supports development of strategic investment planning activities, including development of the Network Investment Outlook. Investment strategies and plans translate strategic priorities into business activities and investments to optimise asset performance and ensure network reliability in an economic and cost-efficient manner.

Robust performance management processes are integral to the AMS. These processes monitor, measure, and improve asset performance and system effectiveness, ensuring continuous improvement and compliance with standards.

Importantly, the AMS integrates with other management systems including finance, safety, environment, community and stakeholders, enterprise resilience, governance, property, risk, people, and information management. This integration ensures that all organisational elements are aligned.

A full list of all management systems and relationships can be found in the Document Management Framework.

The AMS is supported by key enablers that ensure the capability and capacity to deliver asset outcomes. These include risk and opportunity and change management, organisation, governance and assurance, asset data, asset information and systems, supply chain, financial governance, competence and awareness, people and processes.

4.2 Asset Management Policy

The Asset Management Policy operates at the highest level within our document management framework to provide direction for sustainable asset management. This policy is subject to approval by the Board and is reviewed on a 2 yearly cycle.

Its purpose is to establish direction that supports the responsible and effective management of assets. It ensures assets are utilised in a manner that is both sustainable and profitable.

The Asset Management Policy is a fundamental component of Powerlink's strategic planning and is essential for achieving long-term success. Its formal structure and regular review process ensure it remains relevant and effective in the face of changing market conditions and emerging technologies.

4.2.1 Asset Management Policy compliance plan

An assurance program has been developed and implemented to monitor and verify that asset management policy principles are being consistently applied across the organisation. This program supports governance and accountability by providing visibility into how well the policy is being translated into practice. Additionally, the Asset Management Committee (AMC) fosters a culture of continuous improvement, monitors assurance activities, regularly reviewing and refining asset management policies and practices to ensure they remain effective and aligned with organisational objectives (Asset Management Policy Compliance Plan). See Appendix G for further details about the AMC.

5. Asset Management Objectives

Asset management objectives and associated measures have been established to ensure that asset management activities are aligned with the strategic objectives of the organisation. By doing so, Powerlink can optimise its asset management practices and drive business success.

The objectives and measures outlined in Table 5.1 were selected to ensure they are relevant and impactful in achieving the overall corporate objectives. This table provides a clear picture of the alignment between asset management objectives and business objectives, as well as actions across the lifecycle required to achieve them.

Table 5.1: Asset management objectives

Asset management objective	Alignment to business objective	Definition	Key actions across the lifecycle
Maintain network reliability and security	Maintaining the network condition and risk level	Ensure assets perform effectively and minimise unplanned disruptions	Plan: Set reliability targets based on risk and criticality Design: Specify robust asset configurations Operate and maintain: Conduct condition monitoring and preventive maintenance Renew/Dispose: Replace or refurbish assets before failure
Maintain asset safety	Delivering the work planned to maintain the network as safe, affordable, reliable, secure in an efficient manner	Ensure compliance with safety regulations and proactive risk mitigation	Plan: Identify safety-critical assets Construct/Install: Apply safe design standards Operate: Monitor safety KPIs and incidents Maintain: Undertake statutory inspections and corrective actions Decommission: Safely retire hazardous assets
Support sustainable asset management decisions	Maintaining the network condition and risk level	Integrate environmental, social, and governance considerations into asset decisions	Plan: Consider lifecycle cost and emissions Design: Select energy-efficient and low-impact materials Procure: Choose suppliers with sustainable practices Maintain/Refurbish: Extend asset life where viable Dispose: Recycle or repurpose end-of-life assets
Maintain asset risk at sustainable level	Delivering the work planned to maintain the network as Safe, Affordable, Reliable, Secure in an efficient manner	Implement risk-based, cost efficient approaches to asset management activities	Plan: Identify and assess asset risks Maintain: Apply condition-based or risk-based maintenance Replace: Prioritise investment based on asset risk score Monitor: Track residual risks and reassess thresholds
Utilise asset information for asset decisions	Delivering good customer outcomes and maintaining trust of customers and communities	Leverage accurate and reliable asset data for informed decision making	Plan: Use data analytics for forecasting Design: Record asset specifications for future analysis Operate: Gather operational data through IoT/sensors Maintain: Capture work history and condition data Evaluate: Use performance data to inform future decisions

Asset management objectives are fundamental to embedding asset management thinking across the business, enabling Powerlink to deliver safe, cost-effective, reliable, and secure electricity transmission services.

These objectives were developed through a structured process involving:

- Review of the Business Strategy and Strategic Priorities – to identify how asset management contributes to enterprise level outcomes.

- Analysis of stakeholder expectations and regulatory requirements – to ensure the objectives address the needs of customers, regulators (such as AER), and communities.

- Assessment of asset performance and risks – to focus on the most critical factors affecting long term asset health and service delivery.

- Consideration of ISO 55001 requirements – to ensure objectives support continuous improvement, risk-based decision-making, and lifecycle value.

5.2 Asset Management Measures

Asset management measures are structured around key value areas that represent the core pillars of effective asset management which are sustainability, risk, cost and performance. Each value and its associated measures contribute to the achievement of the asset management objectives outlined in the previous section.

The measures are detailed in Table 5.2.1 and may be added or modified as needed to reflect evolving priorities or insights. These measures are presented through an interactive dashboard that is automatically updated, ensuring timely and accurate visibility. Full explanation of how these measures are developed is explained in Asset Management Procedure.

The results are reviewed and discussed quarterly with the Asset Management Committee to support informed decision-making and continuous improvement (Asset Management Measures Dashboard).

Table 5.2.1: Asset management measures

Key values	Measure Name	Purpose
Performance	Annual Routine Maintenance Completion rate	Ensures that routine maintenance is performed as scheduled, which is essential for maintaining network performance and reliability.
	The number of serious incidents (short-term: 5 years)	Monitoring and improving asset safety, ensuring a safer network environment.
	The Asset Failure rates due to maintenance	Discovering maintenance-related issues and improving maintenance practices to reduce asset failures.
	On-time delivery (OTD) rate	Identifying and addressing any delays or issues with asset work orders, ensuring that asset-related problems are resolved, and ensuring asset risk is at a manageable level.
	Asset Management Data Quality	Supporting decisions making.
Cost	Routine Maintenance Cost	Managing and optimising maintenance budgets (cost-effective maintenance practices)
	Unplanned maintenance cost	Identifying the gaps and managing unexpected maintenance expenses.
Risk	Health index vs Age (Transformer only)	Assessing the asset's current condition relative to its expected lifespan, ensuring timely maintenance and replacement to maintain network reliability and security.
	Outage management	Monitoring and reducing emergency outages, ensuring a more reliable network.
	Unplanned maintenances (#)	To count the number of unplanned maintenance activities, this will help in monitoring and managing unplanned maintenance.
	Health Index (HI) high-risk management: High-risk health index assets not managed	Prioritising workorder and addressing high-risk assets.
Sustainability	Vegetation high risk management	Managing vegetation-related risks.
	Volume of SF6 gas top-up	Supporting sustainable asset management practices.

Sustainability

Sustainability is integral to long-term value realisation. Powerlink seeks to operate and invest in assets that support Queensland's energy future, reduce environmental impact, and enhance climate resilience. Our asset decisions consider emissions reduction targets (e.g. net zero by 2040 for scope 1 and 2), environmental compliance, and the circular economy (e.g. reuse and recycling of assets at end-of-life). Sustainable asset management also supports intergenerational equity and reinforces our social licence to operate.

Powerlink has established a formal Environmental, Social and Governance (ESG) Framework, reflecting its commitment to creating and sustaining long-term value in an ever-changing world.

The ESG Framework is a comprehensive concept that focuses on non-financial topics and aims to manage the risks and opportunities associated with these changes. The three dimensions of ESG (Environmental, Social and Governance) are comprised of multiple components relevant to the operating environment. The ESG Framework outlines the organisation's capabilities and commitments to meeting obligations and improving ESG outcomes. Powerlink's dedication to ESG highlights its responsible and sustainable approach to business operations.

5.2.2 Risk

Effective asset management is fundamentally about managing risk within acceptable levels. Powerlink applies a structured Risk Management Framework to evaluate the likelihood and consequence of asset failures, safety incidents, environmental breaches, and service disruptions. Asset risk management is guided by the Board-approved Risk Appetite Statements (RAS), which define the

amount and type of risk Powerlink is willing to accept or pursue in achieving its strategic and business objectives. These statements are a core element of Powerlink's Governance Framework and provide clear boundaries for risk-based decision-making.

5.2.3 Performance

Asset performance is measured against service level requirements for reliability, availability, safety, and asset performance resulting in good customer outcomes. Ensuring that assets consistently meet these standards is essential for delivering value. Underperformance can lead to regulatory penalties, increased operational risk, and reputational damage, while overperformance may indicate overinvestment. Value is realised by achieving the right level of performance, not the highest level at any cost.

5.2.4 Cost

Achieving value involves managing total lifecycle costs including capital, operations, maintenance, and disposal rather than focusing only on initial cost. Asset strategies aim to minimise the cost of delivering required service levels over time. This includes optimising asset life extension opportunities, deferring capital expenditure where safe and feasible, and driving efficiency through innovation and strategic procurement.

6. Asset Management Goals

Powerlink is committed to supporting the Queensland Government's energy roadmap. The roadmap emphasises the importance of improving existing energy assets while developing new infrastructure to meet future demand. It highlights the need for a balanced energy plan that ensures affordable, reliable, and sustainable energy for all Queenslanders.

Powerlink utilises the approach defined in the Strategy Management Framework to develop the Strategic Asset Management Plan (SAMP).

6.1 Strategic Asset Management Goals

1. Collaborate to enhance risk management and network access:

- Balancing risks, trade-offs, and opportunity to enable safe, efficient transmission assets
- Deliver world-class asset and network performance that our customers expect by considering all asset and network constraints.
- Maintain and evolve high quality standards of asset management practices for our staff, landholders, and the community.
- Define the value, risks and benefits associated with the management of property, stakeholders and offsets.
- Improve integration of Powerlink's safety system and asset management system with risk management systems.

2. Integrate new technologies to meet Queensland's shifting energy needs:
- Support the future generation mix in Queensland by ensuring our assets are suitable to enable different types of generation.
- Ensure assets support system adaptability and adoption of new technology.
- Foster agility to balance the evolving needs of stakeholders.

3. Develop capabilities to uplift our asset management maturity:
- Create strong alignment so that our people can excel in all they do.
- Become thought leaders and ambassadors for asset management within the business and broader industry.
- Align property, stakeholder and offset management with asset strategies.

4. Deliver holistic lifecycle innovation to drive sustainable outcomes:

- Manage assets considering public commitments and customer, stakeholder and shareholder requirements.
- Improve transparency and communication within Powerlink and with external stakeholders.
- Use analytics to support short- and long-term planning, risk management, and network optimisation.
- Drive world-class environmental, social and governance (ESG) outcomes from assets across the entire lifecycle value chain.

5. Advance decision making through data and analytics:

- Facilitate transparency and clear communication between divisions and with external stakeholders.
- Provide visibility of whole of life data and insights for short- and long-term opportunity identification.
- Leverage digital technology to navigate complexity and improve responsiveness.

Appendix F summarises our goals and objectives and shows the linkages to our strategic objectives.

6.2 Strategic Asset Management Capabilities

The successful delivery of Powerlink's Asset Management Strategy depends on establishing critical capabilities that enable the achievement of its strategic objectives.

6.2.1 Industry advocacy

One of the key capability areas is industry advocacy, where Powerlink advocates for policies that support the growth and development of the energy industry. Powerlink will ensure it has strong representation in the industry, with regulators and other stakeholders specifically on strategic asset management.

6.2.2 Integrated planning

Powerlink will uplift its capability in integrated planning. Integrated planning involves ensuring all asset life cycle stage plans are developed in an integrated way so that there is line of sight from an asset's beginning of life until its end of life as well as managing asset needs across the lines of business (regulated and non-regulated).

6.2.3 Sustainability

Powerlink will take further steps and promote sustainable practices such as further working on procurement strategies including practicing sustainable materials sourcing, conduct environmental impact assessments, engage stakeholders and provide transparent reporting. Climate change adaptation is also an essential part of carbon and sustainability management. Powerlink will keep improving its climate change adaptation strategy as part of its carbon and sustainability management practices through three workstreams, greenhouse gas emission reduction, natural values, biodiversity and land management and resources and waste management.

6.2.4 Internal and External stakeholder engagement

Uplifting this capability would include ensuring that stakeholders are informed and consulted for any relevant asset management processes, decisions, etc.

6.2.5 Automation and predictive analytics

Powerlink will develop and implement a plan with a detailed roadmap on automation and predictive analytics of asset management by using historical and real time data. This will help identify potential problems early and taking proactive measures to prevent outages and improve the overall performance of the assets. Automation involves leveraging technology to automate tasks that were previously performed manually. By utilising sensors and other monitoring equipment to collect data on asset performance and employing software to analyse this data and make informed decisions

regarding maintenance and repairs, we can achieve significant advancements. To accomplish this, it is essential for us to develop and implement a comprehensive roadmap for automation and predictive analytics capability across all divisions.

7. Asset Management Decision-Making

The following section outlines the key drivers that influence Powerlink's asset management practices, including asset risk, asset condition, external factors, and service level requirements shown in Figure 7.1. These drivers underpin informed and balanced decision-making by identifying the principal risks and considerations that shape asset strategies and actions.

Figure 7.1: Key Drivers for asset decisions
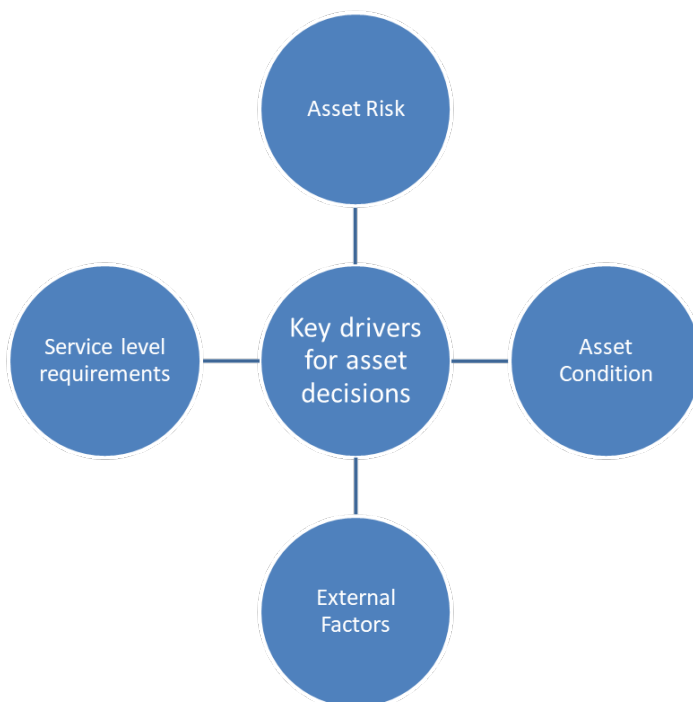
7.1 Asset Management Drivers

Powerlink's approach to asset management is shaped by a range of strategic, operational, and external drivers. Understanding these drivers is essential to ensuring effective and sustainable asset management practices.

Key considerations include alignment with organisational goals and objectives, a clear assessment of asset risk, asset condition, and performance, government and national integrated system plans, adherence to regulatory obligations and environmental responsibilities, and utilisation of innovation and emerging technologies. By systematically evaluating these factors, Powerlink develops and maintains a robust asset management framework that maximises asset value, supports service delivery, and minimises risk.

7.1.1 Asset risk

Powerlink operates in a high-risk environment, with activities such as live electrical work and work at heights presenting significant safety challenges. These risks are further compounded by Queensland's unpredictable climate, which includes severe weather events such as storms and

cyclones making it more difficult to forecast future network needs and conditions. In addition, the widespread presence of high-voltage assets in publicly accessible areas increases the potential consequences of network failure, posing further risk to both the community and operational personnel.

Asset risk is the foundation of Powerlink's asset management activities. It determines how resources are allocated, and which assets require intervention. Risk is assessed using a combination of:

- Probability of failure: Based on asset condition, age, and historical performance.

- Consequence of failure: Evaluated in terms of safety, network reliability, environmental impact, and financial cost.

Powerlink uses a structured framework to manage asset risk, The Asset Risk Management , Framework defines overview of risk, risk calculations, risk cost methodology, and Asset Risk Management Process for Project Delays - Guideline outlines how risk is assessed and mitigated, especially in cases of project delays.

To manage asset risks, Powerlink utilises a structured Risk Matrix to assess and prioritise risks based on their potential consequences. This allows for a consistent and transparent evaluation of risk severity and informs appropriate mitigation strategies.

Table 7.1.1.1 outlines the primary categories of potential risks. Given the wide-ranging nature and severity of these risks, Powerlink maintains a proactive and vigilant approach to risk management ensuring the safety of its workforce, the public, and the ongoing integrity of the transmission network.

Table 7.1.1.1: Risk categories

Risk category	Source of major risk
Financial and contractual	• Significant delay in project completion • Failure/damage leading to third party communications outage
Legal and compliance	• Failure of asset due to foreseeable condition, • Failure of safety systems resulting in injury or fatality • Non-compliant assets (e.g. inadequate line to ground clearance) • Failure of vegetation management
Stakeholder	• Media attention resulting from extended black-out or damage resulting from Powerlink assets. • Cost of electricity supply • Landholders
Projects	• Materials supply failure/major delays • Resources and outages
Network operations	• Structure/line failure (in cyclone, microburst or flood), • Insulator or earth wire failure (all weather conditions including good weather) • Failure of critical substation component or asset • Damage to underground cable from unauthorised excavation, or failure of termination • Failure of communications system • Trip due to bush or cane fire • Obsolescence of equipment, tools and skillsets (supportability), spares
Safety	• Explosive failure of current transformer • Substation fire • Fatality/injury following unauthorised climbing or substation entry • Public contact with overhead high voltage line (high vehicle, kite) • Physical failure of insulator/conductor/joint/structure in span with safety exposure (public/populated area, road, railway) • Shock resulting from earth fault in property adjacent to tower/substation/transition site • Line component failure due to incorrect data, indicating work done or condition good, when work has not been done or condition is poor • Inadequate line clearance to flood water

Risk category	Source of major risk
People	• Workplace fatality, pandemic
Environmental and cultural heritage	• Transformer oil leak/bund failure • Oil filled cable damage resulting in oil leak • Bushfire (initiated by vegetation contact with conductor or asset failure) • damage to heritage site due to field/construction activity • SF6 gas leaks

7.1.2 Asset condition

Asset condition provides the data that informs asset risk. It is managed through a combination of inspection, monitoring, and analytics:

- Assets are assigned a Health Index score as condition score based on inspection data, defect notifications, and outage reports.

- Substation equipment and transmission lines are monitored using condition scores and live updates via SAP and other IT systems.

- Desktop and detailed assessments are triggered when condition scores indicate deterioration or risk.

Condition data is used to:

- estimate remaining service life;

- identify defective components; and

- support maintenance scheduling and replacement planning.

7.1.3 External factors

External factors play a critical role in shaping asset management strategies and decision-making. Regulatory requirements sets the baseline for compliance and performance expectations, including safety, environmental, and service obligations established by bodies such as the Australian Energy Regulator (AER), which influence how assets are planned, operated, and maintained. Adhering to these standards ensures legal compliance and supports a culture of accountability and continuous improvement. Additionally, emerging regulations related to climate resilience, sustainability, and cybersecurity are increasingly impacting asset management planning and lifecycle strategies.

Growth and demand drivers, including population increases, urban expansion, and evolving technology, also place pressure on infrastructure capacity and service delivery. These trends necessitate agile and forward-looking investment plans and asset management practices that can accommodate changing loads, new customer expectations, and innovations such as distributed energy resources or digitalisation. Engaging with stakeholders and understanding their priorities is essential for aligning asset management objectives with broader social, environmental, and economic outcomes. Collectively, these external influences shape the context within which assets are managed and challenge organisations to balance performance, risk, and costs. Climate related risks and changes in weather create particular asset related risks to the network. Queensland is prone to severe weather, particularly in the north of the state, mainly due to cyclones, although high intensity wind associated with storm cells (micro-bursts) also have the potential to inflict significant damage to transmission lines in the rest of the state.

Fast flood water, particularly carrying debris, has the potential to damage structures, and some substations have a risk of inundation. The total failure rate of all wind related failure causes, including cascade, is on average less than one structure failure per year. Structure failure quantities in cyclones depend on both the cyclone intensity category and the extent of the network at the location where it makes landfall. The age and design of structures will also contribute to the extent of damage, but it is

expected that network damage could occur in category 4 and category 5 cyclones, particularly if an extensive network exists at the landfall location.

7.1.4 Service level requirements

Powerlink's service level requirements (SLRs) define the minimum performance standards our electricity transmission assets must meet to deliver value to customers, support regulatory compliance, and align with our strategic objectives. These requirements reflect stakeholder expectations, legal and regulatory obligations and broader goals such as safety, reliability, and sustainability.

SLRs are expressed across key performance dimensions:

- Reliability and availability: Ensuring continuous supply through targets such as circuit availability and minimised unplanned outages.

- Safety: Achieving zero harm through compliance with health, safety, and process safety standards.

- Asset condition: Managing asset health and risk to prevent failures and optimise lifecycle performance.

- Environmental compliance: Meeting regulatory approvals and climate-related targets, including our net-zero commitments.

- Cost efficiency: Delivering services within regulatory allowances while optimising long-term value.

These service levels are embedded into asset management objectives and are used to guide planning, risk assessments, and investment decisions.

By integrating service level requirements into all aspects of our asset management system, Powerlink ensures that its transmission network continues to deliver safe, reliable, and sustainable electricity to Queensland's communities and economy.

7.2 Asset Decisions

Powerlink adopts a risk-based methodology for the identification and management of asset decisions, as detailed in Figure 7.2.1. This formal and comprehensive asset management approach ensures the effective management of all assets throughout their lifecycle.

Figure 7.2.1: Asset Decision input and output
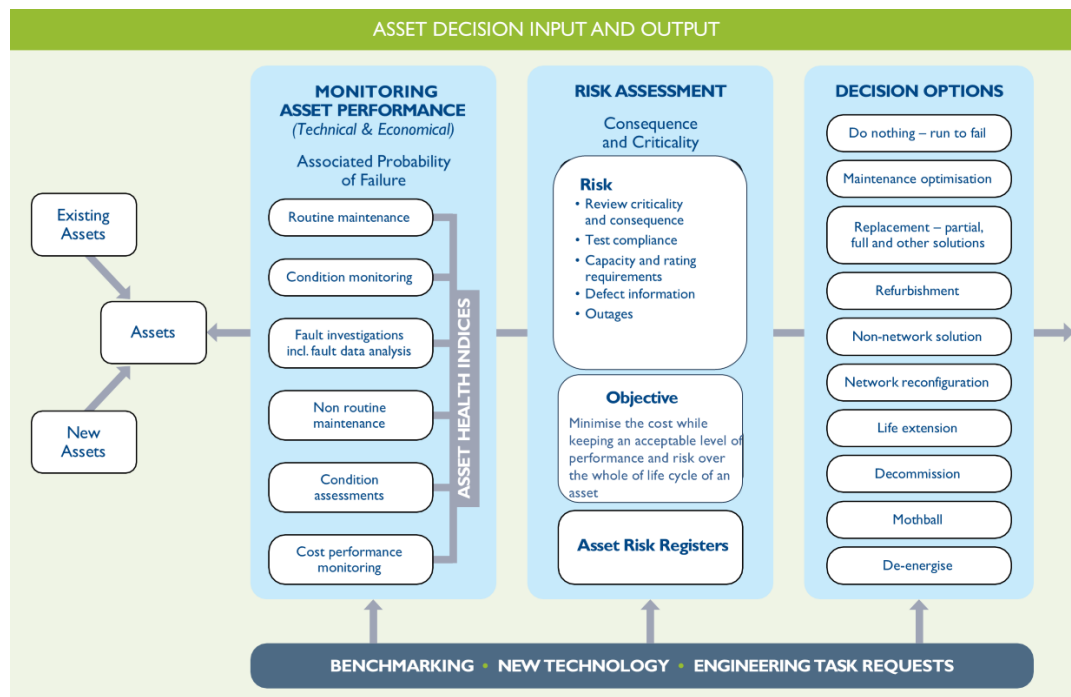
Key decision processes can be categorised in two areas:

- Investment planning
- Operation and maintenance

7.2.1 Investment planning

The triggers and drivers for reinvestments into Powerlink's transmission assets generally relate to end-of-life condition and equipment obsolescence. However, significant new investment will be required to address changes in generation mix and load developments over the medium to longer term.

The Network Investment Outlook (NIO) provides the business with a medium to longer term outlook of potential network investment strategies under different plausible scenarios and market developments. The NIO supports internal planning, stakeholder engagement, asset management and regulatory processes by identifying future network requirements, prioritising business activities, and highlighting investment expenditure optimisation opportunities.

This medium to longer term view enables Powerlink to anticipate future system needs, respond to emerging trends, and coordinate investment decisions with broader market and policy developments in a timely manner to deliver cost effective solutions for Powerlink's customers and stakeholders.

The NIO is a point-in-time plan updated annually to adapt to changing market dynamics and external development and trends. The NIO provides clear guidance to the business on medium to longer term investment strategies to ensure that shorter-term activities, such as project approvals, asset management and maintenance activities, easement acquisitions, and community engagement are aligned.

The NIO is also required to consider strategic information from other electricity infrastructure publications including the Queensland Government's Energy Roadmap and AEMO's Integrated System Plan (ISP). The NIO considers broader trends in the energy market including potential future generation changes, minerals and mining electrification, industrial decarbonisation, load growth, energy storage, and downstream consumer changes.

A cornerstone of the strategic investment planning processes within the NIO is area planning. Area planning is a structured, collaborative method for shaping network investment strategies within areas which have inter-related network assets and investment drivers. The area planning approach ensures that investment planning decisions are not made in isolation, and that inter-dependencies between investment decisions across an area are considered and assessed holistically to determine an overall optimal investment approach. This process relies significantly on insights from subject matter experts across the organisation and uses cross-functional teams to determine the advantages and drawbacks of various investment strategies.

The NIO is part of the annual cycle of network assessment and investment review. Network investment strategies within the NIO provide input into shorter to medium term projects and business activities including publication of the Transmission Annual Planning Report (TAPR), Capital Budget Reviews, Powerlink's Corporate Plan, external consultation processes (including the Regulatory Investment Test for Transmission), and project initiation, approvals and delivery.

Figure 7.2.1.1: Timeline of plans
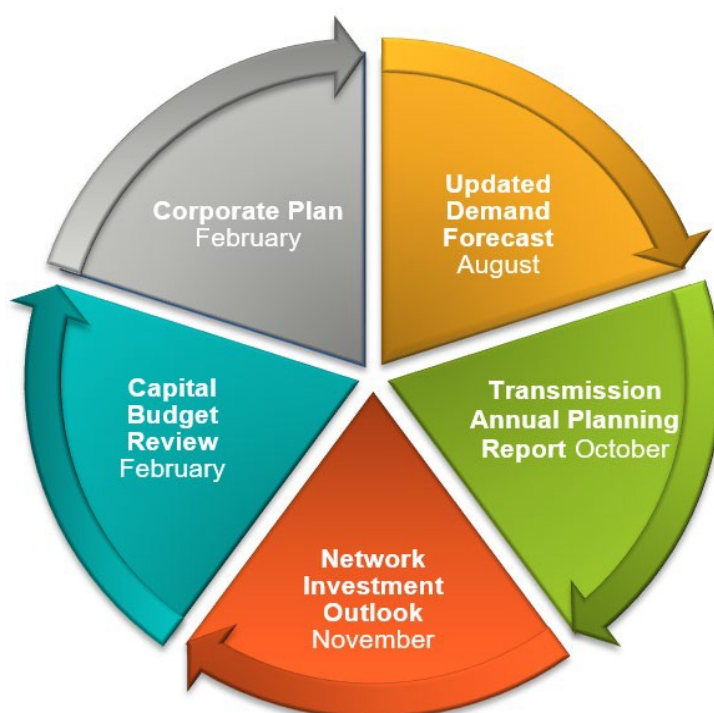
A significant proportion of network investments are related to asset reinvestments to address emerging condition risks and obsolescence. The first step in determining optimal strategies to address assets approaching the end of their technical service life is to assess the intervention timing.

The need and timing for intervention are defined when 'business as usual activities' (including routine inspections, minor condition based and corrective maintenance and operational refurbishment projects) no longer enable the network asset to meet prescribed service levels due to deteriorated asset condition.

An assessment of the need and timing for network asset intervention is the first step of the asset reinvestment process. The type and nature of reinvestment is dependent on a range of considerations, and these are evaluated on a case-by-case basis as part of the annual investment planning process.

The trigger to intervene needs to be identified early enough to provide an appropriate lead time for the asset reinvestment planning and assessment process. This enables informed and prudent decisions

to be made that consider all economic and technically feasible options (including non-network options). The high-level steps involved with the asset reinvestment process are shown in Figure 7.2.1.2. Powerlink's Reinvestment Criteria Framework further explains the methodology undertaken for asset interventions.

Figure 7.2.1.2: High level steps within the asset reinvestment process

Need to Intervene → Base Case Assessment → Options Analysis → Decision

Powerlink considers a range of strategies and options to address emerging asset condition risk and capacity limitations including:

• refurbishing to extend the service life of assets;

• replacing assets of different capacity or type;

• changing the configuration and/or topography of the network;

• retiring or decommissioning of assets where there is unlikely to be an on-going enduring need; and

• implementing innovative solutions and technologies including non-network solutions and alternatives.

Powerlink is also required by the National Electricity Rules to provide access to its transmission network to parties who wish to connect. The connection services include:

• Prescribed services – provision of connection assets to Distribution Network Service Providers (e.g. Ergon or Energex) or Prescribed connection services.

• Negotiated services – provision of connection assets required to form a connection for any other parties to the prescribed transmission network.

• Negotiated connection assets greater than $10 million in value are subject to contestability whereby a connection proponent can engage a third party (other than Powerlink) to deliver the connection assets. These assets are termed Identified User Shared Assets (IUSAs).

• Non-regulated services – connection assets beyond the transmission network connection point that connect to the negotiated connection assets.

• Designated network assets (DNAs) - are privately owned and operated connection assets that provide the services required to connect a party to the shared transmission network.

7.2.2 Operation, maintenance and refurbishment

The Asset Management Policy at Powerlink drives the organisation's operating, maintenance, and refurbishment processes to provide safe and environmentally conscious transmission services that are cost-effective over the whole-of-asset life. Powerlink aims to meet customer and stakeholder reliability requirements while facilitating the effective operation of the competitive electricity market.

Powerlink carefully balances each of these activities through a risk assessment process, considering the lifecycle of assets. Outage management is critical for Powerlink to ensure compliance with the National Electricity Rules (NER), effective work progress against the maintenance plan and capital works programme, manage outages for projects and maintenance, reduce system restoration time, achieve Service Target Performance Incentive Scheme (STPIS) target outcomes, and work collaboratively with customers to reduce impacts on the network and customers.

Since 2004, Powerlink has utilised the Reliability Centred Maintenance (RCM) approach to establish asset maintenance requirements. RCM provides a structured framework for logically analysing the potential failure modes of assets and systems, as well as the likely effects and consequences. This analysis is used to review and update the responsibilities for, and frequency of, maintenance activities, including the levels of required spares. RCM is central to Powerlink's maintenance planning, which is an iterative process that ensures maintenance strategies remain aligned with asset condition, performance, and risk. Powerlink applies the RCM approach to all critical assets and regularly reviews maintenance strategies to maximise asset reliability and availability while optimising ongoing maintenance costs.

Maintenance plans are managed and scheduled using SAP, Powerlink's enterprise asset management system. SAP enables the integration of maintenance planning with asset data, work management, and performance monitoring, supporting evidence-based decision-making and efficient resource allocation. Annual maintenance budgets are developed by considering the forward programme of work alongside historic trends, ensuring that financial planning is robust and responsive to both current and emerging needs.

Progress against maintenance plans is monitored across asset classes, workgroups, and geographic areas, enabling Powerlink to identify trends, address emerging issues, and drive continuous improvement. Maintenance activities are continually optimised to ensure that resources are targeted where they deliver the greatest value, supporting the delivery of safe, reliable, and cost-effective network services.

The maintenance of assets within the transmission network is crucial for their continued ability to provide network services. To ensure this, Powerlink follows an Asset Refurbishment Policy. Refurbishment is initiated when the cost and effort required to maintain the plant or equipment exceeds normal maintenance expenditure, or when a systematic problem that requires repair is identified. This process involves activities that restore an asset or its component to its pre-existing condition or function. In contrast, asset replacement involves complete replacement to achieve an improvement in capacity, capability, compliance, or to extend the asset's life beyond its financial life.

Powerlink operates in an environment prone to natural disasters, such as cyclones, and has developed emergency response strategies to tackle such extreme weather events.

Network security is a critical aspect of Powerlink's operations and is defined as the state of being protected against danger, loss, or harm.

Powerlink invests heavily in the physical and cyber security of its transmission assets, in line with the Security Management Framework. This ensures the mitigation of adverse consequences associated with intentional or malicious actions by others.

7.3 Management of Change

Powerlink has established a structured Asset Change Management process to ensure that changes to physical assets, asset management processes, or the Asset Management System (AMS) are risk-informed, strategically aligned, and compliant with ISO 55001 requirements. This process supports continuous improvement, operational resilience, and regulatory readiness.

Governed by the Asset Management Change Procedure, the process includes five key steps:

1. Identify the category of change using the 7x7 Corporate Risk Matrix.
2. Scope and assess the complexity of the proposed change.
3. Evaluate impacts on safety, cost, performance, compliance, and sustainability.
4. Consult stakeholders.
5. Implement, monitoring and reporting, and closing out the change.

Oversight is provided by the Asset Management Committee (AMC), ensuring alignment with Powerlink's asset management strategy and objectives. The process is integrated with Powerlink's Organisational Change Management Framework to maintain consistency across enterprise-wide initiatives.

8. Leadership and Commitment

Leadership drives the asset management culture through governance, strategic alignment, and resource provision.

Executive Management demonstrates leadership and commitment to the Asset Management System (AMS) and this Strategic Asset Management Plan (SAMP) by:

- ✓ **Providing direction and governance**
  Endorsing the Asset Management Policy and ensuring governance through the Asset Management Committee (AMC) for lifecycle decisions across all asset classes.
- ✓ **Aligning with organisational objectives**
  Ensuring asset management activities support Powerlink's strategy, risk appetite, and compliance obligations, consistent with ISO 55001:2024.
- ✓ **Resourcing and capability**
  Allocating adequate resources, skills, and tools to implement and continually improve the AMS and SAMP.
- ✓ **Integration and collaboration**
  Promoting cross-functional engagement to embed asset management principles across finance, IT, procurement, safety, and environmental functions.
- ✓ **Risk and resilience**
  Aligning asset risk treatment with Powerlink's risk appetite and incorporating resilience considerations, including climate-related risks where relevant.
- ✓ **Performance and improvement**
  Monitoring AMS performance, conducting management reviews, and driving continual improvement to deliver safe, reliable, and cost-effective services. 8.1

9. Support

Effective asset management is supported by skilled personnel, robust data systems, digital tools, and strong governance.

9.1 Resourcing Strategy and Management

Powerlink's ability to deliver its asset management objectives relies on having the right mix of resources people, systems, tools, and external support deployed effectively across the asset life cycle. The resourcing strategy ensures that resource levels and capabilities are aligned with current and future workload demands, regulatory obligations, technological changes, and the evolving complexity of the transmission network.

9.2 Training and Competence

Powerlink understands the importance of having well-trained employees and contractors who are equipped with the necessary skills to manage our assets effectively. To ensure all employees and contractors are up to date with the latest asset management practice straining is provided as part of the annual compliance program, role-specific training, and career development (Powerlink -Training Management Plan).

Asset management-specific training is delivered through various channels. For new starters, a general introduction to asset management as part of the induction process is provided. We also encourage our employees to pursue tertiary education in asset management. In addition to this, short courses

provided by the Asset Management Council and other commercial providers are delivered. These courses cover a wide range of topics such as asset lifecycle management, risk management, and maintenance strategies.

9.3 People Capability Framework

Powerlink has established a formal People capability framework,. This framework serves to identify the key capabilities and associated behaviours that employees are expected to exhibit to achieve sustained personal and organisational growth, success, and high performance. The framework outlines a set of high-level capabilities that are expressed through behaviour-based statements across multiple levels.

9.4 Asset Data, Information and Systems

Asset data forms the foundation of effective asset management for organisations that rely on physical infrastructure, such as Powerlink Queensland. It is essential that accurate, reliable, and up-to-date asset-related data and documentation is captured and maintained throughout all phases of the asset lifecycle from planning and design to operation, renewal, and decommissioning.

One of the core categories of asset data includes information about the physical characteristics of assets, such as make, model, dimensions, configuration, and location. This information is managed within Powerlink's enterprise resource planning (ERP) platform, SAP, which serves as the central repository for asset master data.

Asset information is central to Powerlink's decision-making processes. It is used to assess asset management options, evaluate costs and benefits, and inform both short-term operational responses and long-term strategic planning. Powerlink utilises a comprehensive suite of enterprise information and computational systems to manage asset data across the lifecycle. In parallel, financial data including asset valuation, depreciation, budgeting, and maintenance cost records is also maintained in SAP. This data supports financial planning and ensures alignment between operational activities and broader investment strategies. Powerlink's Asset Information Strategy (AIS) aims to establish a unified, data-driven framework that supports sustainable asset management and drives future digital transformation beyond isolated technology upgrades.

Operational measurement data is collected over time through measurement documents associated with specific measuring points. These records support monitoring of asset condition and performance trends and are also stored in SAP. Additionally, geospatial data is managed through both SAP and Esri ArcGIS, enabling spatial analysis and integration with external GIS datasets. This data is increasingly vital for spatial planning, network modelling, and situational awareness.

Engineering drawings and technical design documentation provide further context for asset information. These are managed in systems such as Hexagon SDx and Autodesk Vault. For transmission line design, detailed structural and layout information is maintained in PLS-CADD, a specialised design software platform.

The Portfolio Risk System (PRS) is a critical tool within Powerlink's asset management system. It enables robust risk analysis and provides a clear line of sight between asset condition, investment options, and risk exposure. PRS supports value-based decision-making by using predictive analytics, equipment degradation models, supportability and obsolescence metrics, and condition and performance trends to identify optimal intervention strategies. It enhances transparency, repeatability, and consistency in asset reinvestment planning.

This integrated ecosystem of tools and data enables Powerlink to make informed, risk-based decisions that optimise asset performance, minimise lifecycle costs, and ensure alignment with regulatory obligations and stakeholder expectations.

9.4.1 Asset data quality

Asset data quality is a strategic enabler of Powerlink's asset management goals. It ensures that decisions are informed, transparent, and aligned with long-term business objectives. The organisation

defines asset data quality as the fitness for purpose of asset information, meaning it must be accurate, complete, timely, and relevant to support risk-based and condition-based decision-making.

Powerlink is improving its asset data quality across several dimensions:

- Accuracy - Data reflects the true state of the asset, free from errors;
- Completeness- All required fields are populated, with no critical gaps;
- Timeliness- Data is current and updated regularly; and
- Consistency- Uniform formatting and standards across systems.

These dimensions will be monitored using a data quality dashboard, which compares actual data against specified requirements and tracks trends for continuous improvement.

Strong governance is central to Powerlink's data quality efforts. Asset Information Working Group and Asset Management Committee oversee strategy and implementation of asset information and asset data quality monitoring.

9.4.2 Asset analytics

Asset Analytics plays a critical role in Powerlink's asset management approach by enabling data-driven decision-making across the asset lifecycle. Through predictive modelling and performance analysis, it helps optimise asset performance, minimise downtime, and improve operational efficiency. By shifting the focus from reactive to proactive maintenance, Asset Analytics contributes to significant reductions in maintenance costs. It also enhances reliability by identifying failure trends, root causes, and implementing corrective actions, thereby improving service continuity and customer satisfaction. Safety is improved by using data to identify and mitigate potential risks to personnel and infrastructure. Additionally, Asset Analytics supports lifecycle management by informing asset replacement strategies and extending asset life, ultimately reducing capital expenditure. Overall, it empowers Powerlink to make informed, value-based decisions that align with organisational goals and stakeholder expectations (please refer to Asset Management Data and Analytics Strategy for further information)

9.4.3 Cyber security

The rise of cyber security threats in operational technology (OT) environments across the world is a cause for concern. Considering this, Powerlink has embarked on an Information Security Management Programme (ISMP) aimed at enhancing the company's information security maturity. This programme is designed to evaluate Powerlink's security posture via the Australian Energy Sector Cyber Security Framework (AESCSF).

In addition, it is important to note that cyber security technology controls have a short lifespan and must be reviewed and assessed at each replacement cycle to ensure their effectiveness against the latest threats. As such, Powerlink is committed to continuously evaluating its cyber security measures to ensure that they remain robust and effective in the face of evolving threats.

9.4.4 SOCI Act

The *Security of Critical Infrastructure (SOCI) Act* was introduced to strengthen the resilience of Australia's critical infrastructure. Electricity is classified as a critical infrastructure sector because its disruption would have immediate and widespread consequences for healthcare, water supply, telecommunications, and transport. The SOCI Act mandates responsible entities to adopt and maintain a Critical Infrastructure Risk Management Program (CIRMP). The CIRMP requires entities to take an 'all-hazards' approach to risk management, meaning asset-related decisions must consider but not limited to physical, cyber, supply chain, personnel, environmental, and operational risks.

These obligations are directly supported by the asset management system's emphasis on risk-based planning, asset data governance, and lifecycle traceability. For example, Powerlink's asset risk

assessments and condition monitoring processes feed into the CIRMP by identifying vulnerabilities and prioritising mitigation actions.

Responsible entities are required to submit a Board approved annual attestation to the Department of Home Affairs. The report must demonstrate that a CIRMP is in place, operational, and reviewed regularly. It should also identify any hazards that had a significant impact on the asset during the reporting period and outline the measures taken to mitigate these risks.

Powerlink must provide operational and ownership information about its critical infrastructure assets to the Secretary of the Department of Home Affairs. This includes:

- asset location and function

- ownership and operational control details

- changes to asset status or ownership.

This register is regularly updated to reflect material changes, ensuring transparency and traceability of critical assets.

Powerlink maintains a CIRMP that identifies and manages material risks to its assets, systems, and networks. The CIRMP is supported by assurance activities and processes, including updates to the Audit, Risk and Compliance Committee (ARCC) and the Board.

9.4.5 Electrical Safety Management System

Powerlink Queensland's Electrical Safety Management System (ESMS) is a legislatively mandated framework that ensures the safe operation, maintenance, and development of our high-voltage electricity transmission network. It is a critical component of Powerlink's overall Asset Management System (AMS), and their integration is essential to achieving consistent safety, reliability, compliance, and performance outcomes across the asset life cycle.

Powerlink's ESMS is developed in accordance with the *Electrical Safety Act 2002 (Qld)* and associated *Electrical Safety Regulation* and is approved by the Queensland Electrical Safety Office (ESO). It outlines the systems, procedures, and controls in place to prevent electrical incidents, manage risks to workers and the public, and ensure that safety is embedded into asset planning, design, construction, operation, and disposal. The AMS ensures that these safety controls are operationalised through lifecycle asset strategies, work practices, and performance monitoring.

9.5 Supply Chain

The integration of supply chain and asset management is a strategic imperative that supports lifecycle planning, risk mitigation, and performance optimisation. To realise these objectives, the Supply Chain Services group plays a critical role in ensuring that procurement, materials, and contract services are aligned with asset needs and business priorities.

The Supply Chain group is responsible for the end-to-end delivery of products, services, and expertise that enable the organisation to meet its commitments to regulated and non-regulated customers. This includes materials procurement and strategic sourcing functions all of which are tightly integrated with asset lifecycle needs.

Their role is not limited to transactional procurement. The group acts as a strategic advisor, ensuring that external spend is optimised over the life of assets, and that supply chain responsiveness aligns with asset performance goals. The Warehouse and Logistics Group plays a critical role in supporting the objectives of the Strategic Asset Management Plan (SAMP) by ensuring the efficient management, storage, and distribution of materials and spare parts across the asset portfolio. Through robust inventory control, optimised warehousing practices, and streamlined logistics processes, the group enables timely delivery of essential components to operational sites, minimising downtime and supporting the reliability and resilience of Powerlink's network. Their ongoing collaboration with procurement, supply chain, and asset management teams ensures alignment with strategic priorities and continuous improvement in service delivery.

9.6 Communication and Awareness

Effective communication and stakeholder awareness are essential to the successful implementation and continuous improvement of Powerlink's Asset Management System (AMS). Consistent with ISO 55001 requirements, Powerlink ensures that asset management objectives, priorities, and responsibilities are clearly communicated across all levels of the organisation and to relevant external stakeholders.

9.6.1 Internal communication

Powerlink maintains structured communication processes to ensure alignment between corporate strategy, asset management objectives, and regular operational activities. Key mechanisms include:

- regular team briefings to cascade strategy and link individual roles to asset outcomes
- Asset Management Committee meetings for strategic oversight and cross-functional coordination
- internal digital platforms (e.g. SharePoint, intranet dashboards) for sharing policies, plans, performance data, and procedures
- training and onboarding programs that reinforce the importance of the AMS, service level expectations, and decision-making frameworks.

These communication channels support a strong culture of shared accountability and enable all personnel to understand how their work contributes to long-term asset performance, risk management, and value delivery.

9.6.2 External communication

Powerlink also communicates asset management related information to external stakeholders including the Australian Energy Regulator (AER), customers, government agencies, and the community to support transparency, trust, and regulatory compliance. Key channels include:

- the Transmission Annual Planning Report (TAPR) and corporate publications
- engaging with stakeholders during project planning, consultation, and investment decision-making
- regulatory submissions that clearly articulate asset strategies, performance forecasts, and risk justifications
- participation in industry forums and working groups to share insights and respond to evolving expectations.

---

10. Performance Evaluation

Powerlink is committed to evaluating the performance of its Asset Management System (AMS) through structured and evidence-based processes, ensuring continuous improvement and alignment with strategic objectives. Key mechanisms for performance evaluation include internal audits, management reviews, and structured governance and assurance activities.

10.1 Internal audits, assurance and management review

Periodic assurance activities are conducted to assess the effectiveness and compliance of the AMS with ISO 55001 standards, organisational policies, and legislative requirements. These assurance activities are planned and executed according to an established schedule and cover relevant elements of the asset lifecycle.

Management reviews are undertaken periodically, incorporating inputs from assurance activities, performance data, incident investigations, and stakeholder feedback. These reviews provide a structured opportunity to evaluate the continuing suitability, adequacy, and effectiveness of the AMS, and to identify opportunities for improvement.

Powerlink recognises that strong governance and assurance are critical to the successful operation of its AMS. Governance structures ensure clear accountability and decision-making, while the assurance program provides confidence that asset management activities are delivering intended outcomes and remain aligned with Powerlink's strategic direction and risk appetite.

Powerlink is developing a formal Asset Management Assurance Framework to define the structure, roles, responsibilities, and processes that support assurance across the asset lifecycle. This framework will align with enterprise risk, assurance and governance documentation, structures and integrate with existing management systems, including the Asset Management System and Safety Management System.

The framework includes:

- defined assurance activities across plan–do–check–act (PDCA) cycle stages;

- clear responsibilities for first, second, and third lines of assurance;

- use of tools such as bowtie analysis, internal audits, and performance indicators;

- integration of process safety considerations and regulatory obligations; and

- feedback loops to inform decision-making and continuous improvement.

This structured approach ensures consistent oversight, traceability of decisions, and alignment with ISO 55001 and relevant regulatory requirements.

10.3 Governance

Governance of the AMS is overseen by established internal committees, including the Asset Management Committee and Board committees such as the People, Safety and Environment Committee and the Audit, Risk and Compliance Committee. These bodies receive regular reporting on assurance activities, performance outcomes, and risks.

Senior leadership ensures asset management objectives are aligned with Powerlink's strategic choices and that appropriate resources and controls are in place to support effective delivery. The governance model also ensures that changes, risks, and performance trends are escalated appropriately, enabling timely and informed decision-making.

11. Improvement

Continual improvement is achieved through systematic monitoring, analysis, and evaluation of asset performance and management system effectiveness. Inputs to improvement include audit findings, performance trends, risk assessments, stakeholder feedback, and lessons learned from incidents and near misses. Powerlink also maintains a formal Improvement Plan based on gap analysis against GFMAM and ISO 55001 standards. This plan is continuously monitored and updated to ensure alignment with best practice and evolving organisational needs. The plan provides a structured roadmap for closing identified gaps and driving maturity across the Asset Management System.

11.1 Non-Conformity and Corrective Action

Powerlink has established procedures to identify, report, and address nonconformities within the AMS. When a nonconformity is detected whether through audits, reviews, incidents, or operational feedback it is assessed for root cause, and appropriate corrective actions are implemented to prevent

recurrence. All corrective actions are tracked, verified for effectiveness, and documented to ensure accountability and system learning. Significant nonconformities are escalated through governance channels and, where necessary, inform updates to policies, procedures, or asset plans.

11.2 Preventive (predictive) Action

To proactively manage risks and enhance system resilience, Powerlink incorporates predictive approaches that anticipate potential issues before they arise. This includes the use of data analytics, condition monitoring, and trend analysis to identify early warning signs of failure or degradation. Predictive insights support timely interventions, optimise asset performance, and reduce unplanned outages or incidents. These actions form part of Powerlink's broader risk management and continuous improvement processes, ensuring that potential problems are mitigated before they impact safety, reliability, or performance.

Appendix A: Asset Management Policy

Powerlink's Asset Management Policy establishes principles for delivering value through optimized asset lifecycle strategies, risk management, compliance, and continuous improvement. It underpins our alignment with ISO 55001 and supports strategic, financial, operational, and sustainability objectives.

Asset Management Policy

Powerlink is committed to a sustainable asset management system that understands and considers our customer and stakeholder requirements. This will ensure we efficiently manage risk, cost and performance on our assets throughout the whole of asset life-cycle.

This Asset Management Policy establishes a direction to support the sustainable management of all network and non-network assets.

To achieve this, Powerlink will:

- Comply with all applicable legislative and regulatory requirements;
- Provide safe environmentally conscious transmission services that:
  - are cost-effective over whole-of-asset life;
  - meet stakeholder reliability requirements; and
  - support the transition to a lower carbon energy market;
- Use a risk based approach to manage our assets and balance the environmental, social, governance and economic needs of current and future generations;
- Engage with our customers and stakeholders to understand and incorporate their requirements into the asset management decision making process;
- Make asset life-cycle decisions to maintain, refurbish, upgrade, replace or decommission assets based upon value and asset condition and sound financial principles;
- Enhance integration of strategic asset management into all planning, management and reporting activities so that asset management is derived from and consistent with business strategic planning;
- Efficiently innovate processes, practices and technology to improve service performance or reduce risks;
- Ensure staff are qualified, trained, aware and informed in asset management practices and processes;
- Identify future skills, capabilities, and knowledge and develop staff in a timely manner to meet changing requirements; and
- Establish asset management objectives and monitor performance indicators to measure the effectiveness of asset management practices.

Approved by the Board on 31/07/2024

Appendix B: Stakeholder Priorities

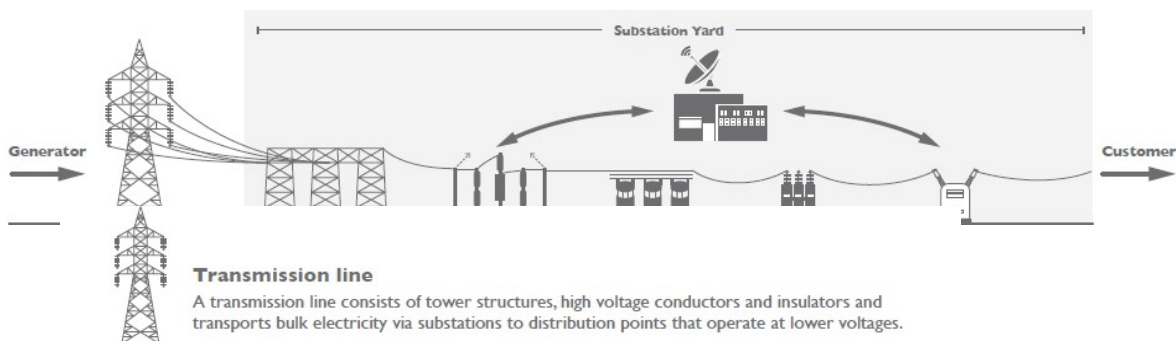| Powerlink Stakeholder Priorities	Safe Network	Responsive Service	Access to Network	Efficient Service Cost	Environmental performance	Regulatory compliance	Reward, Recognition and Development	ROI and Growth	Reliable Information	Sustainable Development	Reliable Network	Cultural heritage
Direct Connect Customers	x	x	x	x							x	
Queensland households, business and individuals (indirect customers)	x			x	x					x		
Communities	x			x	x					x	x	x
Employees and Contractors	x						x		x			
Contractors and Service Providers	x		x						x			
Shareholder – State Government		x		x		x		x	x	x		
State Government	x	x			x				x	x	x	
Safety Regulator	x				x	x			x		x	
Economic Regulator (AER)				x		x			x		x	
Federal Government					x						x	x
Local Government		x			x				x			x
AEMO		x	x			x			x		x	
AEMC				x		x			x			
Landholders	x	x			x				x	x		
Indigenous Communities										x		x

Appendix C: ISO 55001:2024 Alignment Matrix

This matrix demonstrates how Powerlink's Asset Management System aligns with ISO 55001:2024 clauses across context, leadership, planning, support, operation, performance evaluation, and improvement. See figure below for visual representation.

Clause	Requirement Summary	Relevant SAMP Section	Detailed Commentary
Context of the Organisation	Define internal/external context, stakeholder needs, and scope of AMS	Section 2: Context of the Organisation	SAMP articulates organisational context and scope, linking AMS to corporate strategy.
Leadership	Leadership commitment, policy, roles and responsibilities	Section 4: Leadership and Commitment; Appendix A: Asset Management Policy	Leadership involvement and policy alignment are documented, showing governance structure.
Planning	Risk and opportunity management, objectives, planning actions	Section 1.7: Risk Management; Section 5: Asset Management Objectives	Risk management and objectives are integrated with organisational goals.
Support	Resources, competence, awareness, communication, documented information	Section 8: Support	Resource allocation and training requirements are addressed, supporting AMS implementation.
Operation	Operational planning and control, lifecycle activities	Section 6: Lifecycle Management; Section 6.2: Asset Decisions	Lifecycle management and decision-making processes are clearly defined.
Performance Evaluation	Monitoring, measurement, analysis, audits, management review	Section 1.6: Monitoring and Compliance; Appendix E: KPIs	KPIs and compliance monitoring processes support systematic performance evaluation.
Improvement	Nonconformity, corrective actions, continual improvement	Section 9: Improvement	Continuous improvement principles are embedded in SAMP.
Value Realisation and Sustainability	Delivering value and sustainability outcomes	Section 10: Sustainability and Value	Sustainability objectives and value delivery principles are highlighted.

Appendix D: Asset summary

There are five main classes of network assets within the Powerlink high voltage system – lines, substations, secondary systems, OT/IT systems, land assets and telecommunications.

Transmission line
A transmission line consists of tower structures, high voltage conductors and insulators and transports bulk electricity via substations to distribution points that operate at lower voltages.

Substation
A substation, which is made up of primary plant, secondary systems, telecommunications equipment and buildings, connects two or more transmission lines to the transmission network and usually includes at least one transformer at the site.
A substation that connects to transmission lines, but does not include a transformer, is known as a switching station.

- **Substation bay**
A substation bay connects and disconnects network assets during faults and also allows maintenance and repairs to occur. A typical substation bay is made up of a circuit breaker (opened to disconnect a network element), isolators and earth switches (to ensure that maintenance and repairs can be carried out safely), and equipment to monitor and control the bay components.

- **Static VAR Compensator (SVC)**
A SVC is used where needed, to smooth voltage fluctuations, which may occur from time-to-time on the transmission network. This enables more power to be transferred on the transmission network and also assists in the control of voltage.

- **Capacitor Bank**
A capacitor bank maintains voltage levels by improving the 'power factor'. This enables more power to be transferred on the transmission network.

- **Transformer**
A transformer is used to change the voltage of the electricity flowing on the network. At the generation connection point, the voltage is 'stepped up' to transport higher levels of electricity at a higher voltage, usually 132kV or 275kV, along the transmission network. Typically at a distribution point, the voltage is 'stepped down' to allow the transfer of electricity to the distribution system, which operates at a lower voltage than the transmission network.

- **Bus reactor**
A bus reactor is used to control voltages on the high voltage system. Bus reactors are used especially during light load conditions to manage high voltages which may occur on the network.

Secondary systems
Secondary systems equipment assists in the control, protection and safe operation of transmission assets that transfer electricity in the transmission network.

Telecommunication systems
Telecommunication systems are used to transfer a variety of data about the operation and security of the transmission network including metering data for AEMO.

Asset Class	Types	Description
Transmission lines	Structure	Usually, steel lattice but can also be steel poles
	Foundation	Can be concrete or grillage
	Conductors	Usually Aluminium (sometimes with steel core)
	Insulators	Holds and insulates the high voltage conductors from the structures
	Earth wire	Protects the conductors from lightning strikes and helps with faults.
	Underground cables	Provides the insulation transition
Substations	Transformers	Changes voltages from one voltage to another (e.g. 275kV to 110kV or 275/110kV)
	Busbar	Central hub within the substation
	Substation bays	Connects feeders or transformers to the bus. A substation bay comprises of circuit breaker, CTs, VTs, isolators, and other components.
	Circuit breaker	Automatically disconnects (switches off) the feeder or transformer connection upon a signal from the protection relay.
	Current transformer	Measures the current in the feeder or transformer, and sends the measurement to the protection relay.
	Voltage transformer	Measures the voltage, and also sends the measurement to the protection relay.
	Isolators	Manual switch which allows operators to disconnect circuits. Note this switch is not automatic (where circuit breakers are motorised).
Secondary systems	Secondary systems bay	Responsible for overall control and protection of the feeder of transformer. Comprises protection relay, communication devices (e.g. RTU) and other devices
	Protection relay	Processes information from the CT and VT, and sends a signal to the circuit breaker to open to enable disconnection of the feeder or transformer if there is too much current, or voltages are too high or low (usually this indicates some sort of fault or abnormal condition in the network)
Telecommunications	Microwave towers	Broadcast microwave transmissions between two or more locations
	Fibre optic communication paths	Often fibre optics are contained within the earthwires (this is called OPGW or optical ground wire)

Asset Class	Types	Description
Land	Sites	Substations, Communications and washdown sites
	Easement	Easements to support transmission lines and cables

Appendix E: Asset management business capability and process model

This diagram provides a high-level view of the organisation's end-to-end asset management framework, adapted from the IAM (Institute of Asset Management) excellence and maturity model but customised specifically for Powerlink context. Its purpose is to show how all major capabilities and processes work together to manage assets throughout their lifecycle—linking strategy, planning, decision-making, lifecycle delivery, information management, risk management, and continual improvement. By presenting the full asset management system in one view, the diagram helps stakeholders understand how Powerlink creates, protects, and enhances value from its assets in a structured and coordinated way.

The model is structured into Level 0 processes, represented by the large, grouped boxes, which define the major capability domains. Within each Level 0 area, the Level 1 processes are shown as chevrons, outlining the core activities that make up each capability. In the interactive version, selecting a Level 1 process reveals the underlying Level 2 processes, which provide further detail about the tasks involved and include associated attributes such as asset data categories, solution components, and the technologies used to support that process group. This layered structure allows viewers to easily navigate from a broad overview to detailed operational information, offering clarity on both how the asset management framework is organised and how it is practically executed.

For access to the interactive version of the diagram, visit: Asset Management Process Framework (Work in Progress) – SAP Signavio

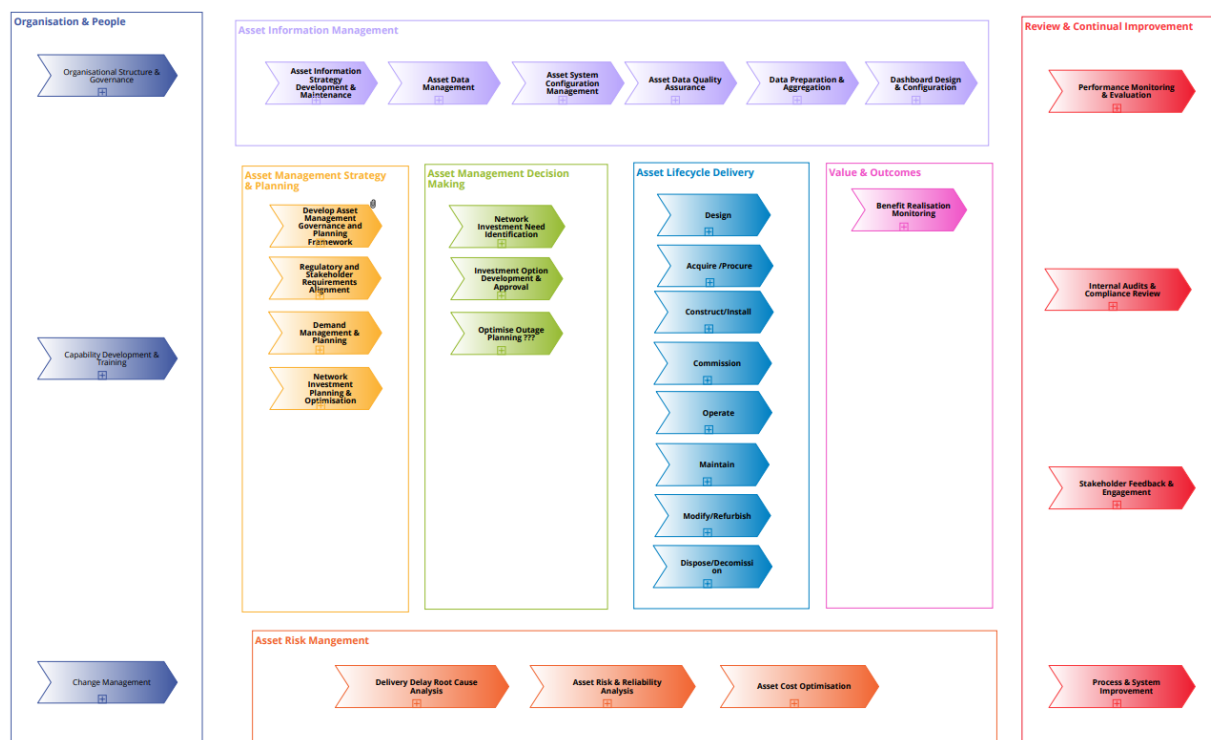Figure E.1: Asset Management Process

Table E.2 supports the above diagram , which presents Powerlink's Asset Management Business Capability and Process Framework. It maps each Level 0, Level 1 and Level 2 process to the relevant subject area in the GFMAM Asset Management Landscape (v3.0, 2024), helping to align Powerlink's internal practices with internationally recognised asset management disciplines.

Table E.2: Powerlink asset management processes mapped to GFMAM landscape (v3.0, 2024)

L0 (Business Capability)	L1 (Process Group)	L2 Process	GFMAM Section No.	GFMAM Section Name
Asset Management Strategy and Planning	Develop Asset Management Governance and Planning Framework	Develop Asset Management Policy	2.1	Asset Management Policy
		Develop Strategic Asset Management Plan (SAMP)	3.1	Asset Management Strategy and Objectives
		Develop Asset Life Plans	3.4	Planning
	Regulatory and Stakeholder Requirements Alignment	Incorporate Regulatory Requirements	2.4	Technical Standards and Legislation
		Incorporate Customer Requirements	1.2	Stakeholder Management
		Incorporate Government Requirements	1.2	Stakeholder Management
	Demand Management and Planning	Demand Forecasting	3.2	Demand Analysis
		Network/System Planning	3.4	Planning
		Supply Chain and Logistic Planning	3.7	Resourcing Strategy and Management
	Network Investment Development and Optimisation	Develop Asset and Area Plan	3.4	Planning
		Optimise Investments	3.5	Decision-Making
		Develop Network Investment Outlook	3.1	Asset Management Strategy and Objectives
		Develop Network Portfolio Plan	3.4	Planning
Asset Management Decision Making	Network Investment Need Identification	Identify Asset Re-Investment Need	3.5	Decision-Making
		Identify Network Limitation Need	3.2	Demand Analysis
		Identify Energy Transformation Need	3.3	Sustainable Development
		Identify System Service Need	3.5	Decision-Making
		Identify Customer Connection Need	3.2	Demand Analysis
		Identify Corrective Action Need	7.3	Continuous Improvement
	Investment Option Development and Approvals	Initiate Preferred Investment Options (Regulated)	3.5	Decision-Making
			3.5	Decision-Making

L0 (Business Capability)	L1 (Process Group)	L2 Process	GFMAM Section No.	GFMAM Section Name
		Develop Preferred Investment Option (Regulated)		
		Perform Consultation (Regulated)	1.2	Stakeholder Management
		Approve Preferred Investment Option (Regulated)	3.5	Decision-Making
		Manage Connection Enquiry (Non-Regulated)	3.2	Demand Analysis
		Initiate Network Connection Projects (Non-Regulated)	3.5	Decision-Making
		Develop Network Connection Project (Non-Regulated)	3.5	Decision-Making
Asset Lifecycle Delivery	Design	Develop Concept Design	6.1	Systems Engineering
		Develop Preliminary/Functional Design	6.1	Systems Engineering
		Develop Detailed Engineering Design	6.1	Systems Engineering
		Conduct Design Reviews and Verification	6.1	Systems Engineering
		Manage Engineering Standards and Specifications	2.4	Technical Standards and Legislation
		Produce Design Documentation and Drawings	6.1	Systems Engineering
	Acquire/Procure	Develop Procurement Strategy	6.8	Supply Chain Management
		Prepare Technical Specs and Tender Docs	6.8	Supply Chain Management
		Conduct Tendering / Supplier Sourcing	6.8	Supply Chain Management
		Evaluate Bids and Select Supplier	6.8	Supply Chain Management
		Negotiate and Award Contract	6.8	Supply Chain Management
		Manage Supplier Performance and Delivery	6.8	Supply Chain Management
		Receive and Accept Goods/Equipment	6.8	Supply Chain Management
	Construct/Install	Develop Construction and Installation Plan	6.2	Asset Creation and Acquisition

L0 (Business Capability)	L1 (Process Group)	L2 Process	GFMAM Section No.	GFMAM Section Name
		Mobilize Construction Resources	6.2	Asset Creation and Acquisition
		Establish Site and Environmental Controls	6.2	Asset Creation and Acquisition
		Execute Civil and Structural Works	6.2	Asset Creation and Acquisition
		Install Electrical and Mechanical Assets	6.2	Asset Creation and Acquisition
		Conduct Quality and Safety Inspections	6.2	Asset Creation and Acquisition
		Manage Construction Issues/Variations	6.2	Asset Creation and Acquisition
		Finalise Works and Prepare for Commissioning	6.2	Asset Creation and Acquisition
	Commission	Develop Commissioning Plan	6.2	Asset Creation and Acquisition
		Perform Pre-commissioning Checks	6.2	Asset Creation and Acquisition
		Execute Functional and Performance Testing	6.2	Asset Creation and Acquisition
		Energize and Commission Assets	6.2	Asset Creation and Acquisition
		Verify Compliance and Sign-off	6.2	Asset Creation and Acquisition
		Handover to Operations	6.2	Asset Creation and Acquisition
	Operate	Monitor Network Operating Conditions	6.4	Asset Operation
		Operate and Control Transmission Assets	6.4	Asset Operation
		Perform Switching and Isolation (for work or faults)	6.4	Asset Operation
		Manage Operational Incidents and Emergencies	6.6	Incident Management and Response
		Manage Operational Constraints and System Stability	6.4	Asset Operation
		Maintain Operational Records and Network Configuration	5.5	Configuration Management
	Maintain	Develop Maintenance Plans and Schedules	6.5	Maintenance Delivery

L0 (Business Capability)	L1 (Process Group)	L2 Process	GFMAM Section No.	GFMAM Section Name
		Perform Routine and Preventive Maintenance	6.5	Maintenance Delivery
		Conduct Condition Monitoring and Inspections	6.5	Maintenance Delivery
		Execute Corrective Maintenance (repairs)	6.5	Maintenance Delivery
		Manage Maintenance Records and Docs	5.3	Asset Management Data and Information Management
		Review Maintenance Performance and Optimise Plans	7.3	Continuous Improvement
	Modify/Refurbish	Assess Need for Modification or Refurbishment	3.5	Decision-Making
		Develop Refurbishment Scope and Design	6.1	Systems Engineering
		Plan and Schedule Refurbishment Works	6.2	Asset Creation and Acquisition
		Execute Modification/Refurbishment Activities	6.2	Asset Creation and Acquisition
		Test and Validate Modified Assets	6.2	Asset Creation and Acquisition
		Update Asset Information and Documentation	5.5	Configuration Management
	Dispose/Decommission	Develop Decommissioning Strategy and Plan	6.7	Asset Repurposing or Disposal
		Isolate and Make Asset Safe	6.7	Asset Repurposing or Disposal
		Remove and Dispose of Asset Components	6.7	Asset Repurposing or Disposal
		Manage Environmental and Hazardous Material Handling	6.7	Asset Repurposing or Disposal
		Rehabilitate Site Conditions	6.7	Asset Repurposing or Disposal
		Finalize Documentation and Closeout	6.7	Asset Repurposing or Disposal
Value and Outcomes	Benefit Realisation Monitoring	Define benefit realization KPIs and targets	7.1	Outcomes and Impacts
		Monitor benefit realization progress	7.2	Monitoring
		Evaluate and report benefit outcomes	7.1	Outcomes and Impacts

L0 (Business Capability)	L1 (Process Group)	L2 Process	GFMAM Section No.	GFMAM Section Name
Organisation and People	Organisational Structure and Governance	Establish AM roles, responsibilities, and authorities	4.2	Organisational Arrangements
		Set up asset management governance structure	4.2	Organisational Arrangements
	Capability Development and Training	Identify asset management competency requirements	4.4	Competence Management
		Provide training and development programs	4.4	Competence Management
		Assess and certify personnel competence	4.4	Competence Management
	Change Management	Identify and assess changes affecting the AMS	4.5	Organisational Change Management
		Plan and implement changes to AM processes/systems	4.5	Organisational Change Management
		Review and verify effectiveness of changes	4.5	Organisational Change Management
Asset Information Management	Asset Information Strategy Development and Maintenance	Develop asset information strategy aligned to AM objectives	5.1	Asset Management Data and Information Strategy
		Update the asset information strategy periodically	5.1	Asset Management Data and Information Strategy
	Asset Data Management	Collect and record asset data in systems	5.3	Asset Management Data and Information Management
		Maintain and update asset data records	5.3	Asset Management Data and Information Management
		Ensure secure storage and backup of asset data	5.3	Asset Management Data and Information Management
	Asset System Configuration Management	Configure asset management IT systems	5.4	Asset Management Data and Information Systems
		Control changes to asset system configuration	5.5	Configuration Management
	Asset Data Quality Assurance	Define asset data quality standards and criteria	5.2	Asset Management Data and Information Standards
		Conduct data quality audits and validation checks	5.3	Asset Management Data and Information Management
		Correct data inaccuracies and update records	5.3	

L0 (Business Capability)	L1 (Process Group)	L2 Process	GFMAM Section No.	GFMAM Section Name
				Asset Management Data and Information Management
	Data Preparation and Aggregation	Aggregate data from multiple sources for analysis	5.3	Asset Management Data and Information Management
		Prepare data sets and reports for decision-making	7.2	Monitoring
	Dashboard Design and Configuration	Design asset management performance dashboards	7.2	Monitoring
		Configure and maintain dashboards for reporting	5.4	Asset Management Data and Information Systems
Review and Continual Improvement	Performance Monitoring and Evaluation	Monitor asset performance metrics (KPIs)	7.2	Monitoring
		Evaluate performance against targets	7.2	Monitoring
		Report performance results to stakeholders	7.2	Monitoring
	Internal Audits and Compliance Review	Plan and conduct internal AM system audits	2.3	Asset Management Assurance and Audit
		Verify compliance with standards and regulations	2.3	Asset Management Assurance and Audit
	Stakeholder Feedback and Engagement	Collect stakeholder feedback on asset management	1.2	Stakeholder Management
		Engage stakeholders through consultations or surveys	1.2	Stakeholder Management
	Process and System Improvement	Identify opportunities for process and system improvement	7.3	Continuous Improvement
		Implement improvements and monitor results	7.3	Continuous Improvement
Asset Risk Management	Delivery Delay Root Cause Analysis	Identify instances of delivery/schedule delays	*No direct match*	*(Covered under internal continuous improvement)*
		Analyse root causes of delays	7.3	Continuous Improvement
		Implement corrective actions to prevent future delays	7.3	Continuous Improvement
	Asset Risk and Reliability Analysis	Identify asset-related risks and reliability issues	2.6	Risk
		Perform risk and reliability analysis	6.3	Integrated Reliability

L0 (Business Capability)	L1 (Process Group)	L2 Process	GFMAM Section No.	GFMAM Section Name
		Recommend risk mitigation and reliability improvement actions	2.6	Risk
	Asset Cost Optimisation	Analyse asset lifecycle costs and value trade-offs	3.6	Life Cycle Value Realization
		Implement initiatives to optimise lifecycle costs	3.6	Life Cycle Value Realization

Appendix F: Asset management line of sight

Strategic objectives	Asset management objectives	Goals and aspirations	2026-2030 targeted deliverables
The right grid for tomorrow	Maintain network reliability and security	Collaborate to enhance risk management and network access	Implement advanced monitoring and cybersecurity compliance Implement predictive analytics
Guide the market	Maintain asset safety	Integrate asset, safety management systems	Integrate asset and safety management systems into a unified platform
Drive value for Queenslanders	Support sustainable asset management decisions	Develop capabilities to uplift asset management	Embed sustainability metrics into asset decisions Transition assets to low-carbon technologies Certify processes to ISO 55001
Unleash our potential	Maintain asset risk at sustainable level	Ensure asset risk remains within acceptable thresholds throughout the lifecycle	Integrate risk metrics into asset lifecycle planning tools Use IoT sensors and analytics to track asset health and asset risk indicators continuously
Drive value for Queenslanders	Utilise asset information for asset decisions	Leverage high-quality, integrated asset information to enable predictive, optimised, and timely asset decisions across the lifecycle	Deploy enterprise-wide asset information strategy Achieve 85% data quality compliance

Appendix G – Asset Management Committee

The Asset Management Committee (AMC) is the primary governance body responsible for oversight of asset management activities across Powerlink. The AMC ensures that lifecycle asset decisions from planning and design through operation and decommissioning are consistent with the Asset Management Policy, Strategic Asset Management Plan (SAMP), and ISO 55001 requirements.

The AMC provides a forum for cross-functional collaboration, integrating perspectives from engineering, operations, finance, risk, safety, and environmental disciplines. Its responsibilities include:

- reviewing and endorsing asset management objectives, strategies, and plans
- monitoring performance against agreed KPIs and risk appetite statements
- ensuring compliance with regulatory obligations and corporate governance standards
- facilitating continuous improvement and alignment with organisational objectives.

The committee's purpose is to maintain an Asset Management System that optimises asset performance and asset lifecycle costs, aligning with Powerlink's business objectives to deliver cost-effective, reliable, and safe services to the community, customers, and stakeholders.

The AMC is chaired by the General Manager Asset Management and comprises a group of core members with functional responsibilities across all asset life cycle stages and a group of other members with functional responsibilities relating to specific areas or supporting functions. The AMC's formal approach ensures effective asset management and contributes to Powerlink's commitment to excellence. The AM Committee (AM Committee Terms of Reference) is the key for enhancing collaboration between divisions and improve cross-functional collaboration (please use RACI for further detailed information on roles and responsibilities) and line of sight through organisation.