ICT Asset and Works Management

Business Case

25 January 2024

Part of the Energy Queensland Group

CONTENTS

1 EXECUTIVE SUMMARY

Title	Non-Network ICT – Asset and Works Management
Application	Energex and Ergon Energy Network
Expenditure category	☐ Replacement ☐ Augmentation ☐ Connections ☐ Tools and Equipment ☒ Non-network ICT ☐ Property ☐ Fleet
Identified need	☐ Network resilience ☐ Facilitate customer and community opportunities ☒ Evolving grid infrastructure ☒ Safe, efficient and affordable operations This business case addresses the non-system ICT investment require to support the drivers 'Evolving grid infrastructure' and 'Safe, efficient and affordable operations. Energy Queensland is committed to: • Prudently keep these existing Asset and Works Management business capabilities current and fit for purpose, including legislative, regulatory, compliance and safety changes, • Continue to unlock new value from investments in Asset and Works Management systems, by improved adoption of available functionality. • Adapt our Asset and Works Management capabilities to a changing business environment (new and more complex asset classes, growing and more complex program of work, more severe weather events, growing skills requirement for field work force), in support of the energy transition, and • Continue to support the growing need for high-quality network and asset data, on which prudent and efficient Asset and Works Management, as well as many other non-network ICT and network investments' benefits depend.
Benefits	This business case realises three benefit categories: maintained core systems, improved asset lifecycle management decision making, and enhanced safety of public and staff. There are no direct realisable financial benefits associated with this business case.
Expenditure[1]	The total investment costs associated with the recommended option ($M). FY26: [redacted] FY27: [redacted] FY28: [redacted] FY29: [redacted] FY30: [redacted] Total 2025-30: [redacted]

[1] All financial figures have been rounded and shown in $M throughout this document, shown using the costing approach for non-network ICT expenditure described in the Non-network ICT Plan 2025-30 document section 7.1.

2 DOCUMENT BACKGROUND

2.1 Purpose of Document

The purpose of this document is to outline the Energex and Ergon Energy Network's proposed non-network ICT program of work pertaining to the Asset and Works Management business capabilities for next regulatory control period from 1 July 2025 to 30 June 2030 (2025-30).

2.2 References

Table 1: Related Documents

Date	Name	Type
19/04/2023	Energex Business Narrative Ergon Energy Network Business Narrative	Direction
25/01/2024	Non-network ICT Plan 2025-30 (Attachment 5.8.01)	Document
25/01/2024	Non-network ICT Common Glossary (Attachment 5.8.10)	Document
31/10/2023	RDP 2025 Project – Shared Assumptions	Assumptions Document
26/06/2020	Energy Queensland Low Carbon Future Statement	Document
19/07/2023	Ergon Energy Network and Energex: Demand Management Plan 2023-24	Document
25/01/2024	All other non-network ICT business cases (Attachments 5.8.02 to 5.8.08)	Document

2.3 Document History

Table 2: Document History

Version Number	Change Detail	Date	Updated by
0.1	Review and develop initial document templates	July to August 2022	EY
0.2	Scoped proposal, assessed costs and benefits, and developed options Draft 1 completed	September 2022 to January 2023 31 January 2023	Energy Queensland EY

Version Number	Change Detail	Date	Updated by
0.3	Continued refinement of messages, format and content including incorporating feedback from RRG Session 1 Draft 2 completed	February to June 2023 30 June 2023	Energy Queensland
0.4	Updated based on feedback from RRG Session 2, Residential Focus Groups, Draft Plan consultation and Strategic Review by Deloitte Draft 3 completed	July to November 2023 24 November 2023	Energy Queensland
0.5	Strengthened strategic narrative, benefits and options analysis Draft 4 completed	December 2023 to January 2024 25 January 2024	Energy Queensland Deloitte
1.0	Final submitted to the Australian Energy Regulator	31 January 2024	Energy Queensland

2.4 Approvals

Table 3: Document Approvals

Position	Name/s	Signature	Date
Approver: General Manager GM Foundation and Network Platform and Services			30/01/2024
Final Approver: EGM A/Chief Information Officer			30/01/2024
Final Approver: EGM Chief Engineer			30/01/2024

3 STRATEGIC CONTEXT

3.1 Background

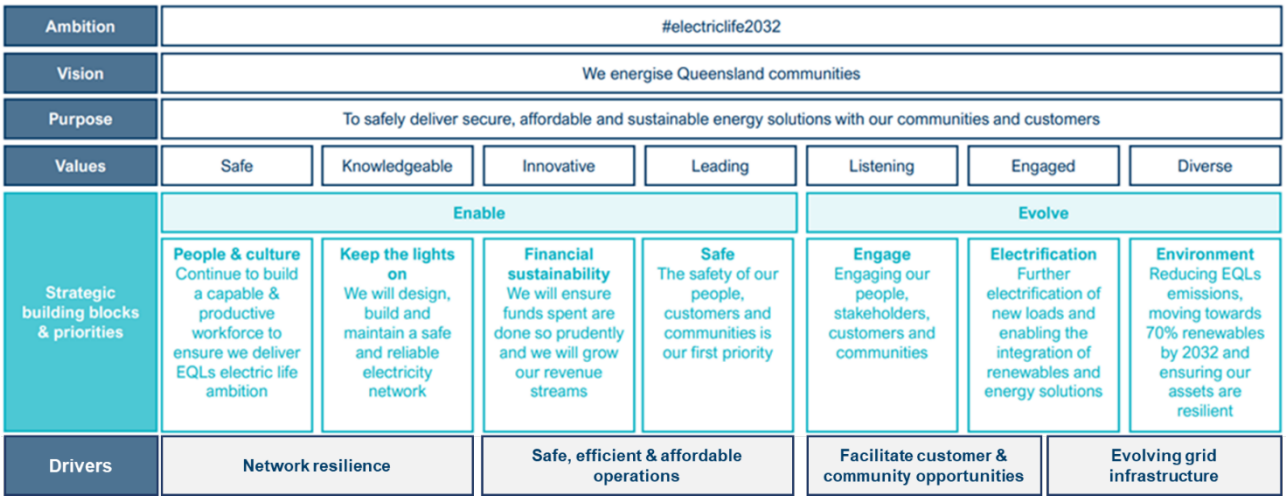
Energex and Ergon Energy Network's Asset and Works Management business capabilities are enabled by a range of integrated applications. The major applications are Asset Management (SAP S/4HANA), Program of Work Management (Oracle Primavera P6, Copperleaf Decision Analytics Solution, SAP Portfolio and Project Management), Works Management and the Geospatial Information System (ESRI ArcGIS Online, ESRI Unified GIS). These applications are supplemented by tools supporting micro scheduling and operational risk assessment, which will reach end-of-life in the 2025-30 regulatory control period.

The SAP, Copperleaf and ESRI applications implemented in the 2020-25 regulatory control period, are part of a major transformation to align and evolve Energex and Ergon Energy Network's business processes. As applications and technology licencing models are shifting from traditional on-premises licencing to more contemporary as-a-service subscription models, subsequent maintenance of these systems is increasingly dependent on the cadence set by the vendor platforms. As major upgrades shift from long intervals to more regular continuous cycles, there is also a shift from non-recurrent to recurrent non-network ICT expenditure. Energex and Ergon Energy Network paused the continuous improvement of legacy Asset and Works Management applications during this major transformation, which will now be reinstated in the upcoming regulatory control period and addressed within the following sections.

3.2 Electric Life 2032 and Investment Drivers

There are four investment drivers that underpin Energy Queensland's Electric Life 2032 ambition, vision and strategic priorities which will inform development of our expenditure plans and forecasts for the 2025-30 regulatory control period, as identified in Figure 1 and which are reflected in our Non-network ICT Plan 2025-30. The investment drivers are reliant on investment in information technology (IT) to deliver the information, infrastructure, security and capability across the breadth of our customer base, and to support the ecosystem of employees, contractors and suppliers who deliver the services that customers expect.

Figure 1: Energy Queensland's Strategic Framework

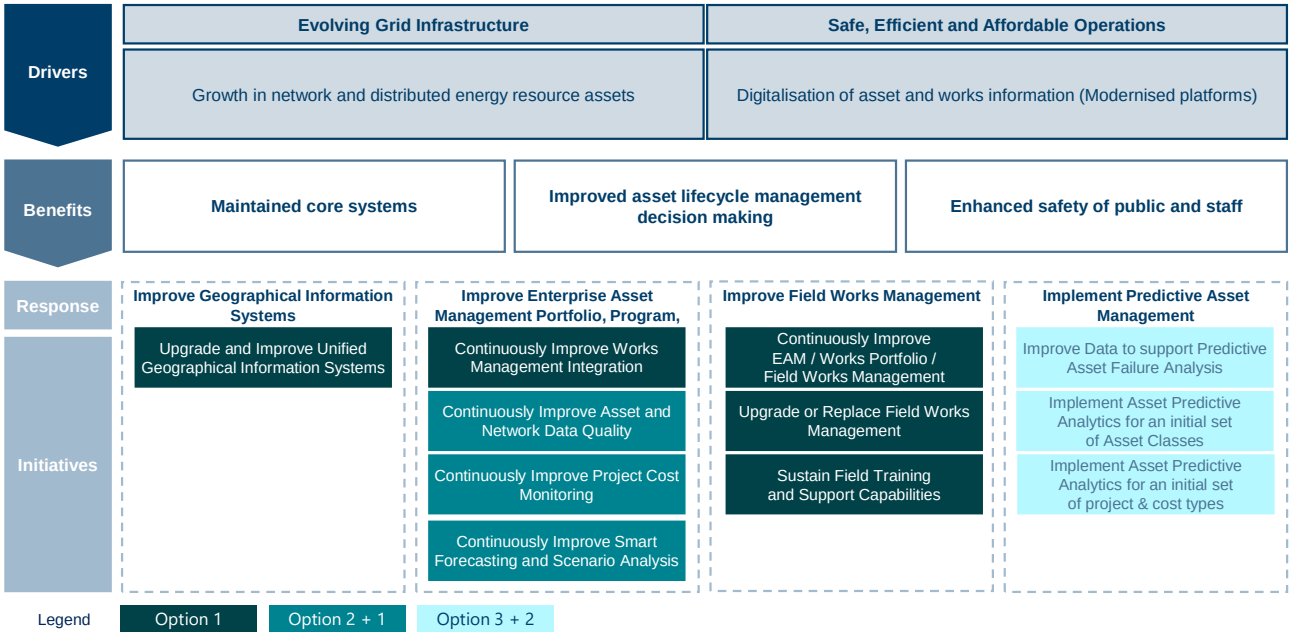


This business case addresses the non-system ICT investment required to support the investment drivers 'Evolving grid infrastructure' and 'Safe, efficient and affordable operations'. Energy Queensland is:

- Planning for an operating environment that is increasingly dominated by the electrification of industrial processes and the integration of renewable energy solutions, including distributed energy resources (DER). The Assets and Works Management business case will enable the technology capability to manage the growing diversity assets, uptake of DER and the bi-directional flow of electricity throughout our networks.
- Committed to delivering electricity services in the most efficient and affordable way, with consideration for customer, community, and employee health and safety. The Asset and Work Management business case facilitates the digitalisation and technological advancement of our customers and employees, maintaining compliant systems, secure data access, secure technology infrastructure, ensuring device resilience, and providing integrated services.

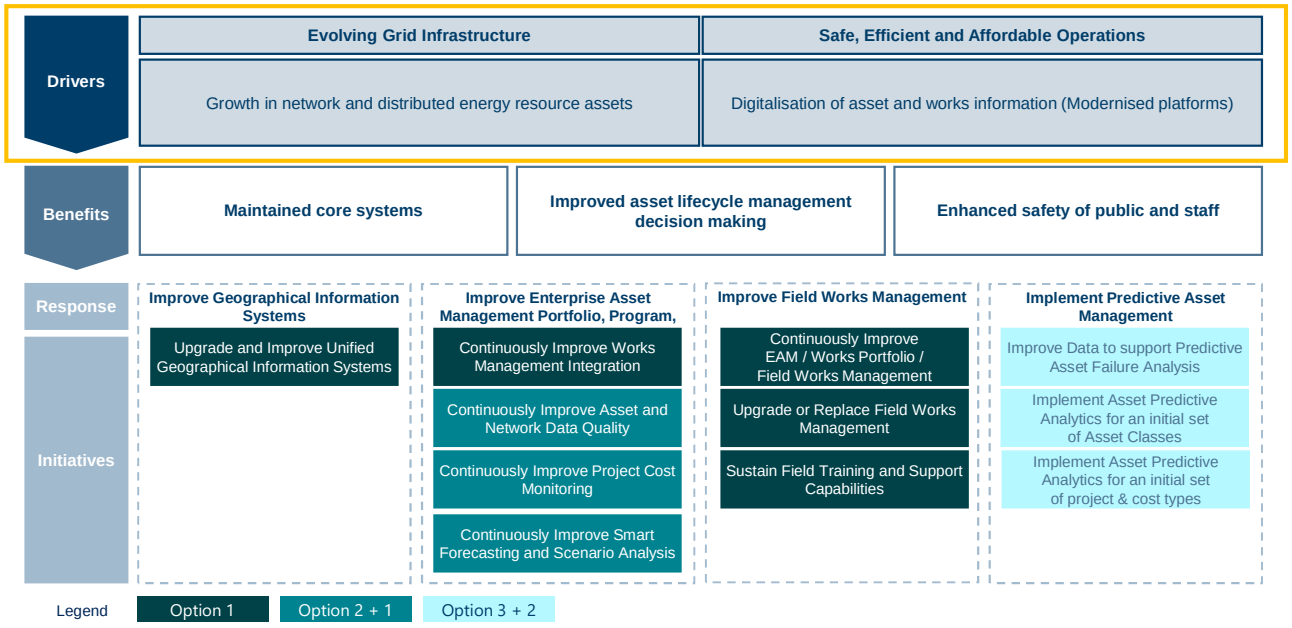
This business case identifies one sub-drivers within each investment driver. For each of these sub-drivers, we have identified the challenges for investment, the benefits that can be realised, and the objectives that can be met and outcomes achieved through the delivery of a strategic response (i.e., programs).

Figure 2: Investment Logic Map for Asset and Works Management business case



3.3 Drivers and Challenges

Figure 3: Investment Logic Map identifying two sub-drivers for Asset and Works Management business case



The two sub-drivers for investment for this business case are:

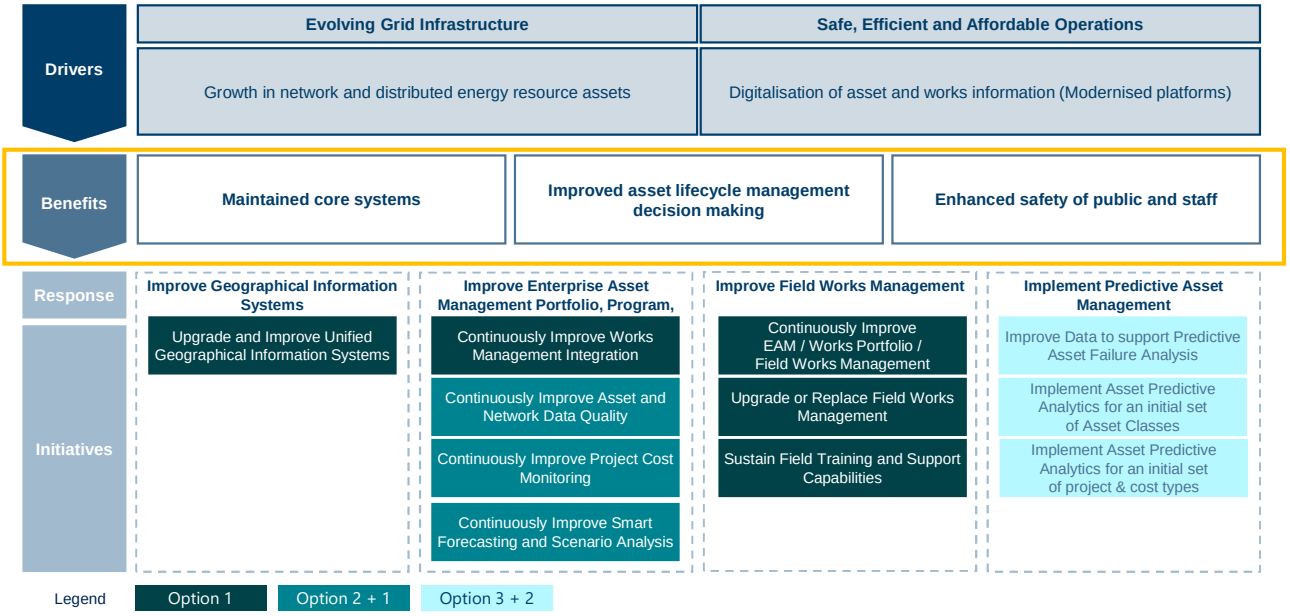
- **Growth in network and distributed energy resource assets.** The rapid growth and increased consumer uptake of renewable technologies, including electric vehicles, battery energy storage systems, solar systems, and smart metering, is shifting how customers use electricity and engage with our network. This change in customer behaviour empowers users of the network to generate, store and manage their own electricity, bringing forward a unique set of challenges and opportunities for a modern DNSP in providing a resilient and well-integrated energy network to meet future needs.

  The way in which the network will need to respond is through the provision of modern infrastructure to aggregate, orchestrate and optimise both front-of-meter (FTM) and behind-the-meter (BTM) assets and endpoints at the utility and customer level. A more dynamic system of incorporating these new technologies, and understanding how people are using and generating electricity, underpinned by a shared data foundation, will support the transformation of the network into a more intelligent grid that supports our growing requirements by utilising all available solutions, while ensuring the network is protected and resilient.

- **Digitalisation of asset and works information (modernised platforms).** The integration of DER into the electricity network is becoming increasingly challenging as Energex and Ergon Energy Network must balance safely providing clean, reliable and smart electricity with addressing customers' affordability concerns. It is critical that Energex and Ergon Energy Network manage the growing volume and variety of operational data received as customer numbers increase and operations become more complex and technologically dependent – reducing the risk introduced by unsupported and non-functional systems and ensuring its Asset and Works Management capabilities are both effective and efficient in enabling the future integrated energy network.

3.4 Way Forward and Benefits

Figure 4: Investment Logic Map identifying three benefit categories that address the drivers



We have identified the following benefit categories that can be realised in response to the identified drivers. Please refer to section 4.3 and 6.2 for an analysis of the quantifiable and qualitative benefits associated with the investment.

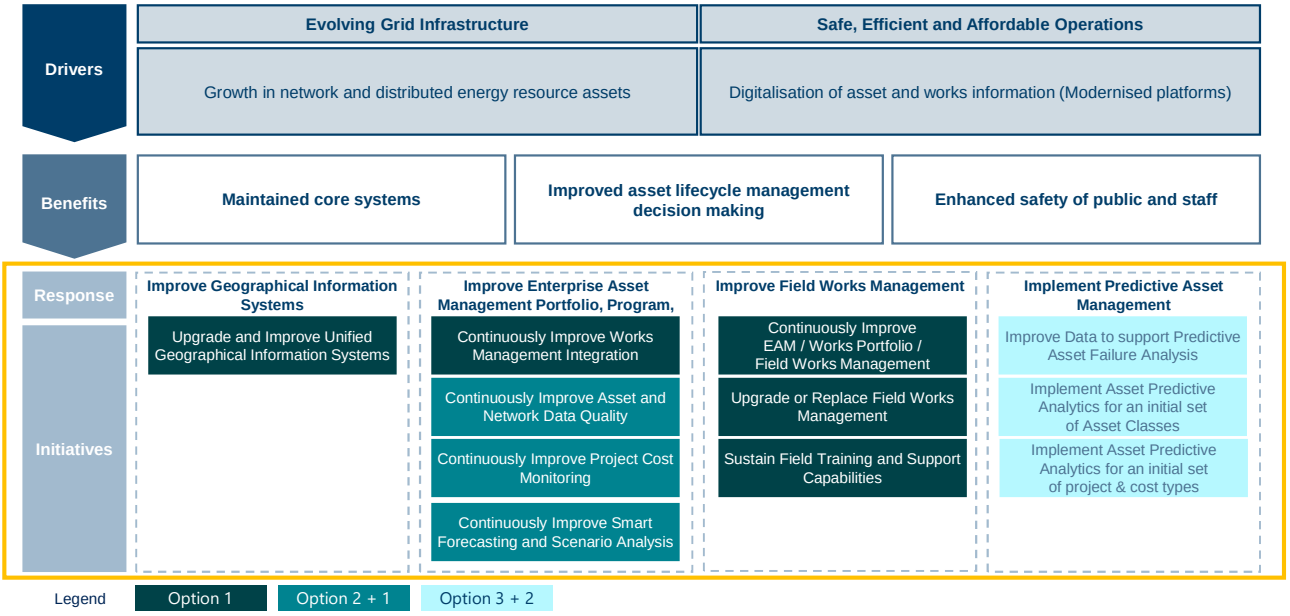
- **Maintained core systems**. Maintaining core systems not only enhances overall performance through the adoption of up-to-date technology but also contributes to a more reliable, supportable, and adaptable operational environment. The list below provides information on the benefits:
  - Adaptability to evolving systems: Keep pace with ongoing changes in other systems, capabilities and processes.
  - Maintain system supportability: Able to access vendor support for current versions, maintaining the supportability of systems.
  - Expert supportability: Leverage experienced or specialist workforce to provide remote assistance to the emergent workforce.
  - Improved digital field user experience: Minor improvements to the digital field user experience and tools.
- **Improved asset lifecycle management decision making**. Enhanced access to asset and network data that empowers decision makers with continuously improving data quality, project cost monitoring and smart forecasting capability. The list below provides information on the benefits:
  - Improved asset investment and lifecycle management decisions: Enhanced decision-making ability for investment into assets and asset lifecycle management through improved digital capabilities and quality of network and asset data.

- Maximise investment benefits: Ability to generate maximum benefits from the significant investments in complex and contemporary Asset and Works Management functionality in the 2020-25 regulatory control period, through continuous efforts to improve and adopt existing capabilities.
- Increased reliability of delivery of works: Effective and efficient works delivery for both, network program-of-work and customer service work, through better forecasting, scheduling, resource planning and utilisation and smarter cost management, despite growth in works complexity and volume, and potential disruptions of works delivery through weather events.
- Realising potential for complex assets: Ability to support a larger variety and more complex asset types throughout their lifecycle.
- Enhanced stakeholder confidence: Improved stakeholder confidence in asset and network data, including for customer investment decision making and DER connection planning.
- Customer service excellence: Effective and efficient customer service work despite increasing complexity.
- Address resource demands: Ability to adopt new processes, procedures or tools efficiently and effectively in the field, meeting future resourcing demand and pace of change with the energy transition.

- **Enhanced safety of public and staff.** Improved asset and network data delivers enhanced training capabilities, knowledge retention and augmented support capability enabling an enhanced safety environment for public and staff.
  - Enhanced stakeholder safety: Improved public, staff, and asset safety, through improved digital capabilities and better-quality network and asset data and information.
  - Lowered carbon footprint: Reduced carbon emissions through avoided truck rolls.
  - Augmented training capabilities: Minor improvement in effective training for Energex and Ergon Energy Network field workers.
  - Minimised travel: Avoided travel associated with remote training capabilities for high volume field training.
  - Enhanced safety: Improved safety outcomes and reduced safety risks through support hazard/safety awareness and on the job support at pace with changes in network technology, complexity of work, or environmental changes.
  - Knowledge reinforcement: Ability to learn and reinforce knowledge in a safe and controlled environment through simulations improving the ability to respond to high pressure situations.
  - Improved stakeholder wellbeing: Improved user experience and wellbeing for field staff through personalised applications, immersive training and simulations.

3.5 Initiatives and Outcomes

Figure 5: Investment Logic Map identifying responses and initiatives that realise the benefits



The following initiatives are proposed to meet our investment drivers, address the development challenges, and realise the benefits identified:

- **Improve Geographic Information Systems.** Energex and Ergon Energy Network has a reliance on its Geographic Information Systems, enhancing operational stability, accessibility to critical network and asset data and supportability for office and field workers. The initiatives within this response include:
  - Upgrade and improve Unified Geographic Information Systems: Continuous improvement, evergreening and major version upgrade of the Unified Geographical Information Systems.

    This includes a level of predictable conservative level of change (including regulatory, compliance and internal change), with a focus on minimum sustainment of the effectiveness of the existing business capabilities at the current level in a continuously changing environment.

    This initiative focuses on compulsory expenditure to continuously maintain Energex and Ergon Energy Network's ICT assets and systems, including ongoing or mandatory upgrades.

    This continuous improvement initiative is intended to maintain Energex and Ergon Energy Network's business capabilities with some minor improvements in efficiency outcomes.

- **Improve Enterprise Asset Management Portfolio and Program.** This response will improve the enterprise asset management portfolio and program through enhanced access to asset and network data quality, enabling more effective works management integration, operational stability, and better asset investment and lifecycle management decisions. The initiatives within this response include:
  - Continuously improve works management integration: Continuous improvement of Copperleaf, Primavera (P6) and SAP (PPM/Project System (PS)/Plant Maintenance (PM)) integration of these systems to improve efficiencies and reduce data conflicts.

    The initiative could have been considered as a recurrent continuous improvement activity within the 'Continuous improvement for EAM / Works Portfolio / Field Works Management' initiative as it is just one part of the continuous improvement for these solutions, but we have separated it out due to its cost categorisation as recurrent and its specific timing in the roadmap.
  - Continuously improve asset and network data quality: Network and asset data management uplift (a program of use cases in areas such as data quality support assurance, data capture processes, asset register consolidation), to ensure Energex and Ergon Energy Network meet stakeholder and customer expectations and business needs in regard to network and asset data quality and completeness.

    This initiative has been separated from the 'Continuous improvement for EAM / Works Portfolio / Field Works Management' initiative, an initiative that focusses on continuous improvement of ICT systems, whereas this initiative focusses on data quality, business processes, data gathering processes, with some data manipulation processes.

    This initiative applies to Option 2 and 3, with an even spread of improvement across the period.
  - Continuously improve Project Cost Monitoring: Implementation of smart project cost monitoring using ML capability to analyse historic cost overruns and forecast and reduce future project cost overruns.

    The initiative could have been considered as a new improvement activity within the Continuously improve EAM / Works Portfolio / Field Works Management initiative as it is just one part of the continuous improvement for these solutions, but we have separated it out due to its cost categorisation as non-recurrent - new/expand.

    This initiative applies to Option 2 and 3, as option 1 proposes the minimum sustainment of the effectiveness of existing business capabilities at the current level.
  - Continuously improve Smart Forecasting and Scenario Analysis: Improvement of network operations, specifically smart resource forecasting and scenario analysis.

    Implementation of smart forecasting to improve rostering of Network Operations resources and scenario analysis to understand the impact of works cancellations due to major events on the PoW.

    The initiative could have been considered as a new improvement activity within the - Continuously improve EAM / Works Portfolio / Field Works Management initiative as it is just one part of the continuous improvement for these solutions, but we have separated it out due to its cost categorisation as non-recurrent - new/expand.

This initiative applies to Option 2 and 3, as option 1 proposes the minimum sustainment of the effectiveness of existing business capabilities at the current level.

- **Improve Field Works Management.** This response will improve and enhance the applications and capabilities used to manage field works and work scheduling, resulting in better asset investment and lifecycle management decisions and field training and support capabilities. The initiatives within this response include:
  - Continuously improve EAM / Works Portfolio / Field Works Management: Reinstatement of continuous improvement expenditure put on pause during replacement of these major solutions.

    This initiative scope includes all applications within the EAM platform, not just the ones that were replaced in the current period.

    Continuous improvement of Enterprise Asset Management and Works Management systems to respond to the changing needs of the network and the business, including:

    - Adapting EAM and WM systems to support Energex and Ergon Energy Network to maintain regulatory compliance.
    - Investing in opportunities to get the most out of existing systems, for example, activating dormant functionality or better using existing capability.

    Continuous improvement of Copperleaf, Primavera (P6) and SAP (PPM/Project System (PS)/Plant Maintenance (PM)) is also included in this initiative.

    This includes a level of predictable conservative level of change (including regulatory, compliance and internal change), with a focus on minimum sustainment of the effectiveness of the existing business capabilities at the current level in a continuously changing environment.

    This initiative focuses on compulsory expenditure to continuously maintain Energex and Ergon Energy Network's ICT assets and systems, including ongoing or mandatory upgrades.

    This continuous improvement initiative is intended to maintain Energex and Ergon Energy Network's business capabilities with some minor improvements in efficiency outcomes.

    This is categorised as non-recurrent expenditure for 2025-30 as Energex and Ergon Energy Network prudently paused continuous improvement on the major EAM and WM systems during the current 2020-25 regulatory control period. Continuous improvement on the other applications in the EAM platform continued.
  - Upgrade or replace field works management: Upgrade or replacement of field works management applications and remaining in-house developed applications including works scheduling and risk assessment.

    The initiative could have been considered as a recurrent continuous improvement activity within the -Continuously improve EAM / Works Portfolio / Field Works Management initiative as it is just one part of the continuous improvement for these solutions, but we have separated it out due to its size and significance on the roadmap. The vendors direction on support and integration with the SAP solutions is currently

unclear, so this initiative has potential to be an upgrade or a replacement. The timing of this initiative has potential to move based on the vendors direction on support.

- Sustain of field training and support capabilities: Sustainment of existing and iterative development of custom mobile applications for field staff for on-the-job support, effective training, and field user experience tools that are expected to primarily address immediate safety, and possibly large-scale productivity requirements.

  This initiative has been estimated as three parallel activities, as there are three parallel streams of work:

  - Sustainment of effective training capabilities
  - Sustainment of on-the-job support capabilities
  - Sustainment of field user experience and tools

  This includes a level of predictable conservative level of change (including regulatory, compliance and internal change), with a focus on minimum sustainment of the effectiveness of the existing business capabilities at the current level in a continuously changing environment.

  This initiative focuses on compulsory expenditure to continuously maintain Energex and Ergon Energy Network's ICT assets and systems, including ongoing or mandatory upgrades.

  This continuous improvement initiative is intended to maintain Energex and Ergon Energy Network's business capabilities with some minor improvements in efficiency outcomes.

- **Improve predictive asset management.** This response will upgrade and enhance predictive analytics capabilities ahead of the expected industry transition. Through leveraging improved data to support a suite of predictive data analysis applications, Energex and Ergon Energy Network's asset and works management capability will benefit. The initiatives within this response include:

  - Improve asset and network data quality to support predictive asset failure analysis: Expansion of the continuous improvement of asset and network data quality to support predictive analysis requirements. The scope of this initiative will be limited to targeted asset classes.

    This is an extension of the other 'Continuously Improve Asset and Network Data Quality' initiative, not a replacement for it. The scope of this is just for a couple of use cases (no conceptual list yet), not across all asset classes, as we will need to pick targeted areas to analyse.

    This assumes we are developing the data gathering, collation and analysis (not using a manufacturer solution). This is mostly businesspeople and business process work, with some data manipulation processes.

    For equipment where the manufacturer embeds the data collection in the equipment and provides the collation & analytics solution, we are assuming that will be OT not ICT.

    This initiative was only considered for option 3. Option 3 was discounted early in the options analysis.

- Implement asset predictive analytics tools for an initial set of asset classes: Implementation of a general Asset Predictive Analytics tool to support the maturity of Asset Management practices. This initiative will primarily be an ICT tool implementation project, with the business process and data collection completed through the improvement of asset and network data quality to include predictive analysis.

  At this stage it is assumed this would be for a general Asset Predictive Analytics tool like SAP Asset Performance Manager, not a general Data Analytics tools and not an equipment manufacturer tool.

  Appropriate data needs to be collected for an appropriate time before a predictive analytics tool can be useful, so the implementation of a tool will be after the data gathering and data quality initiatives. This initiative would be scheduled around the major application updates.

  This initiative was only considered for Option 3. Option 3 was discounted early in the options analysis process.

- Implement Asset Predictive Analytics tools for an initial set of project and cost types: Implementation of a general Predictive Analytics tool to support the maturity of project management practices.

  Implement a Predictive Analytics tool to support the maturity of project management practices. At this stage it is not clear whether this would be predictive analytics capability within our project management tools, or an extension to our general Data Analytics tools. The implementation will likely need to be both an implementation of a tool and the business change to drive a maturity increase. This is only for a limited number of use cases (no conceptual list yet) so we can learn and them apply to more use cases in the following 2025-30 regulatory control period. This is in addition to the previous smart forecasting initiative.

  This initiative was only considered for Option 3. Option 3 was discounted early in the options analysis.

4 INVESTMENT OPTIONS

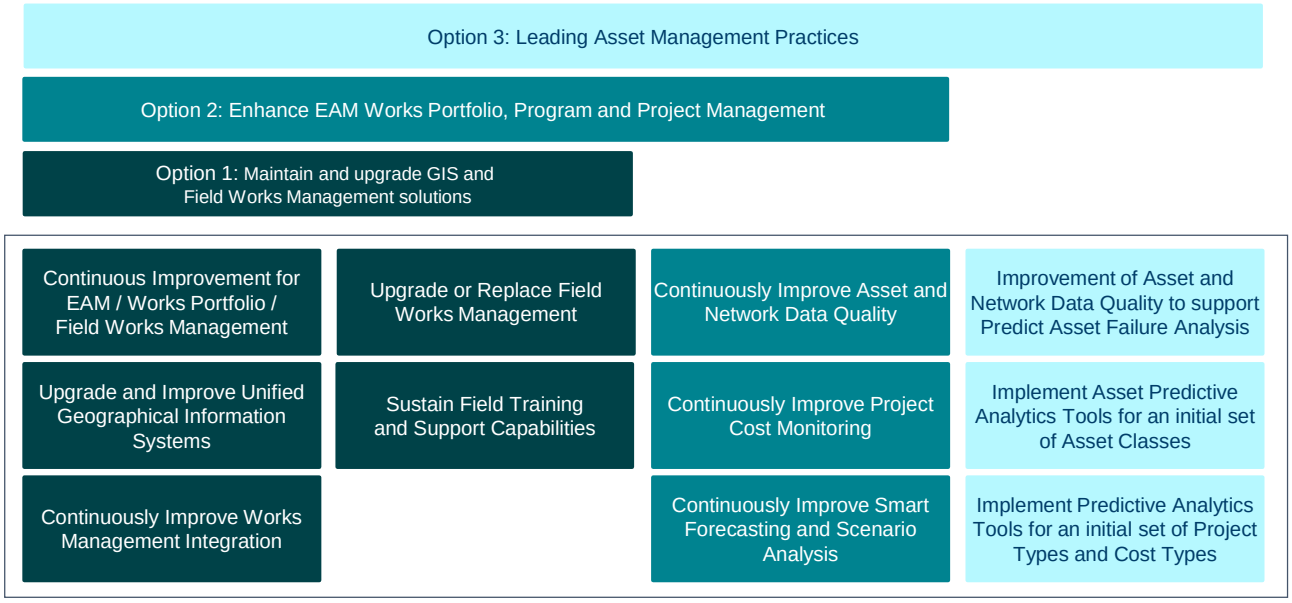
4.1 Options Description

Energex and Ergon Energy Network developed a set of three options to meet the primary business objective of having the capability to manage assets and equipment throughout their whole life cycle, including planning/design, work delivery, asset maintenance and asset data management. The secondary objective is increasing volume and variety of data amid the growth in DER, requiring technology-enabled processes to operate, manage, and improve network assets. This capability needs to evolve with ongoing regulatory and compliance requirements, along with keeping pace with the expected industry transition.

Three options were considered by Energex and Ergon Energy Network to address the drivers outlined earlier, and deliver on the benefits described above, for this business case.

The diagram in Figure 6 shows the initiatives as they are described in Section 3.5, and their spread across the three options is discussed below.

Figure 6: Initiatives Mapped to Options



Option 1: Maintain and upgrade GIS and Field Works Management solutions

Option 1 is the base case to 'Keep the Lights On' by evolving the related non-network ICT capabilities for minimum sustainment of the existing Asset and Works Management business capabilities in a continuously changing environment. This includes 'Evergreening', i.e., ensuring prudent life cycle management of non-network ICT assets and minimum necessary adjustments to digital capabilities to account for predicable changes and compliance requirements.

Within the scope of Option 1 is an initiative focused on the sustainment and continuous improvement of existing on-the-job support technologies, effective training capabilities and field user experience tools capabilities.

Option 1 involves a smaller investment program than proposed in Option 2 that covers recurrent investments, and non-recurrent investment associated with maintaining/renewing/continuously improving existing Asset and Works Management systems.

Option 1 will not adapt the existing business capabilities in keeping pace with the expected energy transition.

Option 2: Enhance EAM Works Portfolio, Program and Project Management

In addition to the following, Option 2 also includes the initiatives outlined in Option 1.

Option 2 is focused on enhancing the business capabilities within scope of Asset and Works Management, beyond that of minimum sustainment, to keep pace with the energy transition. Option 2 enables Energex and Ergon Energy Network to adapt and scale the business capabilities and ICT systems to support the expected industry transition, this is expected through:

- Continuous improvement of asset and network data management (a program of digital use cases in areas such as data quality support assurance, data capture processes, asset register consolidation).
- Scaling and continuous improvement of Program of Work and Works Management capabilities, to manage the growing size and complexity of the program of work expected during 2025-30. Scaling and continuous improvement of Program of Work and Works Management capabilities, to manage the growing size and complexity of the program of work expected during the 2025-30 regulatory control period.
- Smart forecasting in Program of Work Management and Network Operations (in areas such as rostering of resources, scenario analysis, impact of project cancellations).

Option 3: Leading Asset Management Practices

In addition to the following, Option 3 also includes the initiatives outlined in Option 1 and 2.

Option 3 is an enhanced option, Leading Asset Management Practices, by advancing Energex and Ergon Energy Network's practices to start using Predictive Analytics in limited areas of Asset Failure and Project Management.

Early in Option 3 analysis, we discounted it as not credible for 2025-30, instead deferring consideration of these initiatives to the following regulatory control period. This is because we expect that our Asset Management practices will not have matured enough in the next regulatory control period to be able to meaningfully invest in this next level of Asset Management maturity.

Predictive Analytics will require multiple years of appropriate quality asset data to be able to give reliable predictive results.

It is also possible that equipment manufacturers will build predictive analytics into their equipment and service offerings.

While we have discounted this option, we may need to consider some investigations into predictive analytics and equipment manufacturer solutions, in order to inform and shape our initiatives for the following period.

4.2 Criteria Description

The options were reviewed across the following four criteria to arrive at an overall assessment.

- **Risk mitigation associated with option:** Assesses the qualitative likelihood of each option mitigating Energy Queensland corporate risks (i.e., probability of risk occurring). For this criterion, a high / medium / low risk mitigation scoring is provided.
- **Financial benefits associated with option:** Assesses the financial benefits delivered to Energy Queensland, and the broader community from each option. For this criterion, only the total value of the financial benefits is included (if any).
- **Non-financial/non-quantified benefits associated with option:** Assesses the non-financial/not-quantified benefits delivered to Energy Queensland, and the broader community from each option. For this criterion, a limited / partial / full benefit realisation scoring is provided.
- **Costs associated with option:** Assesses the quantitative non-recurrent and recurrent (capital and operating) costs associated with each option. For this criterion, only the total value of expenditure is included.

Table 4 provides a summary of the assessment of the three options, to demonstrate the recommended option for investment.

4.3 Summary of Options Analysis

Table 4 summarises the analysis of the three options. Detailed analysis of each option against the criteria is in the Appendix.

Table 4: Summary of Options Analysis

Criteria	Option 1: Base Case - Maintain and upgrade GIS and Field Works Management solutions	Option 2: Enhance EAM Works Portfolio, Program and Project Management (recommended)	Option 3: Leading Asset Management Practices (discounted)
Risk mitigation associated with the investment	**Low risk mitigation** As option 1 is focused on 'Keep the Lights On' only, Energex and Ergon Energy Network is exposed to the risk that they will not keep pace with the expected industry transition.	**High risk mitigation** Option 2 reduces Energex and Ergon Energy Network risks by maintaining the Asset and Works Management business capabilities at pace with the industry transition.	**High risk mitigation** Same as Option 2. Option 3 additional initiatives are focussed on limited predictive analytics investigations, so will not change risk mitigation.
Financial benefits associated with the investment *(incl. NPV)*	No financial benefits associated with Option 1.	No direct realisable financial benefits are associated with Option 2. Non-financial benefits as an enabler of modern DNSPs are associated with Option 2.	No direct realisable financial benefits are associated with Option 3.

Criteria	Option 1: Base Case - Maintain and upgrade GIS and Field Works Management solutions	Option 2: Enhance EAM Works Portfolio, Program and Project Management (recommended)	Option 3: Leading Asset Management Practices (discounted)
Non-financial benefits associated with option	**Partial realisation across all categories** Non-financial benefits associated with Option 1 include: • Keeping pace with emerging cyber security vulnerabilities through keeping systems patched and on supported versions. • Adaptability to Evolving Systems. • Maintain System Supportability. • Increased Reliability of Delivery of Work. • Enhanced Stakeholder Safety.	**Full realisation across all categories** Non-financial benefits associated with Option 2 include: • All non-financial benefit associated with Option 1. • Keeping pace with stakeholders' expectations in the expected industry transition. • Realising Potential for Complex Assets • Improved Asset Investment and Lifecycle Management Decisions. • Expert supportability • Enhanced Digital Field User Experience.	**Partial realisation across all categories** Non-financial benefits associated with Option 3 include: • All non-financial benefits associated with Option 2. • Maturity uplift in Energy Queensland's predictive analytics capabilities • Enhanced asset and network data quality to support predictive analytics capabilities.
Costs associated with option *Note, expenditure relates to period FY26-FY30, in real terms as at December 2022*	*Total Expenditure* [redacted] • Recurrent capex [redacted] • Non-recurrent capex [redacted]	*Total Expenditure:* [redacted] • Recurrent capex [redacted] • Non-recurrent capex: [redacted]	*Total Expenditure* [redacted] • Recurrent capex: [redacted] • Non-recurrent capex: [redacted]
Commercial NPV ($M)	($40.5M)	($54.7M)	($68.2M)
OVERALL ASSESSMENT	**Not Recommended**	**Recommended**	**Not Recommended**

4.4 Recommended Option

Energex and Ergon Energy Network propose to proceed with Option 2: Enhance EAM Works Portfolio, Program and Project Management as the recommended option, as it is not only sustaining current business capabilities, but enables support for the industry transition.

Option 2 'Improve access provisioning and improve ERP, Operational Risk and Emissions Reporting' is the most prudent and efficient option.

Option 1 'Maintain and upgrade GIS and Field Works Management solutions' is the base case for minimum sustainment of the existing business capabilities at the current level in a continuously changing environment. Option 1 mitigates risks associated with non-compliance with regulatory and legislative obligations, critical ICT systems and cyber risks. Option 1 Maintain and upgrade GIS and Field Works Management solutions' lacks initiatives to keep pace with the changes in the industry transition.

In addition to sustaining and embedding our Asset and Works management digital capabilities, Option 2 is the only option that can enable Energex and Ergon Energy Network to continue safe, prudent, and efficient operation throughout the energy transition. Responding to challenges that arise from the growth in complexity of assets, disruption through weather events and program of work, Option 2 supports:

- Prudent and efficient planning, delivery, and life cycle management of a growing/changing asset base
- Keeping our customers, communities, staff, and assets safe
- Meeting customer and stakeholder expectations through a sustained ability to effectively and efficiently deliver more, and more complex, customer service work
- Quality network and asset data to support automation, smarter / more complex operations and the ability to realise benefits in a range of other non-network ICT and network business cases (such as Integrated Grid Planning, Customer, and network investments related to smarter DER and network operations through DERMS or the Distribution Management System (DMS)), and
- Energex's and Ergon Energy Network's ability to support Queensland in achieving the transition to renewable energy.

Option 3 'Leading Asset Management Practices' is differentiated from other options as it includes by advancing Energex and Ergon Energy Network's practices to start using Predictive Analytics in limited areas of Asset Failure and Project Management. Early in Option 3 analysis, we discounted it as not credible for 2025-30, instead deferring consideration of these initiatives to the following regulatory control period. This is because we expect that our Asset Management practices will not have matured enough in the next regulatory control period to be able to meaningfully invest in this next level of Asset Management maturity.

While Option 2 is recommended, it is dependent upon the Digital Core business case for the implementation of SAP/4HANA major upgrades, of which continuous improvement of the EAM platform is within the scope of this business case.

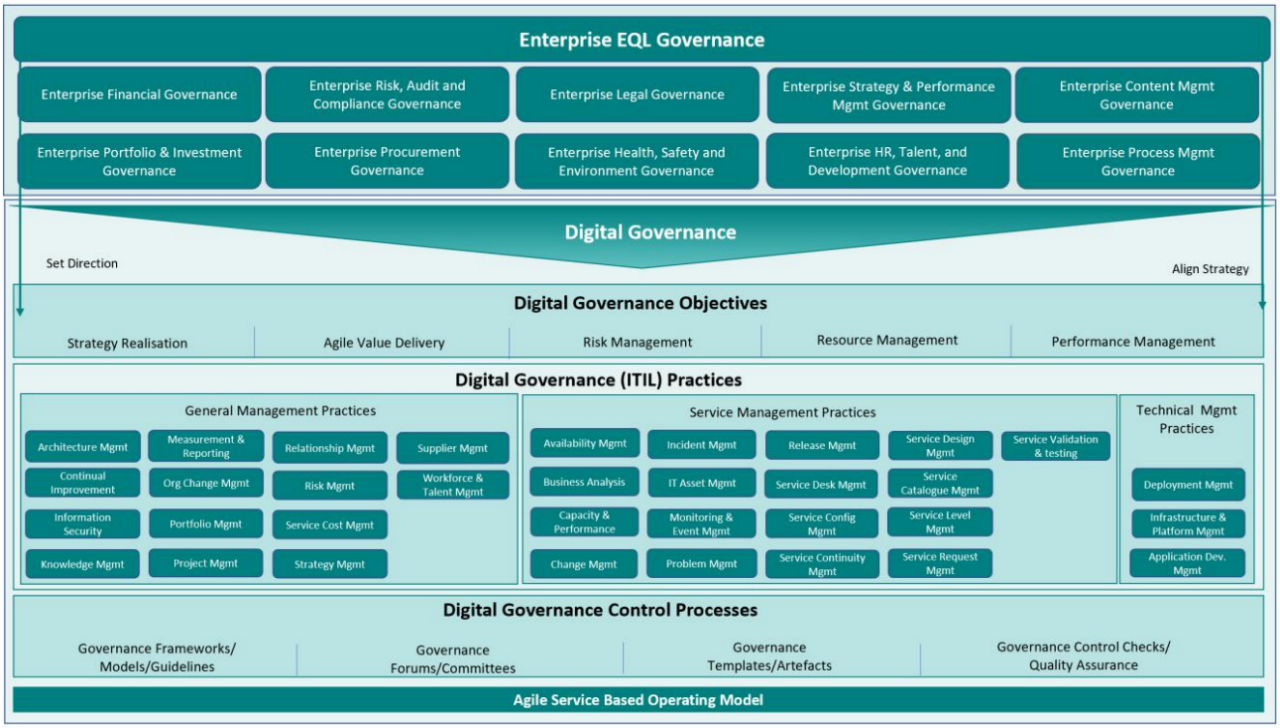
5 IMPLEMENTATION OF RECOMMENDED OPTION

To realise the significant benefits identified through Option 2, we will implement this investment in line with our standard governance and operating models, as described below.

5.1 Governance Arrangements

The initiatives will comply with the Digital Governance Framework (an element of the Corporate Governance Model). For further details, please refer to the Non-network ICT Plan 2025-30.

Figure 7: Digital Governance Model



In addition to this, the Digital Operating Model also incorporates the Scaled Agile Framework ways of working, which provides the approach to the day-to-day delivery of IT services (the how), and incorporates layers of operational governance to Digital planning, prioritisation, and execution activities. This links through to the governance objective of 'Agile Value Delivery'. For further details, please refer to the Non-network ICT Plan 2025-30.

5.2 Change Impact

Asset and Works Management capabilities are widely used across all divisions of Energex and Ergon Energy Network, including by our large number of field staff, so the impact of rolling out changes in this context can be significant. Our Program Delivery Approach (see section 5) outlines the collaboration between delivery and business functions that supports usability, change management, business readiness and adoption.

The expected major change impacts resulting from initiatives in scope of Option 2: Enhance EAM Works Portfolio, Program and Project Management include:

- **'Evergreening' and continuous improvement of existing Asset and Works Management systems.** These systems are used across all divisions of Energex and Ergon Energy Network (including management of digital program and parts of non-network asset management). As we expect to see progressive adoption of more functionality that is part of the existing application footprint, this can lead up to medium levels of change impact.
- **'Evergreening' and continuous improvement of our Geospatial platform** will have medium impacts in the Engineering and Operations divisions, as well as for Customer connection processes.
- **Program and project planning and management teams in the Operations division** will see significant change impacts, through the major upgrade of Field work schedule and dispatch functionality, as well as new smart capabilities for program and project cost monitoring and management.
- **The change impact of the network and asset data management uplifts will vary** and will depend on the exact capabilities that will be required. They can range from digital tools for improving data quality and completeness checks and audits to support our field staff and Network Asset Data groups to smart analytics capabilities that can generate new or significantly improved network and asset information from telemetry or imagery.

5.3 Delivery Roadmap

Energex and Ergon Energy Network will be delivering these initiatives as per our standing Digital Ways of Working using a continuous iterative Agile methodology and platform-based approach.

As to Asset and Works Management capabilities are widely used across all divisions of Energex and Ergon Energy Network (as they also support management of digital program and parts of non-network asset management), including by our large number of field staff (see section 3.3.5), ensuring usability and supporting adoption of changed / new capabilities is particularly a particularly important key component of delivery in this context.

Energex and Ergon Energy Network will ensure business alignment and usability by closely partnering with the Digital division throughout the delivery process, with joint accountability for delivery and will continue to consult with industrial partners. Alongside digital capability delivery, change management, business readiness and adoption are owned and managed by the business capability owners, with support from the Digital division.

The below planning roadmap represents the current view of how these initiatives will be prioritised and delivered over 2025-30. This will be continuously refined over the 2025-30 regulatory control period.

While assumptions of the expected external drivers, triggers, timing, and growth indicators in this expected industry transition have been made, Energex and Ergon Energy Network plan to continuously reassess, implementing in anticipation of the actual customer and industry needs.

Refer to Appendix 6.5 Delivery Risks and Controls, for an overview of the delivery risks, associated consequences, and proposed controls attached to the recommended option.

Figure 8: Planning Roadmap for Asset and Works Management

5.4 Investment Benefits

The recommended option delivers all the benefits described in section 3.4.

There are no realisable direct financial benefits attributable to this business case. All non-financial benefits are listed and described in Section 6.2.

5.5 Investment Costs

The categories of investment are shown in Table 5.

Table 5: Total Costs Overview ($M, real December 2022)

Category	Type	FY26	FY27	FY28	FY29	FY30	TOTAL	NPV
ICT capex	Recurrent	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ICT capex	Non-recurrent	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ICT opex	N/A	-	-	-	-	-	-	-
TOTAL		[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

5.6 Financial Summary

Table 6 summarised the overall financial position of the recommended option (Option 2), with NPV sensitivity analysis captured in Table 7 below.

Table 6: NPV Overview ($M, real December 2022)

Net Present Value	Type	Option 2
ICT capex	Recurrent	(29.3)
ICT capex	Non-recurrent	(25.4)
ICT opex	N/A	-
Benefits	N/A	-
Commercial NPV		**(54.7)**

Table 7: NPV Sensitivity ($M, real December 2022)

Net Present Value	Discount Rate		Benefits	
	+1%	-1%	125%	75%
Recommended option (Option 2)	(52.4)	(57.1)	(54.7)	(54.7)

6 APPENDICES

6.1 Applicable Compliance Requirements

Energex and Ergon Energy Network are required to meet regulatory and compliance obligations within its Asset and Works Management business capabilities in relation to its non-network ICT systems as set out below.

Table 8: Applicable Compliance Requirements Overview

Obligation	Description of Requirement
Electricity Supply (General) Regulations 2001	Electricity Supply (General) Regulation 2001 is one source of Energex and Ergon Energy Network distribution service standards in which Energex and Ergon Energy Network needs to report any network failures for small customers.
***Security of Critical Infrastructure Act* 2018 (SOCI Act)**	The SOCI Act seeks to manage the complex and evolving national security risks of sabotage, espionage and coercion posed by foreign involvement in Australia's critical infrastructure. The Act applies to 22 asset classes across 11 sectors including the energy sector and requires us to comply with certain obligations set out in the Act.
National Electricity Law and National Electricity Rules	The National Electricity Law (NEL) requires Energex and Ergon Energy Network to promote efficient investment in, and efficient operation and use of electricity services for the long-term interests of consumers of electricity with respect to price, quality, safety, reliability, and security of supply of electricity as per the National Electricity Objective (NEO). The operating and capital expenditure objectives set out in the National Electricity Rules (NER) require Energex and Ergon Energy Network to maintain both the quality, reliability, and security of supply of standard control services and the reliability and security of the distribution networks.
The Australian Energy Cyber Security Framework (AESCEF)	Energex and Ergon Energy Network must ensure their critical non-network ICT systems are kept up to date, supported and secured to meet the AESCSF maturity targets. There is potential that this will become a licensing requirement in the future and therefore the assets must be maintained to enable licenses to be kept up to date.
RIN Reporting Requirements	The Australian Energy Regulator (AER) uses RIN reporting to enable benchmarking between DNSPs and support in regulatory determinations. DNSPs are required to provide reporting to the AER annually.
***Work Health and Safety Act* 2011 (WHS Act) and Construction Work Code of Practice 2018**	The WHS Act and the Work Health and Safety Regulations (the WHS Regulations) provide Energex and Ergon Energy Network with practical guidance on how to achieve work health and safety standards and effective ways to identify and manage risks.
Model Code of Practice: Managing electrical risks in the workplace	Energex and Ergon Energy Network, in line with the Code of Practice, must eliminate electrical risks or, if that is not reasonably practicable, minimise the risks so far as is reasonably practicable.
Energy Queensland Safe System of Work	A Safe System of Work is a risk assessed documented methodology for performing work that ensures the safety of workers and any other persons affected by the work.
National Energy Customer Framework (NECF)	The NECF regulates the connection, supply, and sale of energy (electricity and gas) to grid-connected residential and small business energy customers. The NECF is comprised of the National Energy Retail Law, the National Energy Retail Regulations, and the National Energy Retail Rules.

Obligation	Description of Requirement
***Climate Change Act* 2022**	The *Climate Change Act* 2022 outlines Australia's greenhouse gas emissions reduction targets of a 43% reduction from 2005 levels by 2030 and net zero by 2050; requires the minister to prepare and table an annual climate change statement; requires the Climate Change Authority to give the minister advice in relation to the annual statement and future greenhouse gas emissions reduction targets; and provides for periodic reviews of the operation of the Act. This is implemented through the evolving climate change strategies of the Department of Climate Change, Energy, the Environment and Water (DCCEEW), which include investments and compliance requirements affecting DNSPs.
***Privacy Act* 1988, *Information Privacy Act* 2014**	As specified in the *Privacy Act* 1988, Energex and Ergon Energy Network are required to maintain strong controls and security on the accessibility of customer data as well as ensuring appropriate availability of data. Keeping Energex and Ergon Energy Network's critical systems up to date, supported and secured is a key enabler of maintaining these controls.
The Australian Energy Cyber Security Framework (AESCEF)	Energex and Ergon Energy Network must ensure their critical non-network ICT systems are kept up to date, supported and secured to meet the AESCSF maturity targets. There is potential that this will become a licensing requirement in the future and therefore the assets must be maintained to enable licenses to be kept up to date.

6.2 Options Analysis

This section summarises the options against the criteria analysed in defining the investment proposed in this business case.

Risk mitigation associated with investment

This criterion assesses the qualitative likelihood of each option mitigating Energy Queensland corporate risks (i.e., probability of risk occurring). The table below outlines the assessment against the three options.

Table 9: Mitigation of risks across Options

Risk	Option 1: Maintain and upgrade GIS and Field Works Management solutions	Option 2: Enhance EAM Works Portfolio, Program and Project Management	Option 3: Leading Asset Management Practices
Inaccurate regulatory and internal reporting	**Low contribution to risk mitigation** Option 1 includes compliance changes in its continuous improvement requirements. Major changes in data requirements for regulatory reporting are not accommodated.	**High contribution to risk mitigation** Includes non-recurrent and recurrent investment, including continuous improvement in asset and network data quality, to ensure the Energy Queensland Asset and Works Management systems are compliant with regulatory, internal reporting and legislative obligations.	**High contribution to risk mitigation** Same as Option 2. Option 3 additional initiatives are focussed on limited predictive analytics investigations, so will not change risk mitigation.
Risk of erosion or disruption in capacity for work output/productivity (customer service work and other network-program-of-work)	**Low contribution to risk mitigation** With the expected growth in customer and network PoW complexity and volume, investment in only upkeep of current capabilities without any further focus on optimisation is unlikely to be sufficient to sustain effective and efficient delivery capabilities.	**Medium contribution to risk mitigation** Includes non-recurrent and recurrent investment to ensure Energy Queensland's systems sustain effective and efficient delivery capabilities, driven by the expected growth in customer and network PoW complexity and volume.	**Medium contribution to risk mitigation** Same as Option 2. Option 3 additional initiatives are focussed on limited predictive analytics investigations, so will not change risk mitigation.

Risk	Option 1: Maintain and upgrade GIS and Field Works Management solutions	Option 2: Enhance EAM Works Portfolio, Program and Project Management	Option 3: Leading Asset Management Practices
Risk of staff and public safety and other operational incidents and issues **Risk of erosion of customer and stakeholder confidence** **Risk of imprudent, inefficient business operations, asset lifecycle decisions, grid planning decisions**	**Low contribution to risk mitigation** Not focussing on / investing in actively managing and improving network and asset data will lead in deterioration of safety, customer, and business outcomes, as Energex and Ergon Energy Network will be unable to respond rapidly to increasing levels of complexity of customer information needs, decision making, operations, and energy ecosystems / market operations which require automation, advanced analytics, and data sharing.	**High contribution to risk mitigation** Option 2 includes investments that actively manage and improve network and asset data quality, to keep pace with the industry transition. Improved network and asset data quality will mitigate the risk of deteriorating safety, customer and business outcomes driven by the industry transition.	**High contribution to risk mitigation** Same as Option 2. Option 3 additional initiatives are focussed on limited predictive analytics investigations, so will not change risk mitigation.
Inability to realise benefits from other non-network ICT and network digital investments	**Low contribution to risk mitigation** Option 1 does not include investment in capabilities that enable network and asset data quality and completeness auditing and improvement. This will constrain Energex's and Ergon Energy Network's ability to enable benefits in other business cases efficiently, i.e., Intelligent Grid Planning, and network investments in advanced network operations functions.	**High contribution to risk mitigation** Option 2 includes investment in capabilities that enable greater network and asset data quality. This will support Energex's and Ergon Energy Network's ability to enable benefits in other business cases efficiently, i.e., Intelligent Grid Planning, and network investments in advanced network operations functions.	**High contribution to risk mitigation** Same as Option 2. Option 3 additional initiatives are focussed on limited predictive analytics investigations, so will not change risk mitigation.

Financial benefits associated with investment

This business case is focused on meeting Energex and Energy Network's primary business objective of ensuring a continuing, fit-for-purpose set of EAM business capabilities, our primary ICT objective of keeping existing capabilities current, and our secondary ICT objective of improving existing capabilities. Given these objectives largely focus on the maintenance of capabilities and keeping up with required change, there are no direct realisable financial benefits associated with any initiative in this business case.

Table 10: Financial benefits associated with Options

Benefit category	Option 1: Maintain and upgrade GIS and Field Works Management solutions	Option 2: Enhance EAM Works Portfolio, Program and Project Management	Option 3: Leading Asset Management Practices
None	None	None	None

Non-financial/not-quantified benefits associated with investment

This criterion assesses the non-financial/not-quantified benefits delivered to Energy Queensland, and the broader community from each option. The table below outlines the assessment against the three options.

Table 12: Non-financial/not-quantified benefits associated with Options

Benefit category	Option 1: Maintain and upgrade GIS and Field Works Management solutions	Option 2: Enhance EAM Works Portfolio, Program and Project Management	Option 3: Leading Asset Management Practices
Maintained core systems	**Partially Realised** Reliable, supportable, and adaptable operational environment for critical Asset and Works Management capabilities through adoption of up-to-date technology, through the sustainment of asset and works management capability. Including adaptability to evolving systems and maintaining system supportability.	**Fully Realised** Reliable, supportable, and adaptable operational environment for critical Asset and Works Management capabilities through adoption of up-to-date technology, keeping pace with the industry transition. Including expert supportability, customer service excellence and knowledge reinforcement.	**Fully Realised** Reliable, supportable, and adaptable operational environment for critical Asset and Works Management capabilities through adoption of up-to-date technology, accelerating ahead of the expected industry transition.

Benefit category	Option 1: Maintain and upgrade GIS and Field Works Management solutions	Option 2: Enhance EAM Works Portfolio, Program and Project Management	Option 3: Leading Asset Management Practices
Improved asset lifecycle management decision making	**Not Realised** Keep pace with ongoing changes in systems, capabilities, and processes to contribute to a reliable, well-maintained operational environment.	**Partially Realised** Improved access to asset and network data with continuously improving data quality, project cost monitoring and smart forecasting capability. Including realising potential for complex assets, and improved asset investment and lifecycle management decisions.	**Fully Realised** Enhanced access to asset and network data that empowers decision-making for investment with continuously improving data quality, project cost monitoring and smart forecasting capability. Including enhanced asset and network data quality to support predictive analytics capabilities, delivering a maturity uplift in Energy Queensland's predictive analytics capabilities.
Enhanced safety of public and staff	**Not Realised** Improved asset and network data delivers standard training capabilities, knowledge retention and support capability enabling the sustainment of the current safety environment for public and staff.	**Fully Realised** Improved asset and network data delivers enhanced training capabilities, knowledge retention and augmented support capability enabling an enhanced safety environment for public and staff. Enhanced stakeholder safety, enhanced digital field user experience, increased reliability of delivery of work	**Fully Realised** Improved asset and network data delivers enhanced training capabilities, knowledge retention and augmented support capability enabling an enhanced safety environment for public and staff.

Costs associated with option

This criterion assesses the quantitative non-recurrent and recurrent (capital and operating) costs associated with each option. The table below outlines the assessment against the three options.

Table 13: Costs associated with Options ($M, real December 2022)

Costs category	Option 1: Maintain and upgrade GIS and Field Works Management solutions	Option 2: Enhance EAM Works Portfolio, Program and Project Management	Option 3: Leading Asset Management Practices
Recurrent capital expenditure	[redacted] Relating to the minimum sustainment of the existing Asset and Works Management business capabilities in a continuously changing environment.	[redacted] Relating to enhancing the business capabilities within scope Asset and Works Management, beyond that of minimum sustainment.	[redacted] Relating to the minimum sustainment of the existing Asset and Works Management business capabilities in a continuously changing environment.
Non-recurrent capital expenditure	[redacted] Relating to a cluster of sustainment initiatives focused on the existing and iterative development of on-the-job support technologies, effective training capabilities and field user experience tools capabilities.	[redacted] Relating to maintaining/renewing/continuously improving existing Asset and Works Management systems that are detailed in Option 1.	[redacted] Relating to enhanced practices to start using Predictive Analytics in limited areas of Asset Failure and Project Management.
Operating expenses	-	-	-
TOTAL	[redacted]	[redacted]	[redacted]

6.3 Alignment with the National Electricity Rules

Table 14: Recommended Option's Alignment with National Electricity Rules

NER capital expenditure objectives	Rationale
A building block proposal must include the total forecast capital expenditure which the DNSP considers is required in order to achieve each of the following (the capital expenditure objectives):	
6.5.7 (a) (1) **meet or manage the expected demand for standard control services over that period**	The recommended option maintains Asset and Works Management business capabilities to support works to construct and maintain Energex and Ergon Energy Network's distribution networks, enabling it to manage the increasing complexity of assets in the future network.
6.5.7 (a) (2) **comply with all applicable regulatory obligations or requirements associated with the provision of standard control services;**	The recommended option will ensure Energex and Ergon Energy Network complies with all regulatory obligations due to the greater data granularity invested in as part of this business case, as well as non-network ICT asset maintenance of critical systems for Asset and Works Management.
6.5.7 (a) (3) **to the extent that there is no applicable regulatory obligation or requirement in relation to:** (i) **the quality, reliability or security of supply of standard control services; or** (ii) **the reliability or security of the distribution system through the supply of standard control services,** **to the relevant extent:** (iii) **maintain the quality, reliability and security of supply of standard control services; and** **maintain the reliability and security of the distribution system through the supply of standard control services**	The recommended option maintains Asset and Works Management capabilities, as well as enhancing data management and supporting enhancements to works management capability, which enables efficient Asset and Works Management considering increasing complexity and risks across the network. It also enables Energex and Ergon Energy Network to remain compliant with its obligations and enables works on critical network assets to meet customer expectations.
6.5.7 (a) (4) **maintain the safety of the distribution system through the supply of standard control services.**	The recommended option implements Network and Asset Data Management initiatives to support a greater understanding of network risk and improve Energex and Ergon Energy Network's ability to deliver its Program of Work.
6.5.7 (c) **the AER must be satisfied that the total forecast capital expenditure for the regulatory control period reflects each of the following capital expenditure criteria:**	

(1) **the efficient costs of achieving the capital expenditure objectives;** (2) **the costs that a prudent operator would require to achieve the capital expenditure objectives; and** (3) **a realistic expectation of the demand forecast, and cost inputs required to achieve the capital expenditure objectives.**	The recommended option meets the regulatory capital expenditure objectives. An options and cost-benefit analysis provides sufficient evidence for Energex and Ergon Energy Network's preference for the recommended option. Costs were estimated using historical costs, knowledge of recent market procurement for equivalent services and products, as well as specialist advice from subject matter experts.

6.4 Assumptions

The enterprise assumptions on which the need for this business case has been assessed are documented in the 'RDP 2025 Project – Shared Assumptions' document. In addition, assumptions are being made for this business case.

Table 15 explores the assumptions that are applicable for the recommended option only.

Table 15: Assumptions Overview

Assumption Description	Impact if assumption proved invalid	How will the assumption be assessed?
The investment in this proposal have been determined based on assumed growth / change rate in the 2025-30 regulatory control period, based on Enterprise Assumptions on growth / change rate in our grid (e.g., customer numbers, DER capacity, EV's, dynamic connections, number of Intelligent Devices etc.) and strategic direction (such as the rollout of network support BESS which is already underway).	If the rates of growth or technology change are significantly faster than assumed, the investment included in the recommended option may not be able to mitigate business risks as effectively as predicted.	Changes in business needs will be identified through our standard processes for collaborative requirements identification, prioritisation, and digital delivery.
The post-2025 market reform and Energy Security Board Data Strategy[2] will result in significant new compliance and data sharing obligations in 2025-30.	Whilst this is unlikely, it would have minimal impact on the investment need for continuous improvement of our network and asset data capabilities.	Requirements will be identified through our standard processes for requirements identification, prioritisation and digital delivery.

[2] Energy Security Board, URL: Data Strategy (aemc.gov.au)

6.5 Delivery Risks and Controls

The recommended option (Option 2) has a number of delivery risks and consequences attached. These are detailed below, including associated controls.

Table 16: Delivery risks and controls for recommended Option 2

Risk Description	Consequences	Preventative, Detective & Responsive Controls
Control of scope risk	Failure to deliver in line with the intent and commitments within this business case	• Program Delivery Approach (see section 5) includes continuous prioritisation and integrated design and delivery approach between resources from Digital and business divisions, ensuring shared accountability and focus on the right business and employee outcomes.
Delivery of scope risk **Critical personnel and third-party risk**		• Program Delivery Approach (see section 5) follows our Digital planning, delivery and governance frameworks which put appropriate controls in place for ensuring design quality and delivery. • Scope of each initiative/release limited to Minimal Viable Solution with any functionality over that threshold treated as continuous improvement.
Business Engagement risk **Solution adoption risk**	Failure to deliver expected benefits. Negative impact on employee engagement	• The Program Delivery Approach (see section 5) outlines embedded approaches to collaborative and shared management of change, business readiness and adoption. • Incremental delivery of change and digital delivery governance across platforms will establish healthy change cadence, minimising the need for adopting multiple changes in the same business areas at the same time.

6.6 Dependencies

Asset and Works Management, being a very large core set of business systems, has interdependencies with all other non-network ICT business cases and can therefore not be assessed in isolation.

Table 17: Dependencies Overview

Dependency Description	Dependent upon
Upgrades to the SAP S/4HANA platform	Digital Core
Enterprise Intelligence (the reporting component of SAP S/4HANA suite) Network and asset data quality management improvement will depend on data management practices, data platform and the data literacy program in scope of Data & Intelligence.	Data & Intelligence

Dependency Description	Dependent upon
Digital Foundations delivers the infrastructure, cloud capabilities, technologies, integration and service management platforms for the delivery and operations of all digital capabilities. Specific dependencies for the Asset & Works Management context include: • Integration components (of the SAP S/4HANA suite) • The mobile/field workforce components of Asset and Works Management systems are deployed and used on devices which are in scope of Digital Foundations, which makes these devices, and device renewals, an integrated part of the user experience and requires an integrated approach to business adoption. • Digital Foundation has an initiative to simplify Enterprise Collaboration and Information, which is expected to also support accessibility of information in the field	Digital Foundations
Network and asset data of high quality will be required for more automated grid planning and grid operations. Integrated Grid Planning and some network business cases (especially in the DMS space) depend on better network and asset data, but also include data quality uplifts for their specific purposes, and these data quality initiatives should be coordinated with the ones included in AWM.	Integrated Grid Planning, Customer (connection assessments) Network (Engineering division) business cases (UDMS, DERMS related)
All non-network ICT and network investments are dependent on the investments in the Cyber Security business case.	Cyber Security

6.7 Reconciliation Table

Table 18: Financial Reconciliation ($M)

Capital Expenditure	Entity	FY26	FY27	FY28	FY29	FY30	Total 2025-30
Expenditure in business case $M, real December 2022	Energy Queensland	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Allocation to entity (where applicable)							
$M, real December 2022	Energex	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
$M, real December 2022	Ergon Energy Network	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
$M, real December 2022	Other	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Allocation to SCS capex (DNSP only)							
$M, real December 2022	Energex	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
$M, real December 2022	Ergon Energy Network	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Add escalation adjustments (DNSP only)							
Escalation from $M, real December 2022 to $M, real June 2025	Energex	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Escalation from $M, real December 2022 to $M, real June 2025	Ergon Energy Network	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Expenditure in AER capex model/Reset RIN $M, real June 2025	**Energex**	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Expenditure in AER capex model/Reset RIN $M, real June 2025	**Ergon Energy Network**	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]