2023-27
POWERLINK QUEENSLAND REVENUE PROPOSAL

Supporting Document – PUBLIC

IT06 Technology Applications Sustainability 2023-27

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Contents

EXECUTIVE SUMMARY

This investment case documents the justification for investment in technology applications. It is based on the planning undertaken to date and the estimated costs of development, implementation, ongoing operations and maintenance, the anticipated business values to be gained and associated risks.

It is proposed to invest in technology applications renewals consistent with established asset lifecycle management principles over the period FY22/23 to FY26/27 (referred to herein as 2023-27). The proposed investment is required to address the following drivers:

- **Requirement for renewal of the technology applications sustainability, supportability and security.**

  To keep IT systems and services current and to meet the evolving needs of the business technology applications require renewal in line with Powerlink's asset life cycle management strategy.

- **Opportunity to leverage the renewal to improve IT management solutions and services to meet the business needs.**

  Latest versions of technology applications typically bring with them process, usage and security efficiencies that lead to improved data sharing and process automation.

The risk benefits gained from investment in the recommended option will reduce likelihood of operational impact as a result of system downtime, communications hampered by legacy systems, and risk of data loss through failure of recovery or ineffective disaster recovery, and contribute to cybersecurity risk reduction through optimised, modern capability.

The following options are considered:

- **Option 1: Base Case (Counterfactual) – Retain existing systems and defer renewal**
- **Option 2: Cyclic renewal of the technology applications (Recommended)**

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

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 $0.33 million relative to the base case counterfactual.

1. INVESTMENT NEED

1.1. Problem / Opportunity

Identity, resource and access management, messaging, collaboration, application deployment, backups and process automation are some of the core capabilities that allows Powerlink to function efficiently and effectively. These capabilities among others are provided by a broad range of technology applications, many of which form the cornerstone to all IT services.

In the current period Powerlink has built a solid platform with technology applications ending with the transition from Microsoft Office 2016 to Microsoft 365. Now with a firm foundational platform Powerlink is looking to replace and/or migrate other legacy technology applications as they reach their end of life, leveraging cloud and as-a-service models where prudent.

The current technology applications supporting these capabilities will reach end-of-life over the coming regulatory control period (see Table 1). This investment case supports the need to renew these capabilities to ensure ongoing efficiency, sustainability and security of these technology applications.

Systems	Supported Business Functions
MS Active Directory MS Exchange MS SCCM Backup Management Solar Winds Lan Sweeper	IT Infrastructure
Signarvio	Business Process Management
Mobile Device Management Microsoft 365 Citrix	Mobile Workforce Enablement
SNOW ServiceNow	Software Asset and Service Management

Table 1: Technology Application Systems

The existing technology applications have proven sufficient to provide Powerlink with a stable and reliable platform to date. For that to be sustained into the future the technology applications need to be kept modern.

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

- **Requirement for renewal of the technology applications capability for sustainability, supportability and security.**

  To keep IT systems and services current and to meet the evolving needs for the business the applications utilised require recurrent upgrades, patches or platform migrations in line with best practices or as services move to a managed or cloud option where prudent to do so.

- **Opportunity to leverage the renewal to improve IT management solutions and services to meet the business needs.**

Latest versions of applications, typically, bring with them process, usage and security efficiencies along with tighter integration points between applications for improved data sharing and process automation.

1.2. Investment Objectives

This investment in technology application renewals looks to maintain capability in line with the evolving IT industry through a structured life cycle model and will deliver on the following objectives:

- Ensure the ongoing accessibility, supportability and security of technology applications for Powerlink.
- Ensure IT solutions are contemporary to meet the functionality and usability needs of the business.
- Support process efficiencies and information flow through:
    - Improved remote access to core systems and information.
    - Improved integration with cloud services through identity management.
    - Improved cybersecurity for internal and externally hosted data through identity management
    - Improved collaboration and messaging.
- Align with the Queensland Government's document and records management requirements for data retention.
- Align with privacy and 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.

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 *How long it usually stays in layer*	5 to 10 years or longer	2 to 5 years	3 to 12 months
Planning Horizon *How long you describe the plan in application strategy*	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 (Year)	Classification
Citrix	2006	2018	System of Differentiation
SNOW	2019	-	System of Differentiation
MS Active Directory	2000	2016	System of Record
MS Exchange	2000	2021	System of Record
MS Office	1997	2018	System of Record
ServiceNow	2016	2020	System of Record
Backup Management	2018	-	System of Record
Mobile Device Management	2010	2019	System of Differentiation
Signavio	2017	2020	System of Differentiation
Lan Sweeper	2020	-	System of Differentiation
Solar Winds	2020	-	System of Record

Table 2: Existing systems in scope for renewal

1.4. Compliance Requirements

Technology applications play an important role in supporting 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
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 backup management system in conjunction with Powerlink's electronic document and records management solution are core to Powerlink meeting these obligations.
Privacy	Powerlink is obliged to comply with the Australian Privacy Act. This requires implementation of strong controls and security on the accessibility of customer, asset and staff data. This investment in technology applications strengthens Powerlink's capability to upkeep those controls and systems in optimal condition
Critical Infrastructure	As a critical infrastructure provider Powerlink's must comply with the Security of Critical Infrastructure Act, requiring strong controls and security of the configuration and operations of the network. This investment in technology applications strengthens Powerlink's capability to upkeep those controls and systems in optimal condition.
Security	Powerlink is obliged to comply with the Australia Energy Sector Cyber Security Framework (AESCSF) to maintain MIL-2 level. This requires implementation and maintenance of tools to an adequate level of support and security.

Table 3: Compliance Requirements

1.5. Investment Overview

Powerlink's technology application systems are essential to the successful ongoing operation of multiple business areas and functions. This proposed investment in renewal of the capabilities enabled by technology applications is vital for continued efficient and sustainable business operations.

1.5.1. Current State (2020)

1.5.2. IT Infrastructure

Powerlink's IT infrastructure systems enable the core underpinning services for an IT network to function, including but not limited to:

- Identity management
- System management
- Software deployment
- Messaging and calendaring
- System/network discovery
- Reporting and monitoring
- Backup and recovery

Powerlink has a strong internal IT infrastructure function with vital outputs of support, maintenance and monitoring of Powerlink's corporate IT network, systems and cloud assets.

The core platforms for IT infrastructure are provided by the Microsoft suite of IT enterprise applications, but there are a broad range of IT tools and systems utilised on top of the Microsoft suite to ensure the performance of the IT infrastructure function.

1.5.3. Business Process Management

Powerlink utilises Signarvio for business process management where the business record and define business processes within the repository.

1.5.4. Mobile Workforce Enablement

Mobile workforce enablement provides the capability to manage corporate devices, create, collaborate and share corporate information within a secure online presence and provide remote access to internal systems.

Corporate devices are currently managed through Workspace One with Telstra providing the management as a service.

Microsoft 365 is used for access to the Office suite of business applications, collaboration and productivity tools. It is extensively used by all business areas and is enabled on all corporate devices to help ensure the workforce either remote or office based are connected and contactable.

Citrix is the platform utilised to grant access to Powerlink published apps from any remote computer, it provides fast and secure access to many Powerlink systems, information and processes.

1.5.5. Software Asset and Service Management

Powerlink's software asset management capability is provided currently by utilising SNOW software. It is utilised to maintain, track and report on the life cycle management, costs and investments of Powerlink's software assets.

ServiceNow is a platform-as-a-service providing a service management capability covering IT incident management, IT change management, IT request management, automation workflow and approvals, IT knowledge base and configuration management database.

1.5.6. Target State (end of proposed investment)

Through this asset lifecycle renewal investment, Powerlink will seek to maintain a contemporary environment of the current technology applications. This is to provide long term efficiency, sustainability and supportability.

The renewal of technology applications will support the simplification of processes through improved application integrations and automation, enhance the sharing of information and collaboration across the business and provide a secure and enabling platform for improving business efficiencies.

2. INVESTMENT OPTIONS

The following options have been considered to address the investment needs identified in section 1.

Option	Description
Option 1: Base Case (Counterfactual) Retain existing systems and defer renewal	No significant investments in Powerlink's technology applications will be undertaken in the 2023-27 regulatory control period, with renewal deferral until the next period (2028-32).
Option 2: Cyclic renewal of the technology applications (Recommended)	The existing technology applications will be renewed consistent with Powerlink's application asset lifecycle management guidelines for ongoing sustainability, supportability and security. Through the investment the opportunity will be taken to review existing business and IT processes to enable productivity improvement and efficiency.

Table 4: Investment Options

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

2.1. OPTION 1: BASE CASE (Counterfactual) Retain existing systems and defer renewal.

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 technology applications would be deferred until the 2028-32 regulatory period. Investment in this area in the coming period would be limited to standard maintenance and security updates to ensure the products remain supportable with no new major releases being implemented.

2.1.1. Base Case Assumptions

The base case has been estimated on the basis of the following assumptions.

Construction Cost and Scope Assumptions

- Annual investment over the coming regulatory control period will be limited to supporting maintenance and minor upgrades to maintain support.
- Lifecycle maintenance of existing hardware, operating system and database management systems will occur as part of other funded initiatives.
- Vendor support for functional changes to these systems will be minimal. Consequently, no capital expenditure has been forecast over the 2023-27 period and business process workarounds would be required in the event of functional capability gaps.
- While a replacement investment will not be undertaken in the 2023-27 period, it would be required in the 2028-32 period. At that point, the costs of the renewal are based on the assumptions detailed in Option 2, escalated by 15% in recognition of the increased complexity of the deferred systems replacement as the existing application versions fall further out-of-date.

Operating Cost Assumptions

- IT operating costs are forecast to remain unchanged.

Other Assumptions (Non-Financial)

- Business operations can be maintained on the current suite of technology applications subject to likely performance degradation and the risks identified in Table 6 over page. Achievement of Powerlink's forecast productivity improvements may not be possible.

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 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: Base Case Benefits

2.1.3. Risk Mitigation

Table 6 (below) summarises the inherent risks which would be experienced by the end of the coming regulatory control period (2027) if the base case (counterfactual) option is selected.

The equivalent risk analyses provided with the recommended option (Option 2) have been conducted with respect to their effectiveness in mitigating the below base case risks. This assessment has been undertaken in alignment with the Powerlink risk management framework.

Risk Description	Inherent risk 2027	Risk Level
R1 - Business operational impact Inability to effectively share and collaborate with external partners and stakeholders due to supporting technology becoming legacy and not having compatibility with contemporary methods. **Risk categories – (Legal & Compliance, Projects, Safety)**	Business processes and collaboration needs would be hampered by legacy applications and methods not having the ability and features of their contemporary counterparts. **(Possible)** The technology application platform will be hampered when trying to collaborate with the industry. **(Minor)** Manual effort would be required to comply with this obligation	**Moderate**
R2 – Cybersecurity With the inability to progress major system release upgrades, which can include access control and security updates, coupled with the growing sophistication of cybersecurity attacks, there is increasing potential for: • Undetected data corruption or manipulation. • Disclosure of personal or sensitive information. • Loss of control of Active Directory, Exchange, SCCM and other core IT network systems. • Threat of hostile takeover. • Malicious access to OT networks, EMS and SCADA. **Risk categories – (Projects, Safety, Legal & Compliance, Stakeholder)**	The energy sector is considered a high threat area for cyber-attacks. Up-to-date systems are considered a base level defence against a range of these threats. An aging system profile increases the threat opportunity. **(Possible)** A successful cyber-attack resulting in a system outage, data corruption and undetected data manipulation or information disclosure may lead to disruption of normal business operations, project delays, safety issues and external stakeholder concerns. **(Major)** There are no further mitigations within the current solution beyond manual measures	**Significant**
R3 – Cybersecurity Inability to securely wipe and remove access for a lost or stolen mobile device. **Risk categories - – (Legal & Compliance, Projects, Safety)**	Mobile devices can become compromised if lost or stolen allowing either data leakage, impersonation or other malicious attacks. Up-to-date management systems are a base level defence against a range of these threats. An aging management system could increase the threat opportunity. **(Possible)** A compromised mobile device can result in a data leakage or information disclosure via social engineering or impersonation. These could also leading to more severe attacks causing system outage, data corruption and undetected data manipulation which may lead to disruption of normal business operations, project delays, safety issues and external stakeholder concerns. **(Moderate)**	**Significant**
R4 - Business operational impact Inability to restore corporate data and systems from backup in the event of incorrect deletion or system lose. **Risk categories – (Legal & Compliance, Projects, Safety, Stakeholders, whole of**	Information backup and system restores can be hampered by numerous factors such as backup type, link speed, data corruption and backup/restore time. **(Rare)** A failure to recover information or a system can result in system or service outage which may lead to disruption of normal business operations, project delays, safety issues	**Moderate**

Risk Description	Inherent risk 2027	Risk Level
business, disaster recovery)	and external stakeholder concerns. **(Moderate)**	
R5 - Business operational impact Inability to restore corporate data and systems from backup in the event disaster recovery. **Risk categories – (Legal & Compliance, Projects, Safety, Stakeholders, whole of business, disaster recovery)**	Information backup and system restores can be hampered by numerous factors such as backup type, link speed, data corruption and backup/restore time. **(Unlikely)** A failure to meet RTO and RPO times can be very disruptive to a business, but failure to restore at all can be catastrophic to recover from, affecting all of business. **(Major)**	**Significant**
R6 – Business operational impact Inability to communicate effectively with external parties, vendors or customers due to a loss of email services. **Risk categories – (Contracts, Customers, Projects, Safety, Stakeholders, whole of business)**	External party, vendor and customer communications would be hampered by legacy applications or system outage not having the ability and features of their contemporary counterparts. **(Possible)** The email system will be hampered when trying to communicate. **(Minor)** Manual effort would be required to comply with this obligation	**Moderate**

Table 6: Option 1 - Base Case Risk Mitigation

Figure 2 below summarises the risk position of adopting the base case (assessment of each risk tabled above).

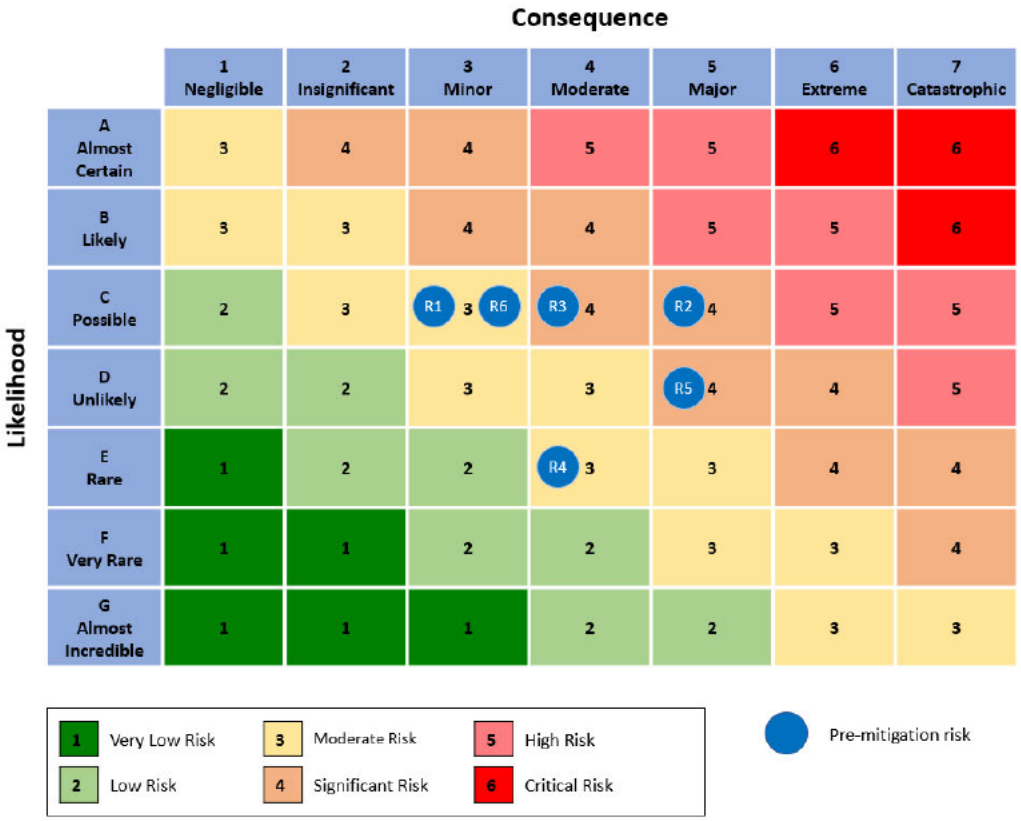

Figure 2: Base Case Risk Assessment

2.2. OPTION 2: Cyclic renewal of the technology applications (Recommended)

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

Through this investment, Powerlink will leverage the opportunity to review IT management systems, services and business processes to support productivity improvements and highlight areas of capability cross over for rationalisation in the technology application suite.

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.

[redacted]

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.
- The project is planned to run across a 24 month timeframe, inclusive of 9 month combined procurement and design phases. The delivery phase is forecast at 12 months, concluding with 3 months of hypercare.
- Ongoing IT Operating costs are expected to be similar to current costs, therefore current costs have been used in estimating future costs
- Lifecycle maintenance of existing hardware, operating system and database management systems will occur as part of other funded initiatives
- The final business case development process will be used to refine the scope, costs and impacts for this investment. A procurement activity will be undertaken to inform costs and solution options.

Operating Cost Assumptions

- IT operating costs are forecast to remain unchanged.

Other Assumptions (Non-Financial)

- Commercially available solutions will be available to meet Powerlink's technology applications scopes.
- While this investment is renewing existing capability, the implementation of more contemporary capability will require change management. This is key to deriving business process improvement efficiencies.

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.)
B1. Systems sustainability Powerlink's core IT management and service functions will be underpinned by efficient, reliable and supportable systems.	N/A (Non-Financial)
B2. Retire technical debt New application versions and upgrades typically offer more functionality and capability while addressing technical and security issues or concerns from previous releases. The result of adopting technology applications with contemporary capability is the flow on effect that allow IT solutions to inherit up-to-date capability resulting in overall reduced design complexity.	N/A (Non-Financial)
B3. Improve security maturity by leveraging up-to-date core IT application platform capability Technology applications renewal reinforces Powerlink's drive toward AESCSF "Security Profile 3" (SP-3) consistent with the requirements of a "High" criticality service provider as defined by the Australian Cyber Security Centre (ACSC) and the Australian Energy Market Operator (AEMO).	N/A (Non-Financial)
B4. Process improvement efficiencies The implementation of contemporary capability is anticipated to support process improvement efficiencies through: • Improved integration between applications for information sharing. • Improved and secure integration for shared services with partner's such as EQ. • Improved automation of business processes, approvals and reporting. • Improved management of mobile devices and mobile services supporting field delivery. • Improved integration with cloud services. • Improved IT fleet and software distribution management. • Increased enablement of remote working and collaboration capabilities.	Contributes to Powerlink's productivity improvement
B5. Improve corporate and remote user experience. Due to the global pandemic at the start of 2020 Powerlink had a surge in demand for mobility and remote user access in all aspects of business operations. An opportunity exists to leverage the technology application renewal to improve capabilities that, in previous regulatory periods, may not have foreseen unique 2020 demands. New versions and upgrades of applications, typically have increased or improved functionality and useability than previous releases this contributes to an improved user experience.	N/A (Non-Financial)
B6. Improve data retention and disaster recovery The investment in contemporary backup management is anticipated to support	N/A (Non-Financial)

Benefit Description	Financial Value ($M Real 2021/22 p.a.)
process improvement efficiencies through: • Improved restore time. • Improved RPO/RTO times. • Improved methods for data/system recovery. • Improved protection methods for data/systems. • Improved archiving methods.	

Table 8: Option 2 Benefits

2.2.3. Risk Mitigation

Risk Description	Inherent risk 2027	Nature of Mitigation	Mitigation through this option
R1 - Business operational impact Inability to effectively share and collaborate with external partners and stakeholders due to supporting technology becoming legacy and not having compat bility with contemporary methods. **Risk categories – (Legal & Compliance, Projects, Safety)**	**Moderate**	Cyclic renewal of technology applications with modern capability provides a contemporary platform able to support current collaboration methods securely. Likelihood – **Very Rare** Consequence – **Minor**	**Low**
R2 – Cybersecurity With the inability to progress major system release upgrades, which can include access control and security updates, coupled with the growing sophistication of cybersecurity attacks, there is increasing potential for: • Undetected data corruption or manipulation. • Disclosure of personal or sensitive information. • Loss of control of Active Directory, Exchange, SCCM and other core IT network systems. • Threat of hostile takeover. • Malicious access to OT networks, EMS and SCADA. **Risk categories – (Projects, Safety, Legal & Compliance, Stakeholder)**	**Significant**	Cyclic renewal of technology applications with modern capability and application of cyclic updates reduces threat vulnerability. Likelihood – **Very Rare** Consequence – **Major**	**Moderate**
R3 – Cybersecurity Inability to securely wipe and remove access for a lost or stolen mobile device. **Risk categories - – (Legal &**	**Significant**	Cyclic renewal of mobile device management platforms with modern capability significantly reduces threat vulnerability. Likelihood – **Very Rare**	**Low**

Risk Description	Inherent risk 2027	Nature of Mitigation	Mitigation through this option
Compliance, Projects, Safety)		Consequence – **Moderate**	
R4 - Business operational impact Inability to restore corporate data and systems from backup in the event of incorrect deletion or system lose. **Risk categories – (Legal & Compliance, Projects, Safety, Stakeholders, whole of business, disaster recovery)**	**Moderate**	Cyclic renewal of technology applications with modern capability will ensure contemporary methods in data protection, integrity checking, security and throughput are utilised reduces this risk. Likelihood – **Very Rare** Consequence – **Moderate**	**Low**
R5 - Business operational impact Inability to restore corporate data and systems from backup in the event disaster recovery. **Risk categories – (Legal & Compliance, Projects, Safety, Stakeholders, whole of business, disaster recovery)**	**Significant**	Cyclic renewal of technology applications with modern capability will ensure contemporary methods in data protection, integrity checking, security and throughput are utilised reduces this risk. Likelihood – **Very Rare** Consequence – **Major**	**Moderate**
R6 – Business operational impact Inability to communicate effectively with external parties, vendors or customers due to a loss of email services. **Risk categories – (Contracts, Customers, Projects, Safety, Stakeholders, whole of business)**	**Moderate**	Cyclic renewal of messaging and calendaring services with modern capability provide improved stability and reliability. Likelihood – **Very Rare** Consequence – **Minor**	**Low**

Table 9: Option 2 Risk Mitigation

Figure 3 below summarises the risk position of adopting option 2 (pre- and post-mitigation assessment of each risk tabled above).

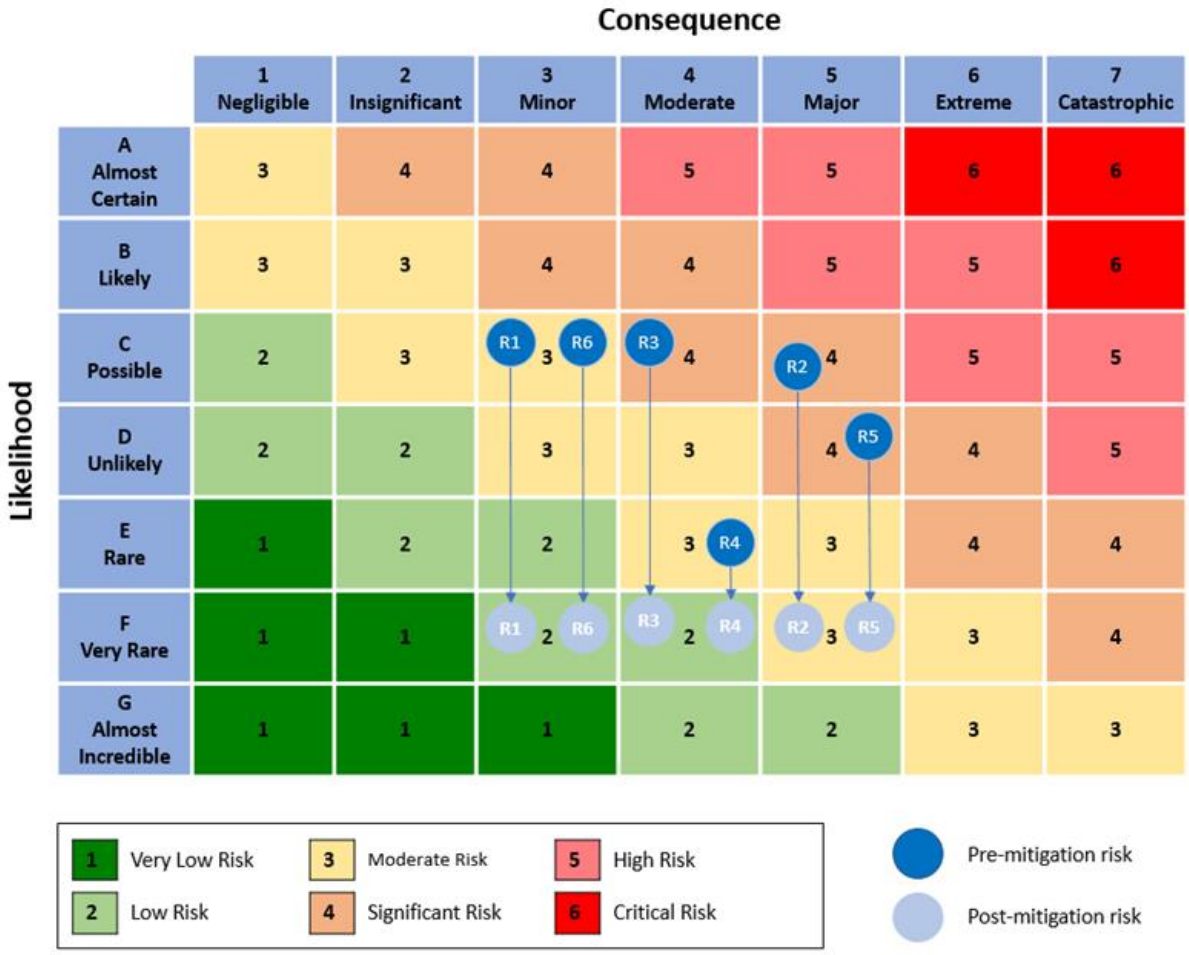

Figure 3: Option 2 - Risk Assessment

2.3. Two option reasoning

Due to diversity in the application capabilities and use mainly being office productivity and supporting infrastructure applications that are covered by this investment case, it was deemed that there were only two legitimate investment options.

Without the ability to consolidate or rationalise applications or capabilities, and with the office productivity suite already migrated to cloud services there was not a viable third option for potential investment that would stand up to scrutiny as a valid option.

2.4. Option Financial Comparison

Table 10 (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	(2,746,358)	-	
Option 2	Cyclic renewal of the technology applications.	(2,414,116)	332,241	**Least Cost**

Table 10: Option NPV Financial Comparison

Consistent with the above analysis, Option 2 "Cyclic renewal of the technology applications" is recommended.

2.5. Cashflow Summary

Table 11 (below) provides a summary of forecast cashflow over the 10 year analysis period for the recommended option (i.e. Option 2).

[redacted]

Table 11: Cashflow Summary (Recommended Option)

3. RECOMMENDATION

3.1. Recommended Solution

It is recommended to endorse "**Option 2: Cyclic renewal of the technology applications**". This option represents the renewal of technology application systems capability, ensuring ongoing sustainability and support for broader business improvement, consistent with IT principles in the delivery and management of IT services.

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 [redacted] capex and [redacted] opex (FY21/22 real terms) with a 10 year NPV benefit of $0.33M relative to the base case counterfactual.

3.2. High Level Timeline

Figure 4 (below) depicts the planned timeframe for implementation of the recommended option.

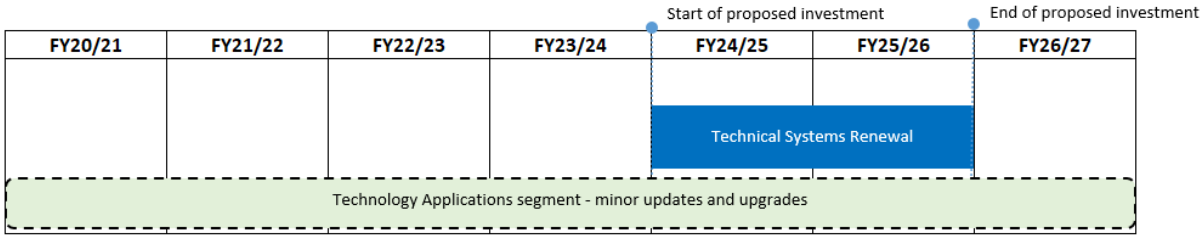

Figure 4: High Level Investment Timeline

3.3. Initiative Value Assessment

Figure 5 (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 above the 75th percentile in assessment against parameter B, C and D, and at the 65th against parameter A.

Figure 5: Initiative Value Assessment

4. SUPPORTING DETAIL

4.1. Program Delivery Risks

Table 12 (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	This initiative is dependent on the knowledge and expertise of Powerlink's personnel including (but not limited to): • Stakeholder Management and Engagement • Architects • IT specialists These resources also have business as usual (BAU) responsibilities.	Moderate	**Accept and Mitigate:** The project will be delivered through a combination of internal and external resourcing. The project and line-managers also have a responsibility to identify potential constrains and manage potential fatigue. This initiative is renewing Powerlink's supporting technology applications, which are core to the corporate IT environment. It is therefore important to allocate the company's most capable staff wherever practical and apply appropriate resource retention strategies.	Low

Table 12: Technology Applications Program Delivery Risks

4.2. Program Constraints

Table 13 (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 2026, to ensure efficient, reliable and supportable systems capability underpinning Powerlink's production IT environment.
02	Financial	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. Endorsement of this investment case does not constitute approval for expenditure. A more detailed investment case will be developed consistent with Powerlink's investment governance processes to confirm the final initiative scope and budget. The investment case will require endorsement by the Powerlink Executive Committee for Digital Technolofy (ECDT).
03	Workforce Impact and Change Management	Technology applications provide the platform for all IT services 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

#	Type	Description
		employ contemporary training methods and change management techniques to minimise the impact of the workforce.

Table 13: Technology Applications Program Constraints

4.3. Program Assumptions

Specific assumptions for each investment option are provided in section 2. Table 14 (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. Powerlink IT technical resources allocated to the program will remain available to both the program and were necessary available to their BAU roles and responsibilities. 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.
03	Priority	Through the life of the program, Powerlink and our stakeholders will continue to prioritise the need for investment in technology applications consistent with the "Investment Need" described in section 2 of this document.
04	Scope	This program seeks to undertake a renewal of Powerlink's technology application platforms in line with prudent application software asset lifecycle management. The scope covers the systems support this capability as outlined in section 1.5.1.

Table 14: Technology Applications Program Assumptions

4.4. Program Dependencies

This project is inter-dependent with the projects and activities described in 15 below.

#	Type	Description
01	Exchange Migration	It is planned that the Exchange environment will be migrated before commencement of the technology application systems renewals to ensure resource availability and integration planning.

Table 15: Technology Applications Program Dependencies

4.5. Business Area Impacts

Table 16 (below) summarises key business area impacts.

#	Impacted Group	Description
01	Powerlink Executive Leadership Team	• Require awareness of the planned investment goals and to provide ongoing oversight of the program, with direct governance duly delegated to the Program Board.
02	Business Workgroups	• 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.
03	IT and OT Workgroups	• Contribute to the planned deployment of technology application solutions, related business process changes and change management activities and to optimise coordination with other planned projects and programs as well as planned software and hardware renewals.
04	BIT Operations & Applications Workgroups	• Provide resourcing into the program as key SMEs and users of the systems. • Will be directly involved in the planning, implementation and support of the renewed systems and solutions.

Table 16: Technology Applications 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
Capex	Capital Expenditure
EQ	Energy Queensland
IT	Information Technology
NPV	Net Present Value
Opex	Operating Expenditure
PQ	Powerlink Queensland
TNSP	Transmission Network Service Provider
TRA	Threat Risk Assessment
CMDB	Configuration Management Database