



# ICT Data & Intelligence

Business Case

25 January 2024



Part of the Energy Queensland Group

## CONTENTS

1	EXECUTIVE SUMMARY .....	4
2	DOCUMENT BACKGROUND .....	5
	2.1 Purpose of Document .....	5
	2.2 References .....	5
	2.3 Document History .....	5
	2.4 Approvals .....	6
3	STRATEGIC CONTEXT .....	7
	3.1 Background .....	7
	3.2 Electric Life 2032 and Investment Drivers .....	7
	3.3 Drivers and Challenges .....	9
	3.4 Way Forward and Benefits .....	11
	3.5 Initiatives and Outcomes .....	13
4	INVESTMENT OPTIONS .....	15
	4.1 Options Description .....	15
	Option 1: Maintain Intelligence Platform .....	15
	Option 2: Keep Pace with Industry Advancements and the Scale of Data .....	16
	Option 3: Lead industry in Data and Intelligence .....	17
	4.2 Criteria Description .....	17
	4.3 Summary of Options Analysis .....	18
	4.4 Recommended Option .....	21
5	IMPLEMENTATION OF RECOMMENDED OPTION .....	22
	5.1 Governance Arrangements .....	22
	5.2 Change Impact .....	23
	5.3 Delivery Roadmap .....	23
	5.4 Investment Benefits .....	24
	5.5 Investment Costs .....	25
	5.6 Financial Summary .....	25

---

6	APPENDICES .....	26
6.1	Applicable Compliance Requirements .....	26
6.2	Options Analysis .....	27
	Risk mitigation associated with option .....	27
	Financial benefits associated with option .....	30
	Non-financial/not-quantified benefits associated with option .....	30
	Costs associated with option .....	33
6.3	Alignment with the National Electricity Rules.....	34
6.4	Assumptions.....	35
6.5	Delivery Risks and Control.....	36
6.6	Dependencies .....	37
6.7	Reconciliation Table.....	38

## 1 EXECUTIVE SUMMARY

Title		Non-Network ICT – Data & Intelligence																
Application	All Energy Queensland lines of business																	
Expenditure category	<input type="checkbox"/> Replacement <input type="checkbox"/> Augmentation <input type="checkbox"/> Connections <input type="checkbox"/> Tools and Equipment <input checked="" type="checkbox"/> Non-network ICT <input type="checkbox"/> Property <input type="checkbox"/> Fleet																	
Identified need	<input type="checkbox"/> Network resilience <input type="checkbox"/> Facilitate customer and community opportunities <input type="checkbox"/> Evolving grid infrastructure <input checked="" type="checkbox"/> Safe, efficient and affordable operations This business case addresses the non-network ICT investment required to support the key investment driver ‘Safe, efficient and affordable operations’. Energy Queensland is committed to delivering electricity services in the most efficient and affordable way, with consideration for customer, community, and employee health and safety. The Data & Intelligence business case enables the digitalisation and technological advancement of customer services and business capabilities by maintaining compliant and secure Data & Intelligence platforms, secure data access and sharing, evolving analytics capabilities, and leveraging growing data volumes.																	
Benefits	This business case realises three benefit categories: Maintained compliance with regulatory and legislative changes regarding data provisioning and sharing, avoided cost with scaling operations through improved data and intelligence, and improved decision making through access to high quality intelligence and insights. The quantitative benefits to be realised from this investment are \$68.8M (present value \$51.2M).																	
Recommended option	Option 2 ‘Keep pace with the industry advancements and the scale of data’ is the recommended option, as it enables the full benefits realisation of dependent business cases (refer to section 6.6), such as Integrated Grid Planning and Customer, and effectively reduces business risk for our DNSPs whilst also enabling customer value through streamlined organisational processes which drive efficient outcomes from improved decision making. Decision making and insights will also be further enhanced and augmented for both quality and quantity via evolving advanced analytics and supporting approaches.																	
Expenditure <sup>1</sup>	The total investment costs associated with the recommended option (\$M). <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th style="width: 16.6%;">FY26</th> <th style="width: 16.6%;">FY27</th> <th style="width: 16.6%;">FY28</th> <th style="width: 16.6%;">FY29</th> <th style="width: 16.6%;">FY30</th> <th style="width: 16.6%;">Total 2025-30</th> </tr> </thead> <tbody> <tr> <td style="background-color: black; color: yellow;">█</td> <td style="background-color: black; color: yellow;">█</td> <td style="background-color: black; color: yellow;">█</td> <td style="background-color: black; color: yellow;">█</td> <td style="background-color: black; color: yellow;">█</td> <td style="background-color: #cccccc;">73.3</td> </tr> </tbody> </table>						FY26	FY27	FY28	FY29	FY30	Total 2025-30	█	█	█	█	█	73.3
FY26	FY27	FY28	FY29	FY30	Total 2025-30													
█	█	█	█	█	73.3													

<sup>1</sup> All financial figures have been rounded and shown in dollars million (\$M) throughout this document, shown using the costing approach for non-network ICT expenditure described in the Non-network ICT Plan 2025-30 section 7.1.

## 2 DOCUMENT BACKGROUND

### 2.1 Purpose of Document

The purpose of this document is to outline Energy Queensland’s proposed program of work pertaining to the data and intelligence 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
25/01/2024	All other non-network ICT business cases (Attachments 5.8.02 to 5.8.08)	Documents

### 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
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

Version Number	Change Detail	Date	Updated by
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
<b>Approver: General Manager</b> GM Enterprise & Information Platform Services			30/01/2024
<b>Final Approver: EGM</b> A/Chief Information Officer			30/01/2024
<b>Final Approver: EGM</b> Chief Engineer			30/01/2024



---

## 3 STRATEGIC CONTEXT

### 3.1 Background

Data and intelligence capabilities are foundational enablers to both Energex and Ergon Energy Network's regulated services and the successful implementation of our strategic direction. In the current 2020-25 regulatory control period, Energy Queensland has prudently invested to modernise data and intelligence capabilities onto scalable cloud infrastructure to deliver contemporary functionality, including:

- Rationalisation of business intelligence to a modern suite of technologies, enabling data visualisation capabilities, including regulatory and compliance reporting.
- Consolidation of core enterprise intelligence platforms to maximise value from cloud infrastructure and avoid unnecessary duplication of costs in the context of significant increases in data volumes.
- Improvements to data governance to manage the growing range of structured and unstructured data sets and deliver foundational improvements to the management of data.
- Expansion of data science capabilities supporting pilot use cases to streamline data driven decision making through a data lake, data pipelines and machine learning.

In the upcoming 2025-30 regulatory control period, Energy Queensland anticipates continued accelerated shifts in markets, customer activity, technology, and legislative and regulatory settings. Considering this, the main objective of this business case is to advance existing data and intelligence capabilities so DNSPs can continue to deliver current and evolving obligations under the NER, generate efficiencies and benefits for customers, networks, and markets, and enable Queensland and Australia's transition to a low carbon economy.

The customer outcomes of many of Energex's and Ergon Energy Network's other non-network ICT business cases such as Integrated Grid Planning and Customer are predicated on us continuing to evolve and expand our data and intelligence capabilities. It is prudent to invest in Energy Queensland's data and intelligence capabilities to keep pace with emerging technologies and trends and to not incur unreasonable inefficiencies and cost that would have significant impacts on customers in years to come.

### 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 ICT Plan. 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**

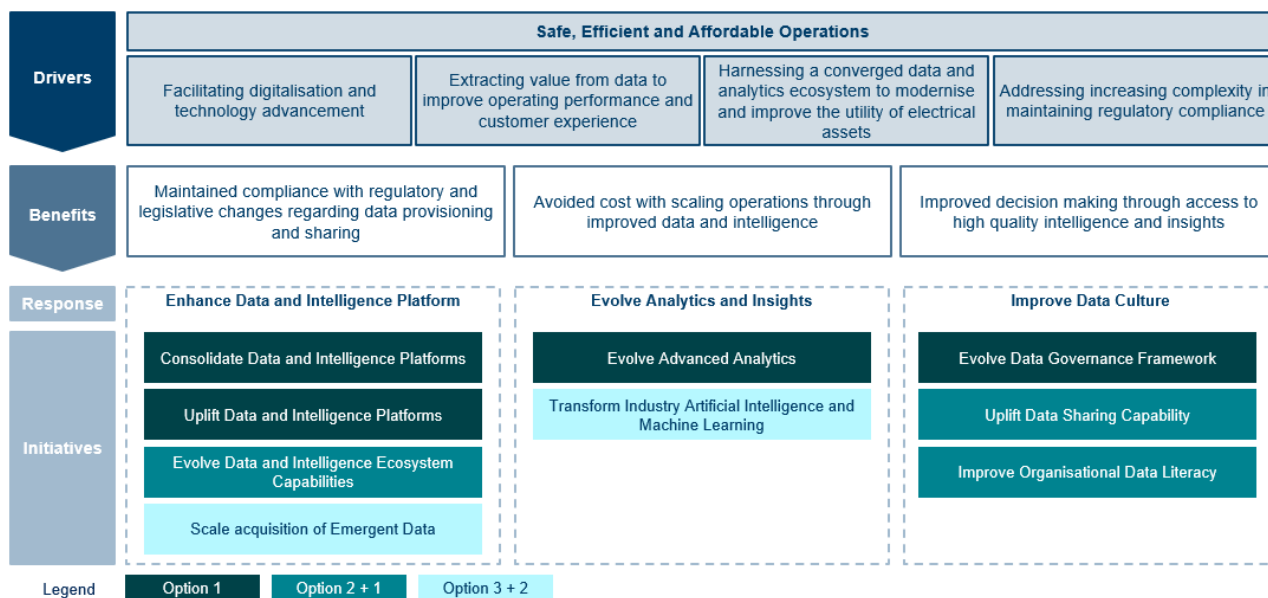
<b>Ambition</b>	#electriclife2032						
<b>Vision</b>	We energise Queensland communities						
<b>Purpose</b>	To safely deliver secure, affordable and sustainable energy solutions with our communities and customers						
<b>Values</b>	Safe	Knowledgeable	Innovative	Leading	Listening	Engaged	Diverse
<b>Strategic building blocks &amp; priorities</b>	<b>Enable</b>				<b>Evolve</b>		
	<b>People &amp; culture</b> Continue to build a capable & productive workforce to ensure we deliver EQLs electric life ambition	<b>Keep the lights on</b> We will design, build and maintain a safe and reliable electricity network	<b>Financial sustainability</b> We will ensure funds spent are done so prudently and we will grow our revenue streams	<b>Safe</b> The safety of our people, customers and communities is our first priority	<b>Engage</b> Engaging our people, stakeholders, customers and communities	<b>Electrification</b> Further electrification of new loads and enabling the integration of renewables and energy solutions	<b>Environment</b> Reducing EQLs emissions, moving towards 70% renewables by 2032 and ensuring our assets are resilient
<b>Drivers</b>	Network resilience		Safe, efficient & affordable operations		Facilitate customer & community opportunities		Evolving grid infrastructure

This business case addresses the non-network ICT investment required to support the key investment driver ‘Safe, efficient and affordable operations’. Energy Queensland is committed to delivering electricity services in the most efficient and affordable way, with consideration for customer, community, and employee health and safety. The Data & Intelligence business case enables the digitalisation and technological advancement of customer services and business capabilities by maintaining compliant and secure Data & Intelligence platforms, secure data access and sharing, evolving analytics capabilities, and leveraging growing data volumes.

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

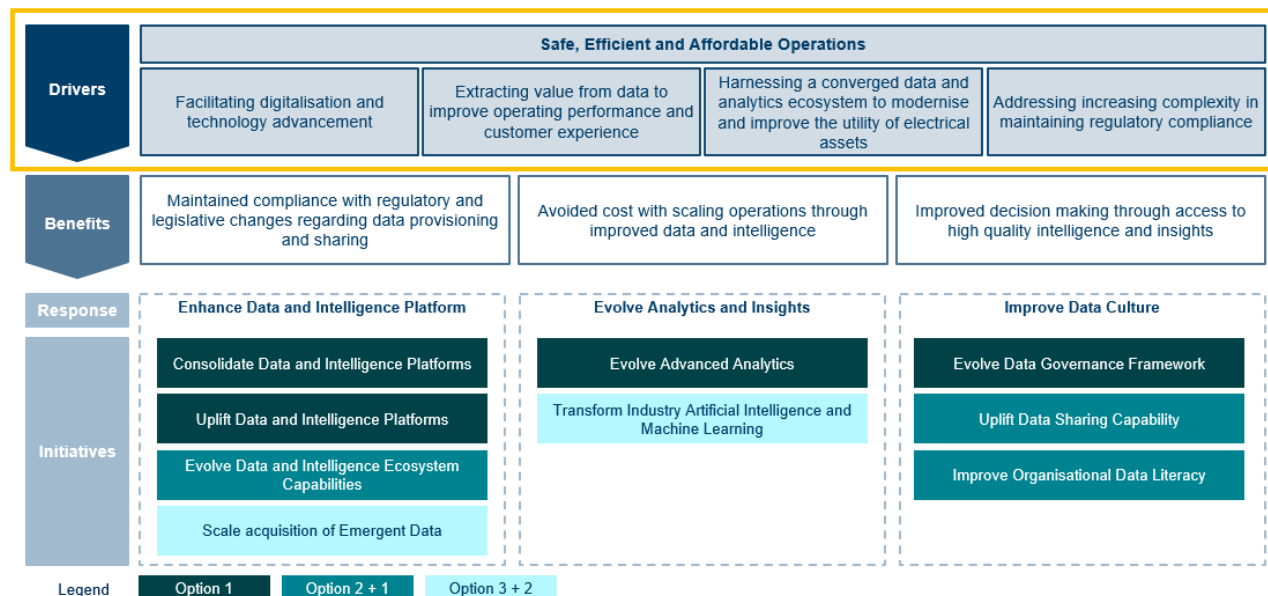


**Figure 2: Investment Logic Map for Data & Intelligence business case**



### 3.3 Drivers and Challenges

**Figure 3: Investment Logic Map identifying four sub-drivers for Data & Intelligence business case**



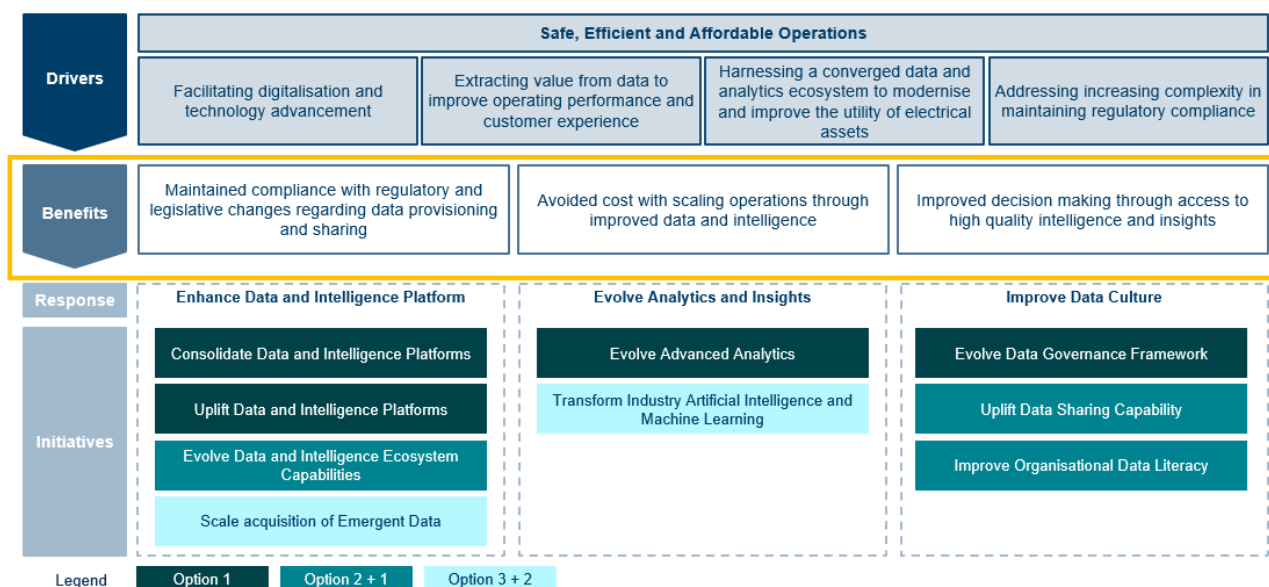
---

The four sub-drivers for investment for this business cases are:

- **Facilitating digitalisation and technology advancement.** As the energy market and ecosystem becomes more digitally connected, an evolution of data and intelligence capabilities, underpinned by digitalisation and advancing technology, is required. By consolidating data and intelligence platforms, implementing solutions which can scale appropriately to acquire new and emerging data sets, evolving data sharing mechanisms, and leveraging contemporary technology for advanced analytics, artificial intelligence (AI) and machine learning, Energy Queensland can keep pace with an increasingly data-driven energy market and maintain safe, efficient, and affordable operations.
- **Extracting value from data to improve operating performance and customer experience.** A shift in the variety, volume, and velocity of data collected and managed by Energy Queensland, plus increasingly frequent major events drive new data and intelligence use cases for operations and customers. Operating performance benefits from easier access to data, enhanced analytics, and greater clarity of data governance and processes, enabling the development of improved customer services and experiences.
- **Harnessing a converged data and analytics ecosystem to modernise and improve the utility of electrical assets.** The energy transition is resulting in an expanding and digitally connected energy market and ecosystem, including the transition to a 100% smart meter penetration target in the NEM, significant growth in DER within the distribution network, new connection types (e.g., dynamic connections), new network asset types (e.g. network batteries or intelligent devices) and considerable customer uptake of electric vehicles. Given the reliance of planning and operations functions on the increasing volume and variety of data, data and intelligence capabilities must be uplifted to enable the harnessing of these technologies to deliver efficient and reliable network operations, supporting response to increasingly frequent major events.
- **Addressing increasing complexity in maintaining regulatory compliance.** Increasing interconnectedness and digitisation is revealing inefficiencies in existing data and intelligence capabilities, resulting in risks to network investment decision-making, and data sharing across internal and external stakeholders. The uplift in data and intelligence capabilities is critical to enable improved forecasting, predictive modelling (for example), for prudent and efficient decision-making, and enable controlled and secure data sharing, thereby supporting Energy Queensland to remain compliant with its regulatory obligations.

### 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 and sub-drivers. Please refer to section 4.3 and 6.2 for an analysis of the quantifiable and qualitative benefits associated with the investment.

- Maintained compliance with regulatory and legislative changes regarding data provisioning and sharing.** This benefit category details how Energy Queensland maintains compliance with regulatory obligations by uplifting data and intelligence platforms and the sharing framework, to ensure high-utility data is securely leveraged for efficient decision-making. The list below provides information on the benefits.
  - Regulatory Compliance and Secure Data Handling: Enabled proactive, adequate and secure response to regulatory and legislative changes regarding data provisioning and data sharing.
  - Cost-effective Compliance through Data Access: Reduced cost of compliance through improved access to data and automated reporting.
- Avoided cost with scaling operations through improved data and intelligence.** This benefit category boosts scalable and cost-efficient data and intelligence operations by consolidating platforms supported by improved governance and quality datasets. The list below provides information on the benefits.
  - Avoided Resource Uplift: Avoided resource uplift requirements from data platform consolidation.

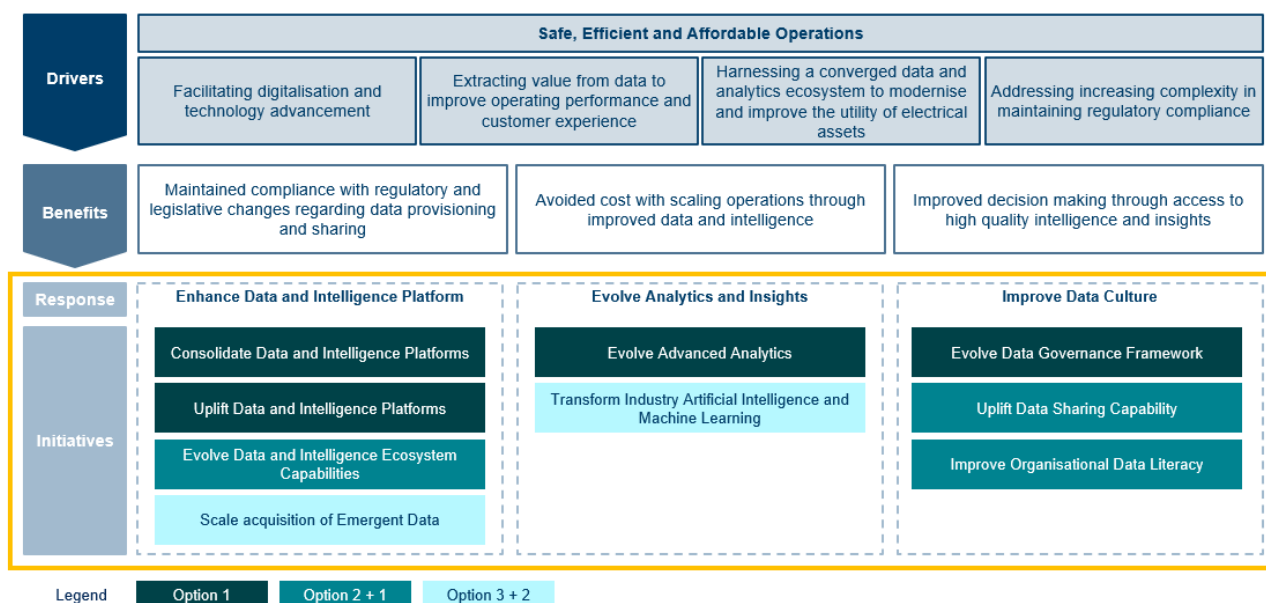
- 
- Scalable and Cost-Efficient Operations: Enabled more scalable, cost-efficient operations through improved data governance and data quality management to reduce duplication.
  - Efficient Data Analysis for Quick Responses: Increased ability to generate, manage and analyse larger volumes of data for faster response to complex problems and major events (internal and external).
  - Efficient Automation Implementation: Improved consistency and efficiency in implementing automation due to more effective data governance, enhanced data quality and richer datasets.
  - **Improved decision making through access to high quality intelligence and insights.**

This benefit category improves decision making through high-quality and consistent data, accurate cost forecasting, predictive models, new business benefits, operational efficiency, and enhanced customer experiences. The list below provides information on the benefits.

    - Improved Data Quality and Consistency: Improved data quality and consistency through automated integrations with data source systems.
    - Enhanced Stakeholder Trust in Decision-Making: Improved stakeholder trust through more effective data governance, enhanced data quality and richer data sets.
    - Accurate Forecasting and Cost Management: Improved accuracy of forecasts and costs to the regulator and shareholders due to improved data quality.
    - Improved Model Auditability and Trust: Improved auditability and trust in predictive models.
    - Unlocking New Business Benefits: Increased opportunity for future data and artificial intelligence (AI) use case capabilities to be leveraged to generate new customer and business benefits.
    - Enhanced Employee Experience: Improved employee experience due to easier access to data, efficiencies in completing data activities and greater clarity of data governance and processes.

### 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.

- Enhanced Data and Intelligence Platform.** The initiatives will enable Energy Queensland to enhance data and intelligence platforms through platform consolidation and uplift for minimal viable requirements, and capability evolution to accommodate, capture value and address the challenges from the increasing volume and variety of data. The initiatives within this response include:
  - Consolidate Data and Intelligence Platforms: Consolidation of current intelligence platforms creating a common ecosystem of technologies for delivery of data assets across the organisation and further driving cost efficiencies from an operational perspective. This will also include alignment to a consistent 'Way of Working' to drive further operational efficiencies.
  - Uplift Data and Intelligence Platforms: Minimum viable update and continuous improvement of data and analytics platforms to ensure compliance and continuity to current industry best practice and compliance with current and future regulatory requirements.
  - Evolve Data and Intelligence Ecosystem Capabilities: Evolving and scaling the capabilities of our strategic data platform in response to the exponential growth in data types and access across the business, capturing value of new technological advances in a fast-moving data and analytics environment and enable business initiatives including increasing use of growing network visibility data.
  - Scale acquisition of Emergent Data: Addresses the data challenges associated with the accelerated and scaled adoption of internet of things (IoT) and smart devices ahead of the industry curve. Acquire emergent data sets such as IoT, climate change and renewable

---

power, and incorporate into core business operations through operational artificial intelligence (AI).

- **Evolve Analytics and Insights.** These initiatives will enable Energy Queensland to evolve advanced analytics capabilities and become an industry-leading information provider through AI and machine learning. The initiatives within this response include:
  - Evolve Advanced Analytics: Improve capability, awareness, and management across the enterprise to enable increasing use of predictive models/algorithms in organisational decision making. Capability uplift across people and process is supported by contemporary technologies to enable efficient scaling to the number and complexity of predictive models actively supported and used, while valuing security and ethical use principles.
  - Transform Industry Artificial Intelligence and Machine Learning: Transformation into an industry leading information provider through the investment in people and technologies to develop our own large language models. Hyperscale data as an asset to drive generational transition within the industry in relation to data science, data visualisation, predictive analytics, automation of data pipelines, data security and machine learning model generation.
- **Improve Data Culture.** These initiatives will enable Energy Queensland to improve as a data-driven organisation through uplifted data sharing, data literacy, and data governance. The initiatives within this response include:
  - Uplift Data Sharing Capability: Minimum viable update to the data sharing framework including the identification, valuation, procurement, ingestion, security, analysis, and disposal of data. Evolve auditing and enforcement mechanisms for data sharing to ensure the usage rights align with evolving compliance requirements and internal policies.
  - Improve Organisational Data Literacy: Development of a data literacy curriculum which includes the training and continuous development of business resources. The aim of this initiative is to enable the democratisation of data, improve business decision making and ensure the safe use of data across the organisation.
  - Evolve Data Governance Framework: Continuous improvement of our data management capabilities, including policy-driven information lifecycle management requirements, reactive and proactive data quality management and reference data management. Ensure alignment to industry best practice and compliance with current and future regulatory requirements. Extend data privacy to incorporate data ethics and data rights to ensure staff are aware of their obligations for customer data, justification for collating data, and the reasons in which we use and do not use data.



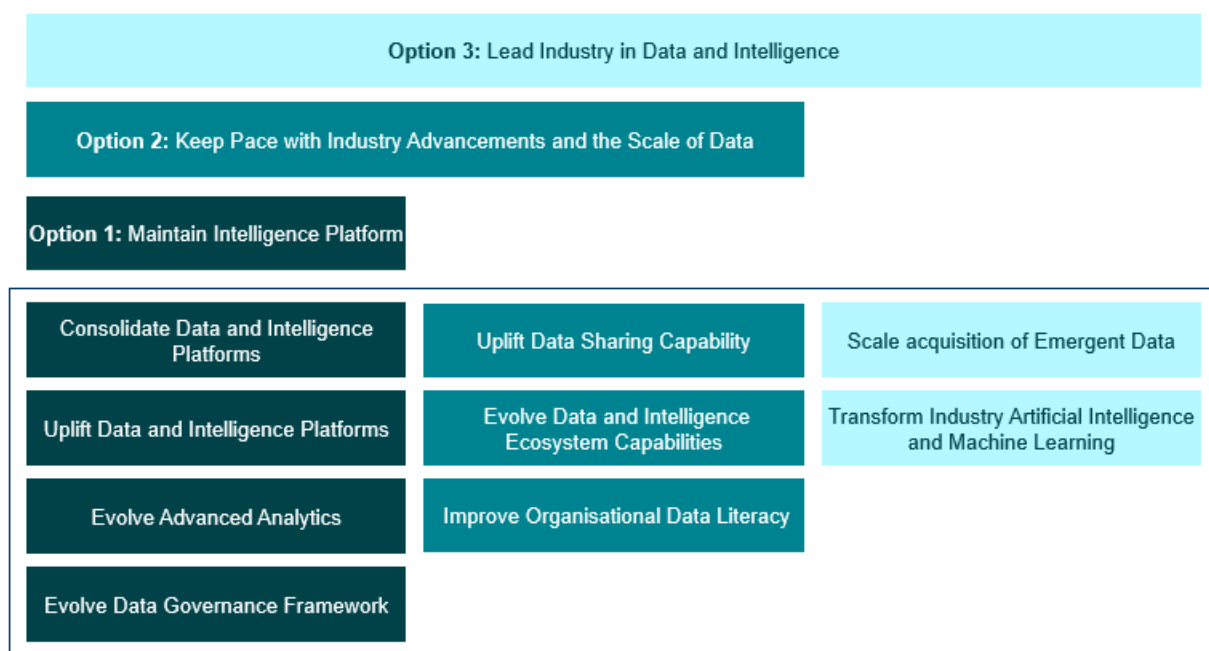
## 4 INVESTMENT OPTIONS

### 4.1 Options Description

Three options were considered by Energy Queensland to address the driver outlined earlier, and deliver on the benefits described above, for this business case.

- Option 1: Maintain Intelligence Platform
- Option 2: Keep Pace with Industry Advancements and the Scale of Data
- Option 3: Lead Industry in Data and Intelligence

**Figure 6: Initiatives Mapped to Options**



Note. each consecutive option includes initiatives from the previous option

#### Option 1: Maintain Intelligence Platform

The focus of this option is to maintain the minimum required data management and intelligence capabilities, to enable the continued operating functions for our customers and DNSP businesses, including undertaking consolidated business reporting over and above the performance reporting delivered through existing platforms (such as SAP), and access to data history (including network and regulated businesses).

In maintaining the intelligence platform, Energy Queensland would see the minimum operational sustainment of data management and analytics capabilities, with some maturity uplift to account for moderate business and compliance changes, minimum prudent investment in capability and data governance to prepare for adequate response to risks introduced through likely technology step-changes, and upkeep basic data awareness for responsible capture and treatment of data. It is

---

important to note that this business case will be agnostic to the tooling/platforms as initiatives may include different platforms depending on the use case and scope.

This option will not be sufficient however, to enable the recommended options in dependent business cases that require new and evolving data and intelligence capabilities at scale, to ensure trusted and efficient business operations. Moreover, this option leaves Energy Queensland exposed to several significant business (operational) risks (refer to section 6.2).

The following data and intelligence initiatives form part of this option:

- Consolidate data and intelligence platforms.
- Uplift data and intelligence platforms.
- Evolve advanced analytics.
- Evolve data governance framework.

## **Option 2: Keep Pace with Industry Advancements and the Scale of Data**

The focus of this option is to keep pace with the accelerating technology change and scale data operations, providing Energy Queensland with the data and intelligence capabilities required to continue to meet the needs of customers, the future electricity grid, and evolving energy ecosystem, while delivering on current and evolving compliance obligations, and enabling response to opportunities and risks presented through AI.

Energy Queensland will invest in capabilities to keep pace with accelerating technology change and scale data operations to support the exponential growth in data volumes, analytics use cases and data sharing requirements to enable efficient business decision-making; enable safe, compliant, effective, and efficient data utilisation across the business and our multi-cloud environment and adopt big data and data science analytics at scale.

Moreover, greater investment in workforce data literacy and skills, including education on new technologies, will enable business users to create value from data, and extended data ethics, while evolving advanced analytics and supporting approaches will further enhance and augment decision-making and knowledge for both quality and quantity.

This option, to the best possible extent, mitigates the risks identified in option 1. However, it does not mitigate the risk of effective and timely response to emerging disruptive risks or opportunities of AI and big data.

In addition to the initiatives referred to in Option 1, the following data and intelligence initiatives form part of this option:

- Uplift data sharing capability.
- Evolve data and intelligence ecosystem capabilities.
- Improve organisational data literacy.

---

### Option 3: Lead industry in Data and Intelligence

The focus of this option is to lead industry in data and intelligence capabilities.

This option strengthens Energy Queensland's end-to-end data and intelligence capabilities, driving organisational transformation to become an information centric business operating model, accelerating adoption of IoT and smart devices ahead of the industry curve, and promoting our position as first movers in the industry in leading, pre-empting and creating standards and benchmarks.

The residual risk of disruptive events in AI and big data is better mitigated through additional initiatives in this option.

In addition to the initiatives referred to in Option 1, and 2, the following data and intelligence initiatives form part of this option:

- Scale acquisition of emergent data.
- Transform industry Artificial Intelligence and Machine Learning.

## 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: Maintain intelligence platform	Option 2: Keep pace with industry advancements and the scale of data	Option 3: Lead industry in Data and Intelligence
<b>Risk mitigation associated with option</b>	<p><b>Low risk mitigation.</b></p> <p>As Option 1 is focused on sustaining 'just enough' data management and analytics capabilities, it will leave Energy Queensland exposed to the risk that it will not keep pace with the expected industry transition, and thus not mitigate risks that have propagated into other business areas (outside of data and intelligence business case).</p>	<p><b>Medium risk mitigation.</b></p> <p>Option 2 reduces Energy Queensland risks by maintaining data and intelligence capabilities at pace with the industry transition.</p> <p>While this option does not mitigate exposure to risk of effective and timely response to disruptive risks or opportunities of AI and big data, Energy Queensland has made this conscious decision based on consideration of its current analytics maturity, an uncertainty attached to assumptions about step-changes in these technologies.</p>	<p><b>High risk mitigation.</b></p> <p>Option 3 mitigates all Energy Queensland risks.</p>
<b>Financial benefits associated with option</b>	\$36.0M	\$68.8M	\$68.8M

Criteria	Option 1: Maintain intelligence platform	Option 2: Keep pace with industry advancements and the scale of data	Option 3: Lead industry in Data and Intelligence
<b>Non-financial benefits associated with option</b>	<p><b>Limited benefit realisation across all categories.</b></p> <p>This option only partially realises select benefits within each benefit category. The non-financial benefits associated with Option 1 include:</p> <ul style="list-style-type: none"> <li>• Regulatory Compliance and Secure Data Handling (partial)</li> <li>• Improved Data Quality and Consistency (partial)</li> <li>• Enhanced stakeholder trust in decision-making (partial)</li> <li>• Enhanced Employee Experience (limited)</li> </ul>	<p><b>Partial benefit realisation across all categories.</b></p> <p>This option fully realises most benefits within each benefit category, except for two benefits that are partially realised. The non-financial benefits associated with Option 2 include:</p> <ul style="list-style-type: none"> <li>• Regulatory Compliance and Secure Data Handling (full)</li> <li>• Cost-effective Compliance through Data Access (full)</li> <li>• Efficient Data Analysis for Quick Responses (full)</li> <li>• Efficient Automation Implementation (partial)</li> <li>• Improved Data Quality and Consistency (full)</li> <li>• Enhanced stakeholder trust in decision-making (full)</li> <li>• Accurate Forecasting and Cost Management (full)</li> <li>• Improved Model Auditability and Trust (full)</li> <li>• Unlocking New Business Benefits (partial)</li> <li>• Enhanced Employee Experience (full)</li> </ul>	<p><b>Full benefit realisation across all categories.</b></p> <p>This option fully realises all benefits within each benefit category. The non-financial benefits associated with Option 3 include:</p> <ul style="list-style-type: none"> <li>• All non-financial benefits associated with Option 2 that are fully realised</li> <li>• Efficient Automation Implementation (full)</li> <li>• Unlocking New Business Benefits (full)</li> </ul>

Criteria	Option 1: Maintain intelligence platform	Option 2: Keep pace with industry advancements and the scale of data	Option 3: Lead industry in Data and Intelligence
<b>Costs associated with option (\$M)</b>	<i>Total Expenditure: \$44.4M</i> <ul style="list-style-type: none"> <li>Recurrent capex: \$20.4M</li> <li>Non-recurrent capex: \$11.1M</li> <li>Opex: \$13.0M</li> </ul>	<i>Total Expenditure: \$73.3M</i> <ul style="list-style-type: none"> <li>Recurrent capex: \$23.8M</li> <li>Non-recurrent capex: \$26.6M</li> <li>Opex: \$22.9M</li> </ul>	<i>Total Expenditure: \$100.8M</i> <ul style="list-style-type: none"> <li>Recurrent capex: \$23.8M</li> <li>Non-recurrent capex: \$54.1M</li> <li>Opex: \$22.9M</li> </ul>
<b>Commercial NPV (\$M)</b>	(\$12.1M)	(\$11.3M)	(\$34.6M)
<b>OVERALL ASSESSMENT</b>	<b>Not recommended</b>	<b>Recommended</b>	<b>Not recommended</b>



## 4.4 Recommended Option

The primary objective of the Data & Intelligence business case is to advance Energy Queensland's existing data and intelligence capabilities, providing the foundational and enabling capabilities leveraged by other non-network ICT business cases.

Option 2 'Keep pace with the industry advancements and the scale of data' is the recommended option, as it enables the full benefits realisation of dependent business cases (refer to section 6.6), such as Integrated Grid Planning and Customer, and effectively reduces business risk for our DNSPs whilst also enabling customer value through streamlined organisational processes which drive efficient outcomes from improved decision making. Decision making and insights will also be further enhanced and augmented for both quality and quantity via evolving advanced analytics and supporting approaches.

It is important to note that many of the initiatives in Option 2 are enabling data and intelligence platforms and capabilities that are built upon and leveraged by use cases in other non-network ICT business cases, including Integrated Grid Planning and Customer. Particular care has been taken to ensure that the investments between these business cases are mutually exclusive (e.g., where data and intelligence initiatives provide for the growing storage requirements of Smart Meter data, Integrated Grid Planning is leveraging this capability, not building it).

Option 1 'Maintain intelligence platform', will only sustain 'just enough' data management and analytics capabilities, however, will not be sufficient to enable the recommended options in dependent business cases that require new and evolving data and intelligence capabilities at scale, to ensure trusted and efficient business operations.

Option 3 'Lead industry in Data and Intelligence' is also not recommended as we expect our data management practices will not have matured enough in the next regulatory control period to enable meaningful investment in this next level of predictive analytics maturity, in addition to the uncertainty attached to any assumptions about the step-changes in these technologies. Therefore, this option is discounted to allow Energy Queensland to focus on maturing data management practices and keeping pace with the industry, enabling the organisation to build up the base of trusted data for future accelerated and scaled adoption of predictive and prescriptive analytic capability.

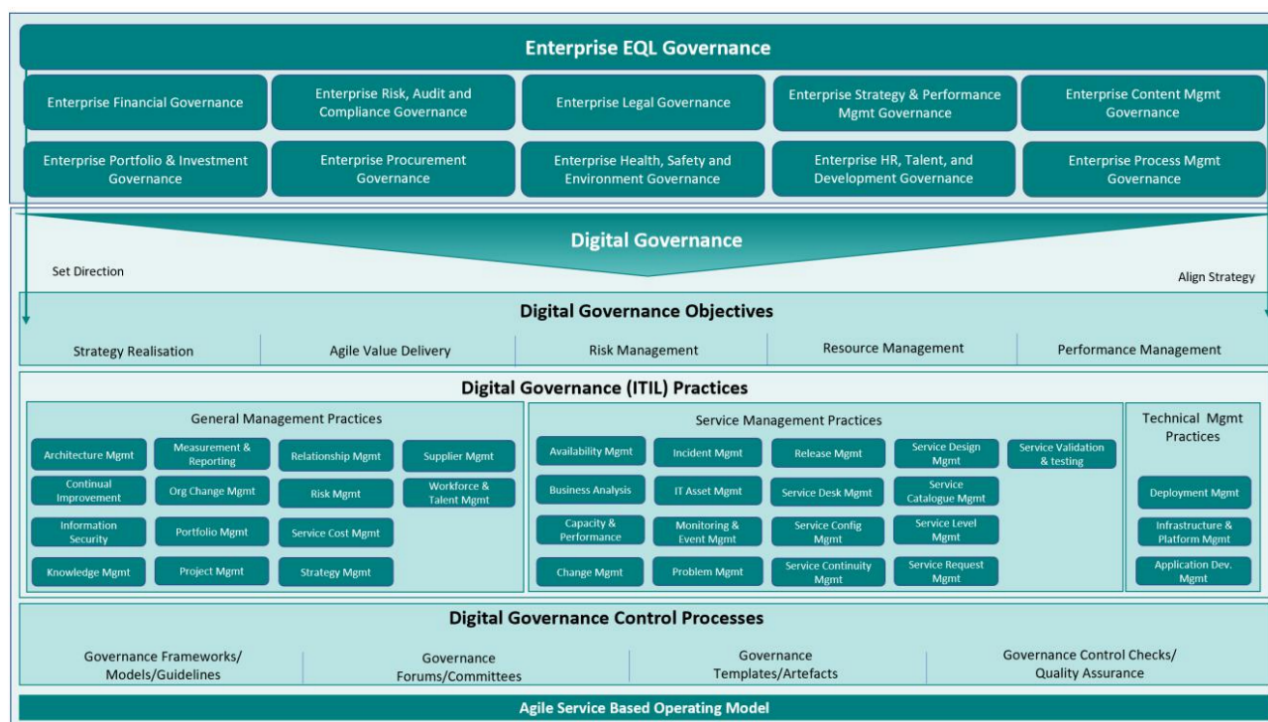
## 5 IMPLEMENTATION OF RECOMMENDED OPTION

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

The key change impacts directly associated with this business case include:

- **Growth in digital capabilities on the Enterprise Data Platform, as well as data sharing requirements**, which will drive the need for new skill sets and operating models in the supporting digital and data teams.
- **At-scale and broader availability of data management and analytics capabilities** requires skills uplifts and results in approach changes to digital architecture and solution design in the digital division.
- **Growing democratisation of data and analytics**, supported by a comprehensive data literacy curriculum and an enterprise-wide data management processes, will both necessitate and enable changes in role profiles of a wide range of employees in Energy Queensland across all divisions, which must be anticipated and managed by divisional management and will result in workflow changes and required skills uplift.
- **Growing dependence on quality data to use in process automation and predictive models** that drive important business decisions will require an increased focus on maintenance of data quality across the organisation. This change is also supported by the data literacy curriculum. It will likely drive increased automation of data capture, data acquisition and data handling processes.

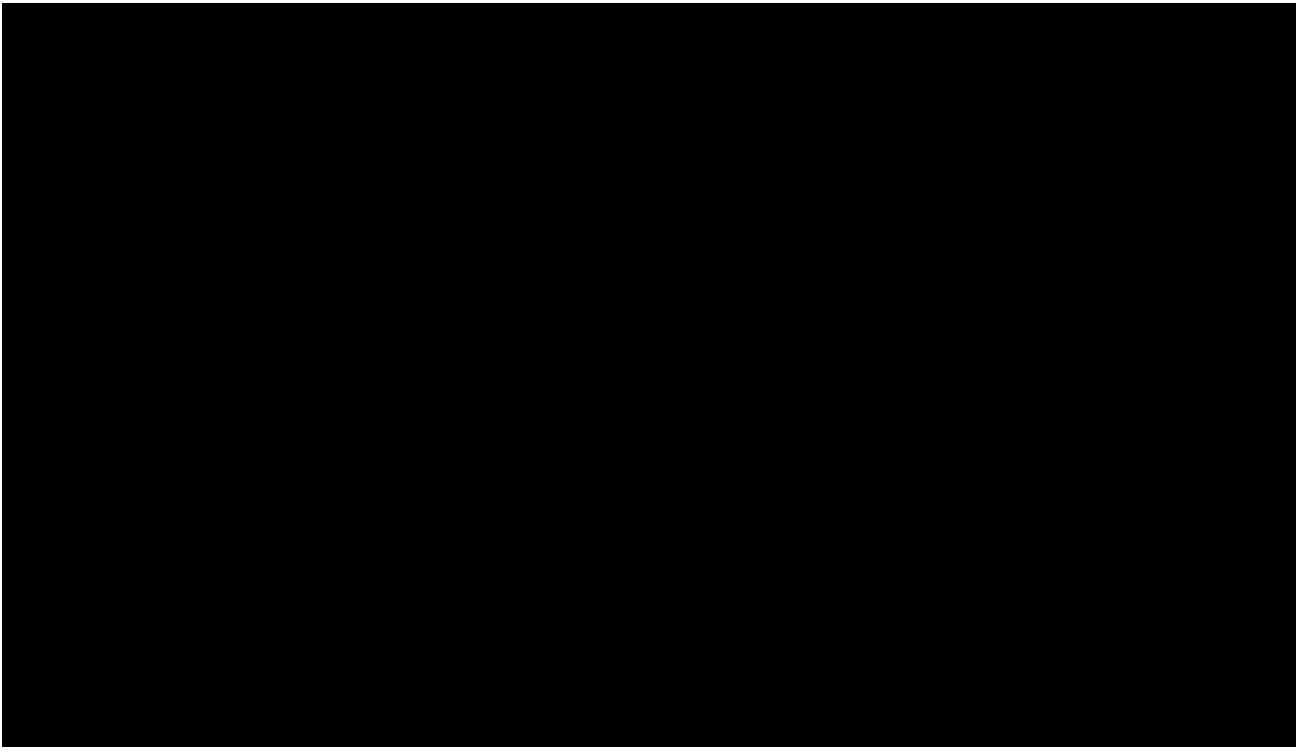
Change impacts due to the implementation of dependent business cases are not duplicated here.

## 5.3 Delivery Roadmap

The delivery of the recommended Option 2 initiatives (as described in Section 4.1) will be delivered using a continuous iterative agile methodology and platform-based approach, as per our *Digital ways of working*. Business Owners, Platform Managers and Platform Architects consciously and frequently review and prioritise the initiatives for continuous delivery of customer value and management of risk. This will ultimately enable incremental and continuous delivery of value, through continuous reassessment and refinement over 2025-30, in accordance with the dynamics of industry changes, customer needs, business requirements and our agile delivery methodology.

A high-level roadmap is depicted below, showing the initiatives being delivered:

**Figure 8: Planning Roadmap for Data and Intelligence**



For information on the *Digital ways of working* refer to the Non-network ICT Plan – Non-network ICT Portfolio Development and Governance section.

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

#### **5.4 Investment Benefits**

The recommended option delivers all the benefits described in section 3.4, except for two benefits that are only partially realised.

The quantitative benefits to be realised from this investment are \$68.8M (present value \$51.2M). Please refer to Section 6.2 for a detailed description of the financial and non-financial benefits.

## 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	■	■	■	■	■	23.8	20.7
ICT capex	Non-recurrent	■	■	■	■	■	26.6	22.8
ICT opex	N/A	■	■	■	■	■	22.9	18.9
<b>TOTAL</b>		■	■	■	■	■	<b>73.3</b>	<b>62.4</b>

## 5.6 Financial Summary

Table 6 summarises 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	(20.7)
ICT capex	Non-recurrent	(22.8)
ICT opex	N/A	(18.9)
Benefits	N/A	51.2
<b>Commercial NPV</b>		<b>(11.3)</b>

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

Net Present Value	Discount Rate		Benefits	
	+1%	-1%	125%	75%
Recommended option (Option 2)	(12.5)	(9.7)	1.5	(24.1)

## 6 APPENDICES

### 6.1 Applicable Compliance Requirements

Energy Queensland is required to meet regulatory and compliance obligations within its data and intelligence capability in relation to its non-network ICT systems as set out below.

**Table 8: Applicable Compliance Requirements Overview**

Obligation	Description of Requirement
<b>Security of Critical Infrastructure Act 2018 (SOCI Act)</b>	<p>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.</p> <p>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.</p>
<b>Privacy Act 1988, Information Privacy Act 2014</b>	<p>As specified in the <i>Privacy Act 1988</i>, Energy Queensland is required to maintain strong controls and security on the accessibility of customer data as well as ensuring appropriate availability of data. Keeping Energy Queensland’s critical systems up to date, supported and secured is a key enabler of maintaining these controls.</p>
<b>National Electricity Law and National Electricity Rules</b>	<p>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).</p> <p>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 network.</p>
<b>The Australian Energy Cyber Security Framework (AESCEF)</b>	<p>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.</p>
<b>ESG reporting requirements within the AASB</b>	<p>ESG (Environment, Social and Governance) reporting requirements are expected to be legislated in Australia by the AASB (Australian Accounting Standard Boards). As of January 2023, there is draft legislation out for consultation from the ISSB (International Sustainability Standards Board). From anything issued by the ISSB, the AASB will need to consider its application in Australia, draft standards applicable to Australia and issue for consultation in Australia before anything can be legislated here.</p>



## 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 option

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 intelligence platform	Option 2: Keep pace with industry advancements and the scale of data	Option 3: Lead industry in Data and Intelligence
<b>Non-compliance with regulatory and legislative obligations, including accuracy of regulatory reporting</b>	<p><b>Low contribution to risk mitigation</b></p> <p>Major new obligations not met if required investment exceeds the sustainment and continuous improvement funding allocations. This risk does not only apply to the Data &amp; Intelligent space but propagates into other business areas, such as Grid Planning or Customer Service.</p>	<p><b>High contribution to risk mitigation</b></p> <p>Includes non-recurrent and recurrent investment to ensure Energy Queensland data and intelligence capabilities enable other business areas, such as Grid Planning or Customer Service, to meet major new obligations.</p>	<p><b>High contribution to risk mitigation</b></p> <p>Same as Option 2.</p>
<b>Inefficient or imprudent investment decisions</b>	<p><b>Low contribution to risk mitigation</b></p> <p>Staff do not have the right data or insights to optimise investment or maintenance decisions. Examples for this can be found in the Integrated Grid Planning business case.</p>	<p><b>High contribution to risk mitigation</b></p> <p>Includes non-recurrent and recurrent investment to ensure Energy Queensland data and intelligence capabilities are sufficient to provide staff with the required data and insights for investment or maintenance decisions.</p>	<p><b>High contribution to risk mitigation</b></p> <p>Same as Option 2.</p>

Risk	Option 1: Maintain intelligence platform	Option 2: Keep pace with industry advancements and the scale of data	Option 3: Lead industry in Data and Intelligence
<b>Increased health and safety risk for our field workers</b>	<b>Low contribution to risk mitigation</b> Field staff do not have the right data or insights at hand when needed to navigate the increasing complexity of work. Examples for this can be found in the Asset and Works Management business case.	<b>High contribution to risk mitigation</b> Includes non-recurrent and recurrent investment to ensure Energy Queensland data and intelligence capabilities are sufficient to provide field staff with the required data and insights to navigate increasingly complex work.	<b>High contribution to risk mitigation</b> Same as Option 2.
<b>Inefficient or ineffective business operations</b>	<b>Low contribution to risk mitigation</b> In an increasingly complex and fast-changing environment, inability to acquire, integrate and use new data sets and big data easily and timely is likely to lead to inefficiencies and lower quality decision making.	<b>High contribution to risk mitigation</b> Includes non-recurrent and recurrent investment to ensure Energy Queensland data and intelligence capabilities include functionality to acquire, integrate and use new data sets and big data easily, minimising inefficiencies.	<b>High contribution to risk mitigation</b> Same as Option 2.
<b>Inability to meet customer expectations, including customer experience, CER integration, pricing, and value expectations</b>	<b>Low contribution to risk mitigation</b> Without the right underpinning data and intelligence capabilities, the corresponding capabilities in Integrated Grid Planning and Customer business cases cannot be delivered.	<b>High contribution to risk mitigation</b> Includes non-recurrent and recurrent investment to ensure sufficient Energy Queensland data and intelligence capabilities to enable corresponding capabilities in other business cases.	<b>High contribution to risk mitigation</b> Same as Option 2.
<b>System performance and security risks</b>	<b>Low contribution to risk mitigation</b> Increased risk of performance and security issues of not well managed integration, data growth, data-integration across multiple cloud systems, or data sharing.	<b>High contribution to risk mitigation</b> Includes non-recurrent and recurrent investment to ensure Energy Queensland data and intelligence capabilities are sufficient to ensure high performance and security.	<b>High contribution to risk mitigation</b> Same as Option 2.

Risk	Option 1: Maintain intelligence platform	Option 2: Keep pace with industry advancements and the scale of data	Option 3: Lead industry in Data and Intelligence
<b>Inability to maintain a prudent and efficient non-network ICT investment and risk profile in the subsequent regulatory control period</b>	<b>Low contribution to risk mitigation</b> Contemporary digital solutions in the utility industry are increasingly centred around data-driven process automation and decision making, and utility product vendors will evolve their solution architectures based on the assumptions of utilities being able to make that data available, increasingly in near-real time. If we don't invest in our ability to keep pace with these requirements, we will not be able to leverage solutions for business efficiencies, or even just evolve our existing solutions to future, maintained product versions.	<b>High contribution to risk mitigation</b> Includes non-recurrent and recurrent investment to ensure Energy Queensland data and intelligence capabilities are keeping pace with utility product vendors solution architectures to enable leveraging of contemporary digital solutions for business efficiencies and future product developments.	<b>High contribution to risk mitigation</b> Same as Option 2.
<b>Inability to effectively and timely respond to emerging disruptive risks or opportunities of AI and big data</b>	<b>Low contribution to risk mitigation</b> Contemporary digital solutions in the utility industry are increasingly centred around data-driven process automation and decision making, and utility product vendors will evolve their solution architectures based on the assumptions of utilities being able to make that data available, increasingly in near-real time. If we don't invest in our ability to keep pace with these requirements, we will not be able to leverage contemporary digital solutions for business efficiencies, or even just evolve our existing solutions to future, maintained product versions	<b>Moderate contribution to risk mitigation</b> Includes non-recurrent and recurrent investment to provide Energy Queensland with the foundational capabilities and skills assumed to be required to monitor the evolution of AI and big data use, identify risk, and take action to implement an adequate risk mitigation response (which may include use restrictions), as far as it pertains to the use of those technologies for analytics and decision support. (For cyber security risks that may be resulting from such technologies refer to the Cyber Security Business case).  However, it will not enable the full and broad business adoption, beyond specific and controlled use cases.	<b>High contribution to risk mitigation</b> Includes non-recurrent and recurrent investment to provide Energy Queensland with the capabilities and skills required to monitor, and take action as required for evolution of AI and big data use.

## Financial benefits associated with option

This criterion assesses the financial benefits delivered to Energy Queensland, and the broader community from each option. The table below outlines the results of the analysis against the three options.

**Table 10: Financial benefits associated with Options**

Benefit	Option 1: Maintain intelligence platform	Option 2: Keep pace with industry advancements and the scale of data	Option 3: Lead industry in Data and Intelligence
<b>Avoided Resource Uplift</b>	<b>\$3.6M pa</b> Avoided resource uplift requirements from data platform consolidation.	Same as Option 1.	Same as Option 1.
<b>Scalable and Cost-Efficient Operations</b>	<b>Nil</b>	<b>\$2.1-\$3.7M pa progressive benefits growth to 2030, and \$3.7M pa from 2030 onwards</b> This option enables more scalable, cost-efficient operations through improved data governance and data quality management to reduce duplication, resulting in avoided costs for data storage.	Same as Option 2.

## Non-financial/not-quantified benefits associated with option

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 11: Non-financial/not-quantified benefits associated with Options**

<b>Benefit</b>	<b>Option 1: Maintain intelligence platform</b>	<b>Option 2: Keep pace with industry advancements and the scale of data</b>	<b>Option 3: Lead industry in Data and Intelligence</b>
<b>Regulatory Compliance and Secure Data Handling</b>	<b>Partial</b> Maintain current capabilities and respond to immediate compliance and data security priorities	<b>Full</b> Evolve capabilities in line with new compliance obligations and enable response to risks associated with data security	<b>Full</b> Same as Option 2.
<b>Cost-effective Compliance through Data Access</b>	<b>Nil</b> This benefit will not be realised as part of option 1	<b>Full</b> Enable data access and automate data set generation through data and intelligence platform to respond efficiently to regulatory compliance requirements.	<b>Full</b> Same as Option 2.
<b>Efficient Data Analysis for Quick Responses</b>	<b>Nil</b> This benefit will not be realised as part of option 1	<b>Full</b> Uplift capabilities of data and intelligence ecosystem and increase the safe, compliant, effective, and efficient utilisation of data across the business	<b>Full</b> Same as Option 2.
<b>Efficient Automation Implementation</b>	<b>Nil</b> This benefit will not be realised as part of option 1	<b>Partial</b> Improved efficiencies through the automation of data pipelines, data analytics and generation of insights	<b>Full</b> Become an industry leader by generating new data and intelligence platform capabilities for data pipelines and automated analytic model generation
<b>Improved Data Quality and Consistency</b>	<b>Partial</b> Minimum prudent investment in addressing data quality within the data and intelligence ecosystem	<b>Full</b> Improve data quality and consistency within the data and intelligence ecosystem	<b>Full</b> Same as Option 2.

Benefit	Option 1: Maintain intelligence platform	Option 2: Keep pace with industry advancements and the scale of data	Option 3: Lead industry in Data and Intelligence
<b>Enhanced Stakeholder Trust in Decision-Making</b>	<b>Partial</b> Continuous improvement uplift for data and intelligence capabilities to ensure trust in the data platforms can be maintained	<b>Full</b> Evolve data and intelligence platforms to adopt new technologies and capabilities whilst ensuring that trust is enhanced through uplift in data literacy and data governance	<b>Full</b> Same as Option 2.
<b>Accurate Forecasting and Cost Management</b>	<b>Nil</b> This benefit will not be realised as part of option 1	<b>Full</b> Implement new data and intelligence platform capabilities specific to predictive and prescriptive analytics that enable outcomes of dependent business cases	<b>Full</b> Same as Option 2.
<b>Improved Model Auditability and Trust</b>	<b>Nil</b> This benefit will not be realised as part of option 1	<b>Full</b> Implement new data and intelligence platform capabilities specific to analytic model management to enhance auditability and uplift the levels of trust within those models	<b>Full</b> Same as Option 2.
<b>Unlocking New Business Benefits</b>	<b>Nil</b> This benefit will not be realised as part of option 1	<b>Partial</b> Implement new data and intelligence platform capabilities that enable to delivery of outcomes from other business cases	<b>Full</b> Create new industry leading business opportunities through new end-to-end data and intelligence capabilities
<b>Enhanced Employee Experience</b>	<b>Limited</b> Minimum prudent investment in ensuring stakeholders have platforms that provide capabilities for leveraging data in support of decision-making.	<b>Full</b> Provide secure, efficient and effective access to data and uplift data and intelligence ecosystem capabilities to ensure employees can complete data activities along with greater clarity of data governance, processes and standards. Support staff retention through offering contemporary tools and technologies.	<b>Full</b> Same as Option 2.

## 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 12: Costs associated with Options (\$M, real December 2022)**

Costs category	Option 1: Maintain intelligence platform	Option 2: Keep pace with industry advancements and the scale of data	Option 3: Lead industry in Data and Intelligence
<b>Recurrent capital expenditure</b>	<b>20.4</b> Relating to ICT asset management, data platform consolidation and minimum sustainment of existing capabilities	<b>23.8</b> Relating to ICT asset management, data platform consolidation and sustainment of existing capabilities	<b>23.8</b> Relating to ICT asset management, data platform consolidation and sustainment of existing capabilities
<b>Non-recurrent capital expenditure</b>	<b>11.1</b> Relating to minimum necessary evolution of the data governance framework	<b>26.6</b> Cost in addition to option 1 are related to improved organisational data literacy and uplift of data sharing capabilities	<b>54.1</b> Cost in addition to option 2 are related to initiatives to become an industry leader in adoption of big data, machine learning and AI
<b>Operating expenses</b>	<b>13.0</b> Relating to labour and ongoing platform cost / L&M for in-scope initiatives	<b>22.9</b> Relating to labour and ongoing platform cost / L&M for in-scope initiatives	<b>22.9</b> Relating to labour and ongoing platform cost / L&M for in-scope initiatives
<b>TOTAL</b>	<b>44.4</b>	<b>73.3</b>	<b>100.8</b>



## 6.3 Alignment with the National Electricity Rules

**Table 13: Recommended Option's Alignment with National Electricity Rules**

NER capital expenditure objectives	Rationale
<p><b>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):</b></p>	
<p><b>6.5.7 (a) (1)</b>  <b>meet or manage the expected demand for standard control services over that period</b></p>	<p>The recommended option strengthens Energex and Ergon Energy Network's Data Management and Enterprise Intelligence capabilities that are foundational enablers in improving the way Energex and Ergon Energy Network manages customer demand for standard control services in an increasingly complex future grid.</p>
<p><b>6.5.7 (a) (2)</b>  <b>comply with all applicable regulatory obligations or requirements associated with the provision of standard control services;</b></p>	<p>The recommended option will ensure Energex and Ergon Energy Network continues to comply with all regulatory obligations through greater data granularity and enhanced data management and reporting capabilities.</p>
<p><b>6.5.7 (a) (3)</b>  <b>to the extent that there is no applicable regulatory obligation or requirement in relation to:</b></p> <ul style="list-style-type: none"> <li><b>(i) the quality, reliability or security of supply of standard control services; or</b></li> <li><b>(ii) the reliability or security of the distribution system through the supply of standard control services,</b></li> </ul> <p><b>to the relevant extent:</b></p> <ul style="list-style-type: none"> <li><b>(iii) maintain the quality, reliability and security of supply of standard control services; and</b></li> <li><b>(iv) maintain the reliability and security of the distribution system through the supply of standard control services</b></li> </ul>	<p>The recommended option centres on the uplift and modernisation of Energex and Ergon Energy Network's core data and technologies within its enterprise intelligence function to provide Energex and Ergon Energy Network with a robust data foundation capable of adapting and scaling to future market and technological disruption and evolving customer needs and expectations with respect to the quality, reliability, and security of supply.</p>
<p><b>6.5.7 (a) (4)</b>  <b>maintain the safety of the distribution system through the supply of standard control services.</b></p>	<p>The recommended option will deliver improvements to data management and quality and will play a pivotal role in operationalising data to make informed safety decisions and minimise safety risks associated with administering standard control services and managing the distribution network.</p>
NER capital expenditure criteria	Rationale
<p><b>6.5.7 (c)</b>  <b>the AER must be satisfied that the total forecast capital expenditure for the regulatory control period reflects each of the following capital expenditure criteria:</b></p>	

<ul style="list-style-type: none"> <li>(1) <b>the efficient costs of achieving the capital expenditure objectives;</b></li> <li>(2) <b>the costs that a prudent operator would require to achieve the capital expenditure objectives; and</b></li> <li>(3) <b>a realistic expectation of the demand forecast, and cost inputs required to achieve the capital expenditure objectives.</b></li> </ul>	<p>The recommended option meets the regulatory capital expenditure objectives.</p> <p>A detailed cost-benefit analysis above 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.</p>
--	---

## 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 14 explores the assumptions that are applicable for the recommended option only.

**Table 14: Assumptions Overview**

Assumption Description	Impact if assumption proves invalid	How will the assumption be assessed?
<b>Enterprise Assumptions on growth / change rate in our grid (e.g., DER capacity, EVs, dynamic connections, Intelligent Devices, and smart meter penetration).</b>	If the growth / change rates are significantly faster than assumed, the preferred option may not be able to mitigate business risks as effectively as predicted, or expenditure might have to be reprioritised.	Changes in scale and business needs will be monitored and identified through our standard processes for requirements identification, prioritisation, and digital delivery.
<b>The post-2025 market reform, including the regulatory requirements resulting from the Energy Security Board Data Strategy<sup>5</sup>, as well as broad response to increasing cyber security (e.g., SOCI Act 2018) and data ethics risks, will result in significant new data collection, reporting and data sharing obligations in the 2025-30 regulatory control period.</b>	N/A – The required foundational data and intelligence capabilities will be needed regardless.	Changes to compliance obligations will be monitored through our regulatory team and identified through our standard processes for requirements identification and digital delivery.
<b>Disruptive risks of emerging technologies, such as generative / natural language AI and big data, occur at a pace that allows for monitoring and timely mitigation within anticipated parameters.</b>	Investment in data and intelligence might have to be reprioritised for an adequate response.	Continuous monitoring of emerging technologies, their business adoption and emerging risks. Reprioritisation of requirements can occur timely, through our Agile processes for requirements identification, prioritisation, and digital delivery.

## 6.5 Delivery Risks and Control

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

**Table 15: Delivery Risks Overview**

Risk Description	Consequences	Preventative, Detective & Responsive Controls
<b>Control of scope risk</b>	Failure to deliver in line with the intent and commitments within this business case	<ul style="list-style-type: none"> <li>Program Delivery Approach (see section 5) includes continuous prioritisation of requirements.</li> <li>Agile delivery method focusses on incremental and continuous value delivery and management of risk</li> </ul>
<b>Delivery of scope risk</b>		<ul style="list-style-type: none"> <li>Program Delivery (see section 5) follows our Digital planning, delivery and governance frameworks which put appropriate controls in place for ensuring design quality and delivery</li> </ul>
<b>Critical personnel and third-party risk</b>		<ul style="list-style-type: none"> <li>Resource planning across technology platform and delivery teams through our Digital planning and governance approaches</li> </ul>
<b>Business engagement risk</b> <b>Embedding of business change risk</b>	Failure to deliver expected customer and benefits and mitigate business risks	<ul style="list-style-type: none"> <li>Program Delivery Approach (see section 5) includes close collaboration with Business Owners and representatives, thereby inherently facilitating business engagement</li> <li>Proposal includes a data literacy curriculum which includes the training and continuous development of business resources</li> <li>Leverage and evolve existing Community of Practice of analytics practitioners across the business</li> </ul>

## 6.6 Dependencies

The Data & Intelligence business case is foundational to all other non-network ICT investments proposals, as referenced throughout the document. The following table therefore lists both outbound (i.e., other proposal depends on data and intelligence capabilities) and inbound (i.e. data and intelligence capabilities depend on other proposal or external drivers) dependencies.

**Table 16: Dependencies Overview**

Dependent Business Case	Inbound (Dependent on)	Outbound (Others depend on)
Asset and Works Management	Data Quality improvement on specifically asset and network data is included in the Asset and Works Management business case	Regulatory reporting (also see 'Digital Core' below) and smarter asset and works data management and analytics are dependent on capabilities in scope of the Data & Intelligence business case
Digital Core	-	This Data & Intelligence business case includes the reporting capability for the SAP S/4HANA suite
Integrated Grid Planning  Customer	-	Data acquisition, storage, and analytics requirements, as well as benefits, for Integrated Grid Planning and Customer use cases included in these business cases are excluded from this business case. Both are dependent on capability delivered by the Data & Intelligence business case.
Network business cases for acquisition and management of Smart Meter data and telemetry	Investments in more Intelligent Devices, data acquisition of Smart Meter data, Grid Visibility data storage for near-real-time purposes and near-real-time analytics for operational functions are included in specific network proposals (and therefore excluded from this business case). They drive data and intelligence requirements in the non-network ICT platforms	-
Cyber Security	The proposed Cyber Security investments in the Cyber Security business case underpin secure data management and sharing.	Data and intelligence investments provide the data classification, governance, management and sharing capabilities that complement the cyber security controls to ensure that our information is safe and secure.
Digital Foundations	While all non-network ICT business cases are heavily dependent on our Digital Foundations, data and intelligence is called out specifically, because of the tight interdependencies with integration platforms and cloud infrastructure, which underpin data and intelligence solutions.	Digital Foundations delivers new rich IoT and other data sets that will be able to be used to create valuable insights, using data and intelligence capabilities

## 6.7 Reconciliation Table

Table 17: Financial Reconciliation (\$M)

Capital Expenditure	Entity	FY26	FY27	FY28	FY29	FY30	Total 2025-30
<b>Expenditure in business case \$M, real December 2022</b>	Energy Queensland	■	■	■	■	■	50.3
<b>Allocation to entity (where applicable)</b>							
<b>\$M, real December 2022</b>	Energex	■	■	■	■	■	21.1
<b>\$M, real December 2022</b>	Ergon Energy Network	■	■	■	■	■	27.9
<b>\$M, real December 2022</b>	Other	■	■	■	■	■	1.3
<b>Allocation to SCS capex (DNSP only)</b>							
<b>\$M, real December 2022</b>	Energex	■	■	■	■	■	19.0
<b>\$M, real December 2022</b>	Ergon Energy Network	■	■	■	■	■	23.2
<b>Add escalation adjustments (DNSP only)</b>							
<b>Escalation from \$M, real December 2022 to \$M, real June 2025</b>	Energex	■	■	■	■	■	21.4
<b>Escalation from \$M, real December 2022 to \$M, real June 2025</b>	Ergon Energy Network	■	■	■	■	■	26.2
<b>Expenditure in AER capex model/Reset RIN \$M, real June 2025</b>	Energex	■	■	■	■	■	21.4
<b>Expenditure in AER capex model/Reset RIN \$M, real June 2025</b>	Ergon Energy Network	■	■	■	■	■	26.2