

2023-27

POWERLINK QUEENSLAND REVENUE PROPOSAL

Supporting Document – PUBLIC

IT05 Stakeholder and Document Management 2023-27

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IT05 Stakeholder and Document Management 2023-27





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EXECUTIVE SUMMARY

This investment case documents the justification for planned investment in corporate IT systems. It is based on evaluation of current systems and assessment against the IT Asset Lifecycle Management. The assessment included estimated costs (development, implementation, ongoing operations and maintenance), the business value, and risks.

It is proposed to invest in corporate applications renewal through the FY22/23 to FY26/27 regulatory period (referred to herein as 2023-27). The proposed investment is required to address the following drivers:

- **Renewal of aging IT systems for sustainability, supportability and security in line with Powerlink's IT Asset Lifecycle Management**

The systems supporting Powerlink's document management (20 years) and stakeholder management (10 years) business functions are approaching end-of-life. In line with Powerlink's IT Asset Lifecycle Management policy, this renewal investment is required to provide efficient, sustainable business capability and processes.

- **Meet the requirements of Queensland State Archives and Document Management Maturity level.**

In June 2018, Queensland State Archives (QSA) released the Records Governance Policy. The Records Management Improvement Plan provides a plan to improve record keeping maturity level from the current level of "developing" through "acceptable" level and finally "managed" by end of 2026. QSA require agencies to show continued improvement in recordkeeping through annual reviews. All agencies are expected to achieve "acceptable" or above.

- **Replace current document management solutions with solutions to meet emerging needs in compliance and mobility**

With COVID-19 and increased need for information in the field, there is a need for a document management system with the capabilities to support a mobile workforce working across many types of devices. Current gaps in capability for supporting mobility is being met through Powerlink developed solutions which are increasingly difficult to maintain.

There is a need for a contemporary document management system which supports Powerlink's evolving requirements for a mobile workforce with IT systems based both on-premises and cloud environment.

- **Opportunity to leverage the renewal for improved stakeholder management**

Through optimised renewal of the aging stakeholder management system, Powerlink can improve its ability to capture, maintain and share stakeholder information including agreements, meetings and other pertinent information. The improvement supports improved access to information in the field and reducing the need for manual processes and data duplication.

The initiative value assessment results reflect a strong alignment, on or near 75% across all four assessment parameters.

The risk benefits gained from investment in the recommended option include a reduction in the assessed risk profile from Significant to Low for all identified risks. This is as a result of a decreased likelihood of operational impact and cybersecurity risk reduction. Ineffective document and stakeholder management



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can lead to poor business function and incorrect information. The recommended option also makes efficient use of cloud and emerging technologies through optimised, modern capability.

The following three options are considered:

- **Option 1: Base Case (counterfactual) – Retain existing systems and defer replacement**
- **Option 2: Cyclic replacement of document management and stakeholder management systems (Recommended)**
- **Option 3: Best in class replacement of document management and stakeholder management systems**

It is recommended that Option 2 be implemented as the least cost solution to meet the identified need. Total forecast non-network (IT) expenditure for the recommended option is [REDACTED] capex and [REDACTED] opex (FY21/22 real terms) with an NPV benefit of \$0.26M relative to the base case counterfactual.



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1. INVESTMENT NEED

1.1. Problem / Opportunity

Document management and stakeholder management is essential to all of Powerlink’s network and business operations. These systems are essential for Powerlink staff, Maintenance Service Providers (MSP) such as Ergon and other contractors.

Document management provides a centralised system for documents to be stored, shared and managed. Document management includes version control, access control, approval processes and publishing. Access is provided to all Powerlink staff as well as contractors including Maintenance Service Providers (MSP), construction companies, and design partners.

The current systems and tools supporting Powerlink’s document management is over 20 years old and stakeholder management will be over 10 years old and are reaching end-of-life over the coming regulatory control period (see Table 1). This investment case supports the need to renew this capability to ensure ongoing compliance, efficiency, sustainability and security of these systems and processes.

Systems	Supported Business Functions
Objective Objective Connect OPSGuide DRS CERDSS	Document Management
PQ-Connect (Mipela)	Stakeholder Management

Table 1: Corporate Systems

The current document management system was installed in Powerlink during 2005. The system is used across the organisation as a central document management system for all staff and contractors. The system was initially installed before mobile devices such as smart-phones, cloud based solutions, and collaborative authoring tools such as Office 365. The current system has shortcomings integrating with cloud solutions such as Office 365 and shortcomings providing access to information from mobile devices. This is impacting field staff as well as office staff working away from the office. Contemporary approaches to document and records management are required to support the effective operation across the whole of Powerlink.

Queensland State Archives require Powerlink to improve its record and document management maturity level from the current level of “Developing” to above the level of “Acceptable”. Powerlink must be assessed and provide a continuous improvement plan annually. The current document management solution comprising of Objective ECM along with a number of in-house developed solutions is not suitable for meeting this obligation.

The stakeholder management system provides a central system for recording details of stakeholders including contact details, records of meetings and agreements. Stakeholders include any external party to Powerlink which Powerlink has any form of relationship with such as landholders, community groups, government representatives and other interested parties. Staff are increasingly meeting stakeholders on their land, in their office or in community meetings. As the NEM transforms there are increasing



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stakeholder engagements with project proponents as well as communities. As the stakeholder management system comes up for major renewal under the asset lifecycle, a contemporary solution is required to support stakeholder management and ensure effective communications and compliance with agreements with stakeholders. A mobile capability is increasingly required to maintain efficiency.

The following investment drivers have defined Powerlink's investment need for the period 2023-27:

- **Renewal of aging IT systems for sustainability, supportability and security in line with Powerlink's IT Asset Lifecycle Management**

The systems supporting Powerlink's document management (20 years) and stakeholder management (10 years) business functions are approaching end-of-life. In line with Powerlink's IT Asset Lifecycle Management policy, this renewal investment is required to provide efficient, sustainable business capability and processes.

- **Meet the requirements of Queensland State Archives and Document Management Maturity level.**

In June 2018, Queensland State Archives (QSA) released the Records Governance Policy. The Records Management Improvement Plan provides a plan to improve record keeping maturity level from the current level of "developing" through "acceptable" level and finally "managed" by end of 2026. QSA require agencies to show continued improvement in recordkeeping through annual reviews. All agencies are expected to achieve "acceptable" or above.

- **Replace current document management solutions with solutions to meet emerging needs in compliance and mobility**

With COVID-19 and increased need for information in the field, there is a need for a document management system with the capabilities to support a mobile workforce working across many types of devices. Current gaps in capability for supporting mobility is being met through Powerlink developed solutions which are increasingly difficult to maintain.

There is a need for a contemporary document management system which supports Powerlink's evolving requirements for a mobile workforce with IT systems based both on-premises and cloud environment.

- **Opportunity to leverage the renewal for improved stakeholder management**

Through optimised renewal of the aging stakeholder management system, Powerlink can improve its ability to capture, maintain and share stakeholder information including agreements, meetings and other pertinent information. The improvement supports improved access to information in the field and reducing the need for manual processes and data duplication.



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1.2. Investment Objectives

This investment in document management renewal will deliver on the following objectives:

- Ensure the ongoing supportability and sustainability of the core systems enabling Powerlink's document and records management business processes.
- Support process improvements and effectiveness and information accuracy / integrity through:
 - Improved capability for staff in the field and working away from the office through suitable mobile applications including the ability to work off-line where mobile coverage is an issue
 - Support for document management with on-line collaboration tools such as Microsoft 365 and OneDrive.
 - Secure access to Document Management for on-site and off-site contractors and other partners.
- Achieve Document Management maturity level "Acceptable" in line with requirements from Queensland State Archives

This investment in stakeholder management renewal will deliver on the following objectives:

- Ensure the ongoing supportability and sustainability of the core systems enabling Powerlink's stakeholder management business processes.
- Support process effectiveness, and information accuracy, timeliness and integrity through:
 - Improved capability for staff in the field and working away from the office through suitable mobile applications.
 - Ability to work with stakeholders while outside of mobile coverage, e.g. rural landholders
 - Improved integration with other systems such as incident and emergency management systems as well as field delivery systems.
- Align with privacy and information security standards.

1.3. Alignment with IT Application Management Guidelines

Powerlink's applications are maintained for supportability, sustainability and security consistent with application asset lifecycle management (ALM) principles aligned with the "PACE" model developed by global research and advisory firm Gartner.

Under the Gartner PACE model, applications are classified as either Systems of Record, Systems of Differentiation or Systems of Innovation with considerations of:

- The nature of business processes supported by the application;
- The pace of change in both the business areas and technology domain;
- The strategic focus for the business area;
- The nature of stakeholder ownership; and
- Risk and funding models.



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Consistent with these various considerations, the PACE model identifies typical expected application service lives and the corresponding prudent planning horizons. The guidelines provide forecast upgrade and renewal timeframes based on these classifications to maintain effective, sustainable and supportable business solutions across an asset's lifecycle.

Figure 1 (below) depicts the Gartner PACE model's expected application service lives and planning horizons for each application category, as well as Powerlink's corresponding asset lifecycle management guideline applicable to each category.

Classification	Systems of Record	Systems of Differentiation	Systems of Innovation
Lifetime <i>How long it usually stays in layer</i>	5 to 10 years or longer	2 to 5 years	3 to 12 months
Planning Horizon <i>How long you describe the plan in application strategy</i>	More than 7 years	1 to 2 years	As long as 6 months
Powerlink Asset Lifecycle Management Planning Guidelines	Structured minor releases Upgrade each 3 to 5 years Replace at 10 to 15 years	Upgrade each 2 to 3 years Replace at 6 to 8 years	Typically not upgraded unless provided as evergreen or cloud

Figure 1: Gartner PACE model and Powerlink ALM planning guidelines

An assessment of the systems within scope of the proposed investment are listed below with the relevant PACE model classification.

System / Repository	Implemented (Year)	Last Major Upgrade	Classification
Objective	2005	2018	System of Record
OpsGuide (Powerlink)	2005	-	System of Differentiation
DRS (Powerlink)	2005	-	System of Differentiation
CERDSS	2005	-	System of Differentiation
PQ-Connect (Mipela)	2015	2015	System of Differentiation

Table 2: Existing systems in scope for renewal



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1.4. Compliance Requirements

Document management and stakeholder management systems play an important role in enabling Powerlink to meet its statutory, regulatory and legal obligations as a transmission network service provider (TNSP). The table below details the obligations supported through the proposed investment.

Obligation	Description of Requirement
Environmental	Powerlink is subject to compliance with environmental obligations as specified in the Environment Protection Act, the Environment Protection and Biodiversity Conservation Act and the Sustainable Planning Act. Maintaining good documentation is required to enable compliance with the Act.
Record Keeping	Powerlink is obliged to ensure it maintains records in accordance with the Public Records Act 2002 (QLD), the Right to Information Act 2009 (QLD) and the Right to Information Regulation 2009 (QLD). The document management system and the stakeholder management system are core to Powerlink meeting these obligations.
Privacy	Stakeholder management and document management systems must comply with the Australian Privacy Act. This requires implementation of strong controls and security on the accessibility of customer and other sensitive data.
Critical Infrastructure	As a critical infrastructure provider Powerlink must comply with the Security of Critical Infrastructure Act, requiring strong controls and security of the network including operational information and plans, work instructions, network assessments and personal information.

Table 3: Compliance Requirements



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1.5. Investment Overview

Powerlink's corporate systems and processes are core to the general business operations of all business areas and functions. The proposed investment in renewal of document management and stakeholder management capability is essential for ongoing efficient and sustainable business operations.

1.5.1. Current State (2020)

Document Management

Powerlink's document management system enables the recording and control of all documents across Powerlink. The system supports core document management functions including:

- Permanent retention of documents
- Security and access framework
- Approval and Publishing

Powerlink has a number of external service providers providing core business services such as maintenance, design and legal, all requiring access to the document management system for access to documents and lodging of documents.

The core platform for document management is Objective. A range of in-house developed ancillary tools and products are also used to support document management process. The current systems are shown in the diagram below.

Stakeholder Management

Stakeholder management provides the capability to manage and distribute stakeholder related information. This includes all aspects of stakeholder engagement including personal details such as names, phone numbers, addresses, job titles as well as agreements, meeting notes and action plans.

Stakeholder management includes the integration of information with other corporate information to provide field staff with a complete view of assets and properties such as environmental work plans. This capability is critical to support ongoing network projects, maintenance and operations.

1.5.2. Target State (end of proposed investment)

Through this asset lifecycle renewal investment, Powerlink will seek to renew its document management and stakeholder management systems with contemporary capability for long term efficiency, sustainability and supportability.

The renewal of systems across document management and stakeholder management functions will support the simplification of processes and enhance the sharing of information across systems through improved business capabilities.

This renewed capability will be integrated with the refreshed ERP Asset Management and GIS solutions to support end-to-end process effectiveness and quality efficiencies e.g. integrated views of stakeholder and corporate information). The existing field mobility solution will leverage the renewed capability to provide in-field viewing and maintenance of stakeholder information including support for off-line viewing.



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2. INVESTMENT OPTIONS

The following options have been considered to address the investment needs identified in the previous section - Investment Need.

Option	Description
Option 1: Base Case (Counterfactual) Retain existing systems and defer replacement	No significant investments in Powerlink’s document management and stakeholder management systems will be undertaken in the 2023-27 regulatory period, with renewal deferral until the next period (2028-32).
Option 2: (Recommended) Cyclic replacement of corporate systems to meet business needs covering the replacement of document and stakeholder management systems	The existing document management and stakeholder management systems will be renewed consistent with Powerlink’s application asset lifecycle management guidelines for ongoing sustainability, supportability and security. Powerlink’s records and document management maturity level will be lifted to “Acceptable” in line with requirements from Queensland State Archives. The opportunity will be taken to revisit existing business processes to enable productivity improvement and efficiency.
Option 3: Best of class replacement of document management and stakeholder management systems	The existing document management and stakeholder management systems will be renewed with best of breed solutions well beyond Powerlink’s minimum requirements to seek further benefits beyond continuity and compliance. Powerlink’s records and document management maturity level will be lifted above “Acceptable” to “Managed” or “Embedded” maturity level to seek further benefits across the enterprise.

Table 4: Investment Options

Each of these options is evaluated in the sections which follow.



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2.1. OPTION 1: Base Case (Counterfactual)

Retain existing systems and defer replacement

The base case (counterfactual) is an assessment of the forecast expenditure and implications if the proposed option(s) do not proceed.

Under this option, renewal of systems capability would be deferred until the 2028-32 regulatory period. Investment in the proposed document management and stakeholder management systems during the coming period would be limited to ad hoc reactive maintenance, as the aged versions of existing systems generally preclude the possibility of undertaking back to back upgrades to bring the systems up to date. Such an endeavour would be largely equivalent to undertaking a system renewal.

2.1.1. Base Case Assumptions

- The base case has been estimated based on the following assumptions.
- Investment in document management and stakeholder management during 2023-27 regulatory period is limited to supporting ad hoc updates to systems.
- Any changes to these systems will be minimal with no capital expenditure over the 2023-27 period with business process workarounds to meet future changes.
- Replacement systems will be required during the 2028-32 period under the Powerlink IT Asset Lifecycle Management policy. Costs have been escalated by 15% in recognition of the increased complexity due to the systems will be further out of date.
- Records/Document management and stakeholder management functions can be maintained on the current systems however these systems will be subject to performance degradation and the ongoing risks identified in Table 6 over page. Achievement of Powerlink's Records and Document Management maturity uplift will not be achieved.

2.1.2. Base Case Benefits

The following benefits may be achieved with selection of this base case option. Financial benefits are identified as "per annum" ongoing savings where relevant, and will begin accruing six months following implementation of the option.

Benefit Description	Financial Value (\$M Real 2021/22 p.a.)
1. Minimises businesses change disruption through continuation of existing work practices.	N/A (Non-Financial)

Table 5: Option 1 - Base Case Benefits



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2.1.3. Risk Mitigation

Table 6 summarises the risks at the end of the coming regulatory control period (2023-27) under the base case. This assessment follows the Powerlink risk management framework.

Risk Description	Inherent risk 2027	Risk Level
<p>R1 – Business operational impact Loss of access to documents or stakeholder information due to system failure or data corruption, coupled with ineffective business workarounds and limited ability to progress updates/upgrades to aged systems to rectify system or data issues.</p> <p>Risk categories – (Legal & Compliance, Projects, Safety, Customer)</p>	<p>As these systems age, there is an increasing probability of system failure for a sustained period of time. (Likely)</p> <p>Stakeholder management will become more critical as further new connections (mostly renewable generation) are undertaken in the coming regulatory period. Growth in renewable energy connections will lead to a significant increase in the number of stakeholders. System outages will have impacts of Powerlink operations and customers. (Moderate)</p> <p>To mitigate this risk, vendor extended support arrangements will be required in the event of system outages. This will not prevent the outages, only assist with resolving issues to reduce the time and impact of the outage.</p>	<p>Significant</p>
<p>R2 - Business operational impact Ineffective document management system leads to business units not being able to function or using incorrect information.</p> <p>Risk categories – Business Operations</p>	<p>While manual control processes are in place to minimise these occurrences, ongoing longer term reliance on manual measures may have diminishing effectiveness and does not remove the risk. (Possible)</p> <p>The business impact will vary depending on when the issue is detected. (Moderate)</p> <p>There are no further mitigations within the current solution beyond manual measures.</p>	<p>Significant</p>
<p>R3 - Business operational impact Ineffective document and stakeholder management leads to an incorrect information being used in the field with a potential workplace health and safety (WHS) impact.</p> <p>Risk categories – Safety</p>	<p>While manual control processes are in place to minimise these occurrences, ongoing longer term reliance on manual measures may have diminishing effectiveness and does not remove the risk. (Possible)</p> <p>The impact will vary depending on the nature of the field work and extent to which the specific documents have impact. This could range from no impact to the potential for injury. (Moderate)</p> <p>There are no further mitigations within the current solution beyond manual measures.</p>	<p>Significant</p>
<p>R4 – Cybersecurity As systems age, system security updates will not be maintained leading to increased potential for:</p> <ul style="list-style-type: none"> • Denial of access through system failure • undetected data corruption or manipulation • disclosure of sensitive information such as stakeholder information or operational information. 	<p>Critical Infrastructure is considered a high risk area for cyber-attacks. Ongoing security patches for systems for identified vulnerabilities are considered a base level defence against a range of these threats. Aging systems without proactive security patching increases the risk. (Possible)</p> <p>A successful cyber-attack resulting in a system outage, data corruption and undetected data manipulation or information disclosure may lead to disruption of normal</p>	<p>Significant</p>

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Risk Description	Inherent risk 2027	Risk Level
Risk categories – Projects, Safety, Legal & Compliance, Stakeholder	business operations, project delays, safety issues and external stakeholder concerns. (Moderate) There are no further mitigations within the current solution beyond manual measures	

Table 6: Option 1 - Base Case Risk Mitigation

Figure 4 below summarises the risk position of adopting the base case (assessment of each risk tabled above).

Option 1

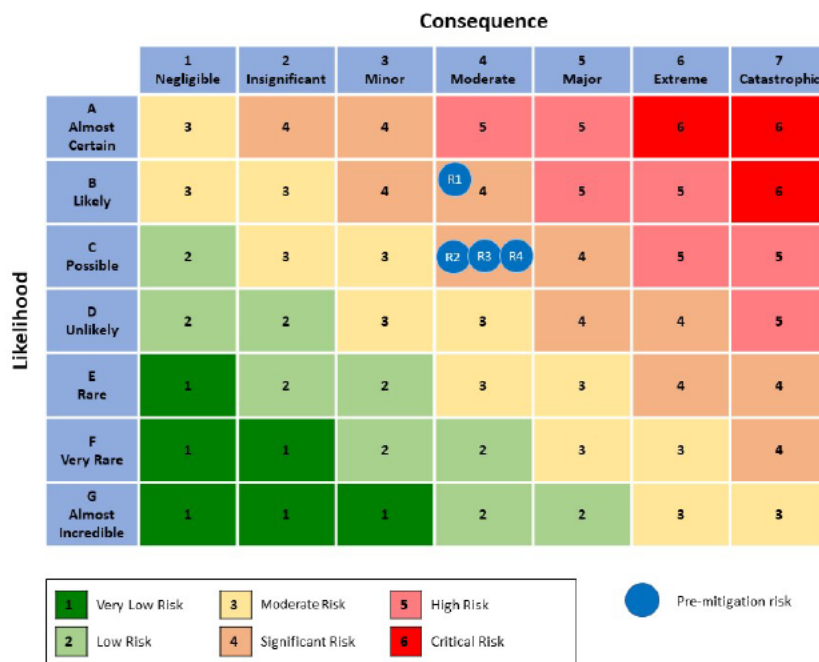


Figure 2 Base Case Risk Assessment



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2.2. OPTION 2: Optimised replacement of both document management and stakeholder management systems (recommended)

The existing document management and stakeholder management systems will be renewed consistent with Powerlink’s application asset lifecycle management guidelines for ongoing sustainability, supportability and security.

Powerlink will leverage this opportunity to revisit processes to support planned productivity improvements in the document management and stakeholder management processes consistent with contemporary practices across the enterprise.

2.2.1. Option 2 Assumptions

This recommended option has been estimated based on the following assumptions.

Construction Cost and Scope Assumptions

- The project costs are based on a build-up of forecast resourcing, vendor & specialist services, as well as software licensing costs as detailed in the table below.

Table 7: Option 2 Cost Build-Up (\$real 2021/22)

This estimate is based on standard unit rates with estimates based on previous projects of similar size and complexity.

Replacement projects for both Stakeholder management and Document Management are planned over a 24 month timeframe.

Business cases will be prepared for each solution to clarify requirements, scope, cost and risks. The procurement is expect to be an open tender process. A business readiness assessment will be undertaken before the commencement of the project.

Ongoing IT Operating costs are expected to be similar to current costs, therefore current costs have been used in estimating future costs.

Available solutions will be available to meet Powerlink’s document management and stakeholder management scope. Particularly document management solutions are available to fully support maturity level “Acceptable” are available.

Along with replacing the existing document management system, significant change management is required to achieve maturity level “Acceptable” as required by Queensland State Archives.



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2.2.2. Option Benefits

The following benefits may be achieved with selection of this recommended option. Financial benefits are identified as “per annum” ongoing savings where relevant and will begin accruing following implementation of the option.

Benefit Description	Financial Value (\$M Real 2021/22 p.a.)
<p>B1. Systems sustainability Powerlink’s core document management and stakeholder management functions and processes will be underpinned by efficient, reliable and supportable systems.</p>	<p>N/A (Non-Financial)</p>
<p>B2. Process improvement efficiencies The implementation of contemporary capability is anticipated to support process improvement efficiencies through:</p> <ul style="list-style-type: none"> • Contemporary mobility capability through mobile phones, tablets and laptops in order to provide versatility and ease of systems integration in delivering processes and capability; • Improved and secure integration with cloud based solutions such as Office 365, Microsoft Teams and ServiceNow • Availability of more up to date information in electronic format improving usability and access • Improved and secure access to the latest information for Powerlink’s contractors including Ergon MSP staff, • Complying with emerging records and document management standards for electronic documents and records • Integration with field devices, providing accurate document and stakeholder information, safety documentation; and • Improved document and stakeholder information version control to ensure Powerlink provides accurate information to field service staff and contractors. 	<p>Contributes to Powerlink’s productivity improvement</p>
<p>B3. Achieve Document and Records Management Maturity Level “Acceptable” as required by Queensland State Archives. The implementation of an appropriately capable document management solution will provide a platform for Powerlink to achieve “Acceptable” maturity level as required by Queensland State Archives.</p>	<p>N/A</p>

Table 8: Option 2 Benefits



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2.2.3. Risk Mitigation

Listed below is a summary of how this option addresses risks identified through the base case. The opening risk position represents the risk level at the end of the coming 2023-27 period should the base case have been selected.

Risk Description	Inherent Risk 2027	Nature of Mitigation	Mitigation through this option
<p>R1 – Business operational impact Inability to core documentation or stakeholder information due to system failure or data corruption, coupled with ineffective business workarounds and limited ability to progress updates/upgrades to aged systems to rectify system or data issues.</p> <p>Risk categories – Legal & Compliance, Projects, Safety</p>	Significant	<p>Replacement of document management and stakeholder management systems with modern capability significantly reduces the likelihood of systems failure.</p> <p>L kelihood – Very Rare Consequence – Moderate</p>	Low
<p>R2 - Business operational impact Ineffective version control in the document management system leads to staff using incorrect information and processes.</p> <p>Risk categories – Business Operations</p>	Significant	<p>Consolidation and replacement of the document management system with modern capability provides improved version control ensuring continual access to latest information and processes.</p> <p>L kelihood – Very Rare Consequence – Moderate</p>	Low
<p>R3 - Business operational impact Ineffective document control in the document management system leads to an incorrect document being used with a potential impact.</p> <p>Risk categories – Safety, Risk</p>	Significant	<p>Replacement of the document management system with modern capability provides improved version control ensuring current document version is utilised automatically.</p> <p>L kelihood – Very Rare Consequence – Moderate</p>	Low
<p>R4 – Cybersecurity With the inability to progress systems updates/upgrades, including access control/security updates, and the growing sophistication of cybersecurity attacks, there is increasing potential for:</p> <ul style="list-style-type: none"> undetected data corruption or manipulation disclosure of sensitive corporate information. <p>Risk categories – Projects, Safety, Legal & Compliance, Stakeholder</p>	Significant	<p>Replacement of the document management system with modern capability and application of cyclic updates reduces threat vulnerability.</p> <p>L kelihood – Very Rare Consequence – Moderate</p>	Low

Table 9: Option 2 Risk Mitigation



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Figure 5 below summarises the risk position of adopting option 2 (pre- and post-mitigation assessment of each risk tabled above).

Option 2

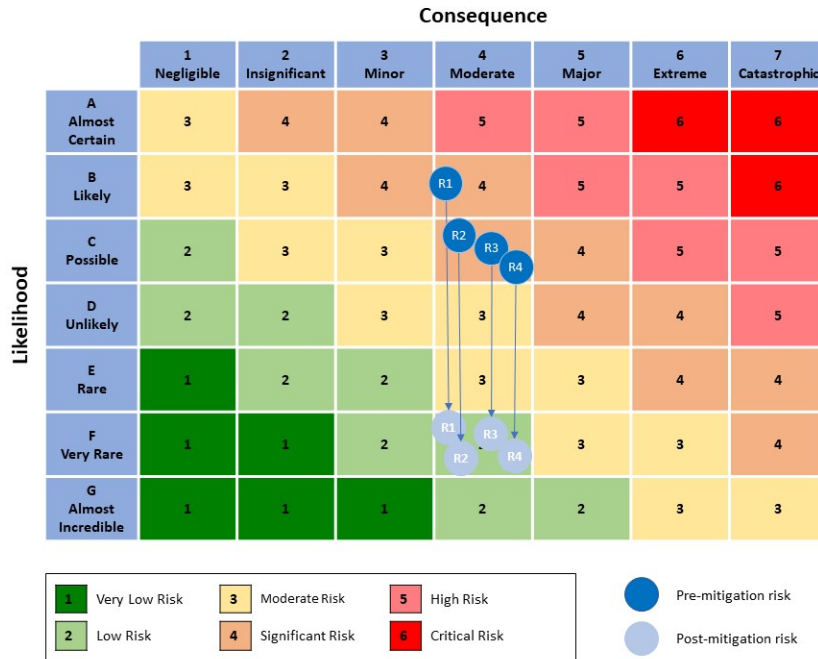


Figure 3 Option 2 - Risk Assessment

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2.3. OPTION 3 Best in Class replacement of corporate systems

This option will seek to best in class solutions for document management and stakeholder management. The best systems available in the market would be identified and implemented to provide Powerlink with strong capability over the next asset lifecycle period for these applications, typically ten to fifteen years. This will provide significant capability uplift compared to a like for like system replacement approach.

2.3.1. Option 3 Assumptions

This option has been estimated on the basis of the following assumptions.

Construction Cost and Scope Assumptions

- The project costs are based on the Option 2 build-up of forecast resourcing, vendor & specialist services, as well as software licensing costs (page 13), but with increased planning and design to reflect the additional effort associated with planning and implementing a new system that needs to be highly integrated.
- Best in class solutions will be substantially more expensive than like for like solutions, It is estimated this will lead to a 40% increase in licence costs and support costs;
- This preliminary estimate has been uses current standard unit rates for Powerlink internal and external resourcing. Effort estimates are based on previous projects for vendor software and implementation cost estimates.
- At project commencement, ta business case will be developed to refine costs and impacts for this investment. Standard procurement activities will be undertaken to further inform costs and solution options.

Operating Cost Assumptions

- IT operating costs are forecast to increase as a consequence of the continued volume of independent systems. This is likely to be further impacted by a return to full licence maintenance (L&M) charges in comparison with previous support-only arrangements.

Other Assumptions (Non-Financial)

- Commercially available solutions will be able to meet Powerlink's corporate systems requirements.
- While this investment is replacing existing capability, the implementation of more contemporary capability will require business change management. It is possible that business areas are impacted multiple times through the progressive delivery of replacement capability.

2.3.2. Option Benefits

The following benefits may be achieved with selection of this option. Financial benefits are identified as "per annum" ongoing savings where relevant and will begin accruing following implementation of the option.

The potential range of benefits matches those of Option 2, along with benefits from the extra initiatives and system replacements. There is a risk to the delivery of the benefits due to the large business change across the enterprise limiting the ability to capitalise on all new capabilities in the short term.



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Benefit Description	Financial Value (\$M Real 2021/22 p.a.)
<p>B1. Systems sustainability Powerlink’s core corporate system functions and processes will be underpinned by contemporary efficient, reliable and supported systems.</p>	N/A (Non-Financial)
<p>B2. Process improvement efficiencies The implementation of contemporary capability is anticipated to support process improvement efficiencies through:</p> <ul style="list-style-type: none"> • Contemporary document management capabilities and processes; • Contemporary stakeholder management capabilities • Updated GIS capabilities • Improved emergency management capabilities • Mobile solutions for all corporate capabilities allowing for all functions to be conducted away from the office. 	Contributes to Powerlink’s productivity improvement
<p>B3. Achieve “Managed” or “Embedded” Records and Document Management maturity level based on Queensland State Archives.</p>	Exceed requirements for Queensland State Archives maturity level.

Table 10: Option 3 Benefits

2.3.3. Risk Mitigation

Listed below is a summary of how this option addresses risks identified through the base case. The opening risk position represents the risk level at the end of the coming 2023-27 period should the base case have been selected.

Risk Description	Inherent Risk 2027	Nature of Mitigation	Mitigation through this option
<p>R1 – Business operational impact Inability to undertake design or utilise existing designs due to system failure or data corruption, coupled with ineffective business workarounds and limited ability to progress updates/upgrades to aged systems to rectify system or data issues. Risk categories – Legal & Compliance, Projects, Safety</p>	Significant	<p>Like-for-like replacement of design management systems with modern capability significantly reduces the likelihood of systems failure.</p> <p>Likelihood – Very Rare Consequence – Moderate</p>	Low
<p>R2 - Business operational impact Ineffective version control in the drawing management system leads to projects using incorrect network design drawings. Risk categories – Projects</p>	Significant	<p>Like-for-like replacement of design management systems with modern capability provides version control ensuring current network design versions are utilised automatically.</p> <p>Likelihood – Very Rare Consequence – Moderate</p>	Low



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Risk Description	Inherent Risk 2027	Nature of Mitigation	Mitigation through this option
<p>R3 - Business operational impact</p> <p>Ineffective network design version control in the drawing management system leads to an incorrect document being used in the field with a potential WHS impact.</p> <p>Risk categories – Safety</p>	Significant	<p>Like-for-like replacement of design management systems with modern capability provides version control ensuring current network design versions are utilised automatically.</p> <p>Likelihood – Very Rare Consequence – Moderate</p>	Low
<p>R4 – Cyber Security</p> <p>With the inability to progress systems updates/upgrades, including access control/security updates, and the growing sophistication of cybersecurity attacks, there is increasing potential for:</p> <ul style="list-style-type: none"> undetected data corruption or manipulation disclosure of design and configuration information. <p>Risk categories – Projects, Safety, Legal & Compliance, Stakeholder</p>	Significant	<p>Like-for-like replacement of design management systems with modern capability and application of cyclic updates reduces threat vulnerability. However, the range of systems continues to provide broader attack possibilities.</p> <p>Likelihood – Very Rare Consequence – Moderate</p>	Low

Table 11: Option 3 Risk Mitigation

Figure 4 (below) summarises the risk position of adopting option 2 (pre- and post-mitigation assessment of each risk tabled above).

Option 3

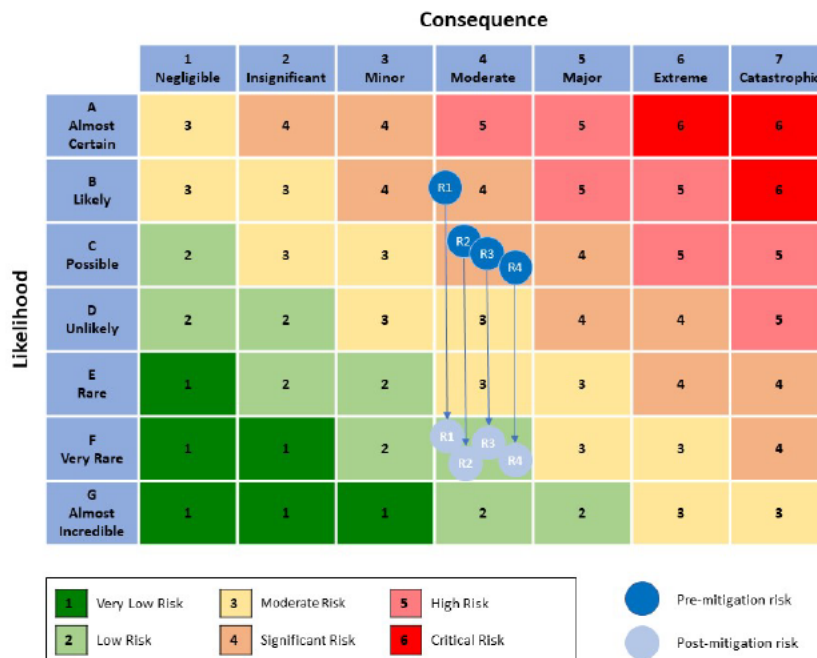


Figure 4: Option 3 - Risk Assessment



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2.4. Option Financial Comparison

Table 12 (below) provides a summary comparison of the identified options.

Option	Title	NPV	Counterfactual Difference	Result
Option 1	Base Case (Counterfactual) Retain existing systems and defer replacement	(4,195,064)	-	
Option 2	Cyclic replacement of document management and stakeholder management systems	(3,931,850)	263,214	Least Cost
Option 3	Best in class replacement of document management and stakeholder management systems	(5,121,974)	(926,910)	

Table 12: Option NPV Financial Comparison

Consistent with the above analysis, **Option 2** “Cyclic replacement of document management and stakeholder management systems” is recommended.

2.5. Cashflow Summary

Table 13 (below) provides a summary of forecast cashflow over the 10 year analysis period for the recommended option (i.e. Option 2).



Table 13: Cashflow Summary (Recommended Option)





3. RECOMMENDATION

3.1. Recommended Solution

It is recommended to endorse “**Option 2 Cyclic replacement of document management and stakeholder management systems**”. This option represents the prudent replacement of core systems capability, ensuring ongoing sustainability and support for broader business improvement, consistent with contemporary workplace.

Delivery of the recommended option will begin in FY24/25.

Total forecast non-network (IT) expenditure for the recommended option within the 2023-27 regulatory control period is █████ capex and █████ (FY21/22 real terms) with a 10 year NPV benefit of \$0.26 million relative to the base case counterfactual.

3.2. High Level Timeline

Figure 7 (below) depicts the planned timeframe for implementation of the recommended option.

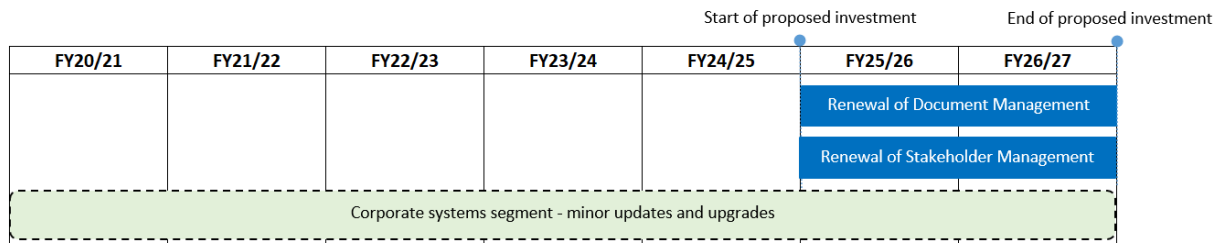


Figure 5: High Level Investment Timeline



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3.3. Initiative Value Assessment

Figure 8 (below) summarises the planned initiative value across parameters of:

- A:** Strategic Alignment and Value
- B:** Ease of Business Change
- C:** Architecture Alignment
- D:** Ease of Delivery and Operation

As indicated in the figure, the planned investment is at or approaching the 75th percentile in assessment against parameters A, C and D. The investment scores lower against parameter B, which is reflective of the potential business impact associated with the renewal of contemporary document management and stakeholder management IT systems capability.

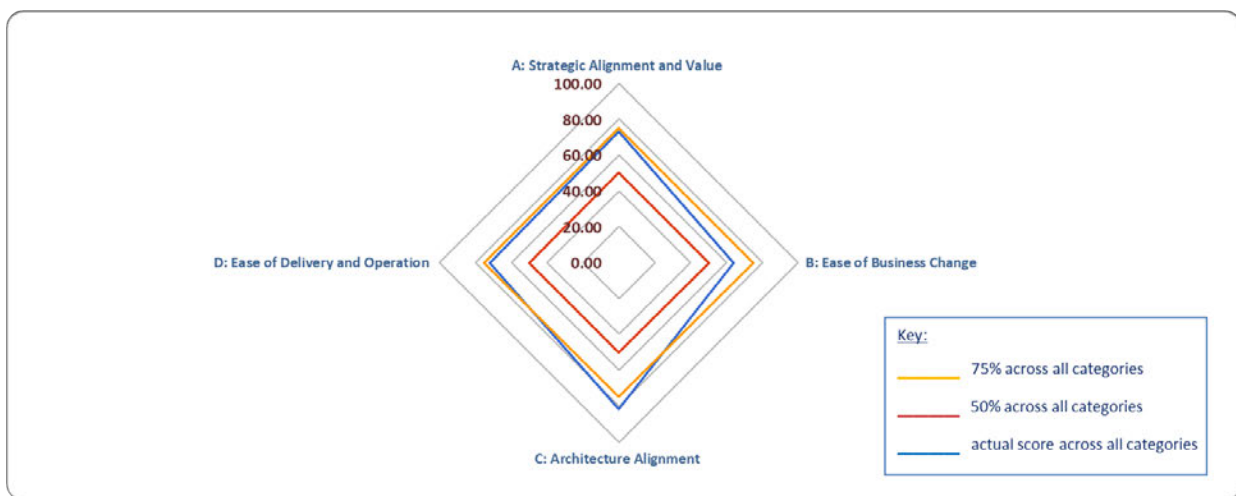


Figure 6: Initiative Value Assessment



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4. SUPPORTING DETAIL

4.1. Program Delivery Risks

Table 14 (below) summarises a set of key risks associated with delivery of the program.

Risk #	Risk Category	Description	Inherent Risk Level	Mitigation Plan	Residual Risk Level
01	Key Resources	<p>This initiative is dependent on the knowledge and expertise of Powerlink's personnel including (but not limited to):</p> <ul style="list-style-type: none"> Records and Document Management Stakeholder Management and Engagement IT specialists <p>These resources also have business as usual (BAU) responsibilities.</p>	Moderate	<p>Accept and Mitigate:</p> <p>The project will be delivered through a combination of internal and external resourcing, with budgetary capacity to enable backfilling of key roles where required.</p> <p>The project and line-managers also have a responsibility to identify potential constraints and manage potential fatigue.</p> <p>This initiative is renewing Powerlink's document and stakeholder management systems, which are core to the day to day operation of the whole of Powerlink. It is therefore important to allocate the company's most capable staff wherever practical and apply appropriate resource retention strategies.</p>	Low

Table 14: Corporate Systems Program Delivery Risks

4.2. Program Constraints

Table 15 (below) summarises a set of key risks associated with delivery of the program.

#	Type	Description
01	Schedule	The program is undertaking application lifecycle replacement of existing capability and planned for completed by June 2027, to ensure efficient, reliable and supportable systems capability underpinning Powerlink's corporate management processes
02	Financial	<p>The financial estimate for this initiative has been based on historic expenditure, standard unit rates, market interactions and the knowledge of internal subject matter experts.</p> <p>Endorsement of this business case does not constitute approval for expenditure. A more detailed business case will be developed consistent with Powerlink's investment governance processes to confirm the final initiative scope and budget. The business case will require endorsement by the Powerlink Exec Committee for Digital Technology (ECDT).</p>
03	Workforce Impact and Change Management	Document and stakeholder management systems are used throughout the organisation, and as such, the program incorporates close involvement of the BAU teams and business leaders. The program will consult on required work practice changes and employ contemporary training methods and change management techniques to minimise the impact of the workforce.

Table 15: Corporate Systems Program Constraints



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4.3. Program Assumptions

Specific assumptions for each investment option are provided in Investment Options section. Table 16 (below) summarises additional assumptions which are relevant to all options.

#	Type	Description
01	Resourcing	Powerlink internal resources allocated to the program will remain available to the program as planned. The program will supplement internal resourcing with external service provision, including services provided by solution vendor(s), non-vendor specialist service providers and experienced contract resourcing.
02	Commitment	Program resources (internal and external) have the commitment, drive and capability to deliver agreed work products to agreed plans. Depending on the resolution of the COVID-19 situation, this delivery may need to be undertaken remotely, either in part or in full, for some work products.
03	Priority	Through the life of the program, Powerlink and our stakeholders will continue to prioritise the need for investment in document and stakeholder management systems consistent with the "Investment Need" described in second section of this document.
04	Scope	This program seeks to undertake an optimised replacement of Powerlink's document and stakeholder management systems in line with prudent application software asset lifecycle management. The scope covers the systems support this capability as outlined in section 2.5.1.

Table 16: Corporate Systems Program Assumptions

4.4. Program Dependencies

This project is inter-dependent with the projects and activities described in Table 17 below.

#	Type	Description
02	ERP & Asset Management	The existing SAP ERP system, like many other systems, is currently hosted on-premise using Powerlink technology infrastructure. Through the planned ERP roadmap, SAP and other systems may progressively transition to cloud-based "as a service" hosting models.

Table 17: Corporate Systems Program Dependencies

4.5. Business Area Impacts

Table 18 (below) summarises key business area impacts.

#	Impacted Group	Description
01	Powerlink Executive Leadership Team	<ul style="list-style-type: none"> Require awareness of the planned investment goals and to provide ongoing oversight of the program, with direct governance duly delegated to the Program Board. Provide leadership and serve as role models in the rollout of improved document management and stakeholder management work practices.
02	Business Workgroups	<ul style="list-style-type: none"> Contribute to the planned deployment of document management and stakeholder management systems and work practices, to optimise coordination with other planned projects and programs as well as planned software and hardware renewals.



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#	Impacted Group	Description
03	Business Workgroups	<ul style="list-style-type: none">• Provide resourcing into the program as key SMEs and users of the systems in administrative functions within divisions.• Administration staff require awareness and training in the new systems to support the broader Powerlink staff and contractors.• Records management team will provide key input in to the implementation of the replacement systems to ensure document and records management standards are being implemented and enforced.
04	SBD / OSD Workgroups	<ul style="list-style-type: none">• Strategy and Business Development along with Operations and Service Delivery teams will require training in the new stakeholder management systems to enable their use in conjunction with field activities.

Table 18: Corporate Systems Business Area Impacts





Appendix A: Glossary of Terms

The following terms or abbreviations are used within this document.

Term	Definition
AEMC	The Australian Energy Market Commission
AEMO	Australian Energy Market Operator
ALM	Asset Lifecycle Management
Capex	Capital Expenditure
CIC	Critical Infrastructure Centre
COAG	Council of Australian Governments
ECDT	Executive Committee for Digital Technology
GIS	Geographic Information System
IT	Information Technology
NPV	Net Present Value
Opex	Operating Expenditure
OT	Operational Technology
PQ	Powerlink Queensland
TNSP	Transmission Network Service Provider

