



Non-network ICT Plan 2025-30

Confidential

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Part of the Energy Queensland Group

Non-network ICT Plan

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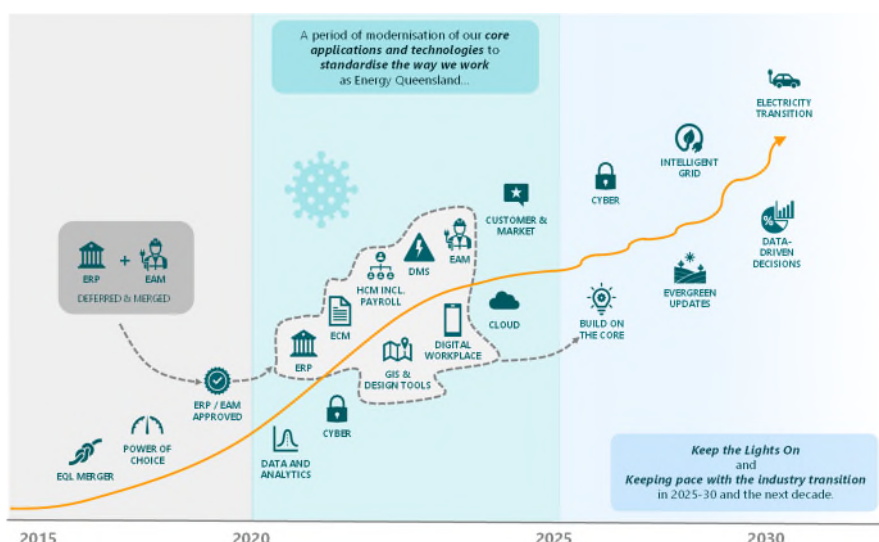
1. EXECUTIVE SUMMARY

Energex and Ergon Energy Network are actively delivering a major non-network information and communications technology (ICT) transformation during this current 2020-25 regulatory control period, replacing major interdependent legacy commercial off the shelf (COTS) and in-house built applications with contemporary application suites, to address the significant legacy application risks and standardise how Energex and Ergon Energy Network operate. While Energex and Ergon Energy Network merged organisational structures in 2016, the organisations retained many of their own separate applications, configurations and business processes.

Energex and Ergon Energy Network are committed to this major transformation of these core non-network ICT systems and business processes. While the business standardisation and transition from these interdependent legacy applications has been more challenging than forecast, it has been necessary.

Energex and Ergon Energy Network will continue to prudently maintain non-network ICT systems and capability consistent with established non-network ICT asset lifecycle management practices. Non-network ICT expenditure levels return to comparable benchmark levels for the 2025-30 regulatory control period. Non-network ICT applications and technology upgrades are managed using an iterative and continuous approach to keep them contemporary, whilst managing cyber security risk. All these approaches enable Energex and Ergon Energy Network to build on the foundations of the capabilities implemented this current 2020-25 regulatory control period to develop the Intelligent Grid, while keeping pace with the industry transition.

Figure 1 Non-network ICT Plan Technology Strategy Narrative



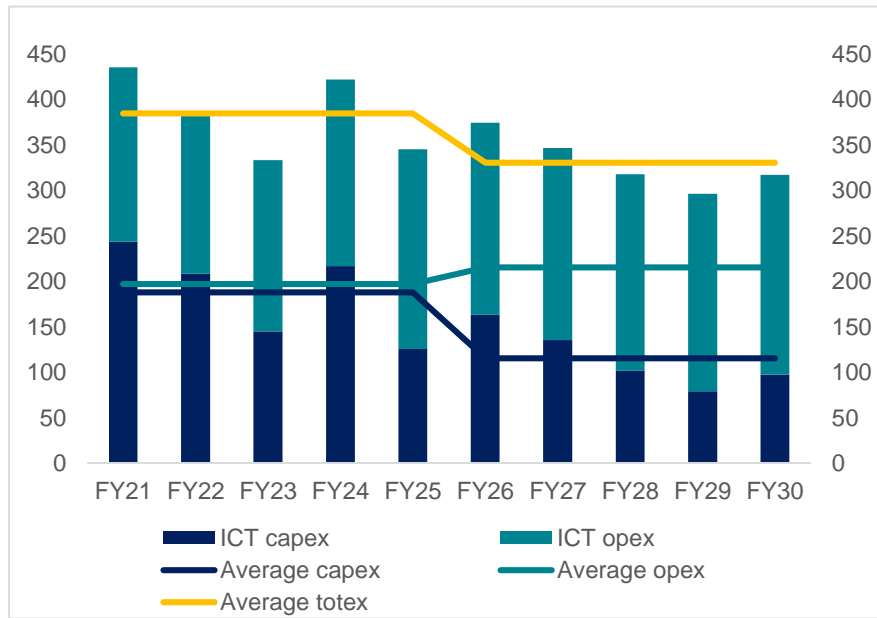
The following figure¹ indicates the total non-network ICT expenditure for the current and coming regulatory control periods. The values include the full non-network ICT total (capital and operating) expenditure (Standard Control Services and Alternative Control Services (ACS)) for the DNSPs. These include both recurrent and non-recurrent expenditure. While Energex and Ergon Energy Network businesses expect a growth phase to support the proposed network capital investment

¹ All financial figures are real December 2022, totals which have been rounded and shown in \$m throughout this document, consistent with the costing approach described in section 7.1.

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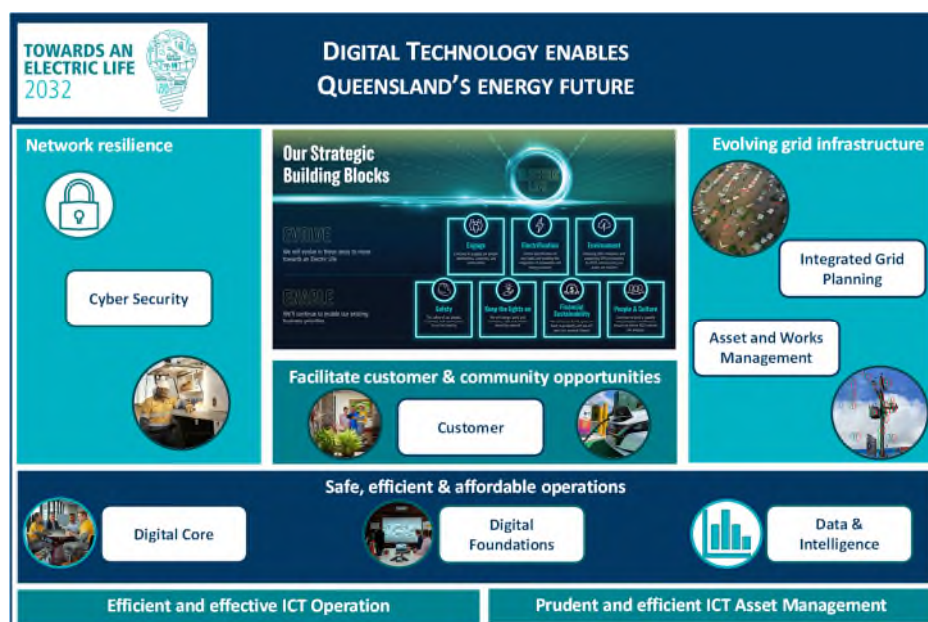
program, non-network ICT expenditure levels drop, returning to comparable non-network ICT total expenditure (totex) per user benchmark levels.

Figure 2 Non-network ICT Total Expenditure Summary



The following figure summarises the strategic outcomes of the overall non-network ICT Plan for the 2025-30 regulatory control period to our customers, our employees and the intelligent grid.

Figure 3 Non-network ICT Plan Strategic Outcomes



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2. BACKGROUND

Energex and Ergon Energy Network are actively delivering major non-network ICT replacement projects during the current 2020-25 regulatory control period, replacing major interdependent legacy commercial off the shelf and in-house built applications with contemporary application suites, to address significant legacy application risks whilst standardising the way Energex and Ergon Energy Network operate.

This non-network ICT Plan summarises the Energex and Ergon Energy Network non-network ICT business cases for the coming 2025-30 regulatory control period. Energy Queensland provides non-network ICT services across all its businesses on behalf of all its subsidiary companies. This plan outlines the items relevant to Energex and Ergon Energy Network.

Non-network ICT systems and capability must be maintained for sustainability, Cyber Security, compliance and operational safety. Planned technology replacements will also be leveraged to enable Energex and Ergon Energy Network's business capabilities.

The sections which follow describe:

- The strategic approaches underpinning Energex and Ergon Energy Network's non-network ICT plans for the coming period
- The non-network ICT Asset Lifecycle Management practices used to maintain and sustain Energex and Ergon Energy Network's non-network ICT capability
- Energex and Ergon Energy Network's approach to Cyber Security Management
- Non-network ICT Expenditure Summaries for the current and forecast period, and
- The planned non-network ICT planning roadmap for the forecast period.

In preparing our non-network ICT Plan we have had regard to:

- Electric Life for our direction for the Electricity Industry transition, and
- The *Security of Critical Infrastructure Act 2018*, which sets our direction for Cyber Security.

There are network ICT components included in other parts of the regulatory proposals of Energex and Ergon Energy Network, for example the Operational Technology Environments (OT, OTE) infrastructure and applications, the Distribution Management System, the Telemetry Hub, Distributed Energy Resource Management Systems (DERMS), etc. The network ICT components are enabled by and reliant on the non-network ICT components, as identified in their business cases. The non-network ICT Cyber Security business case includes network Cyber Security augmentation components.

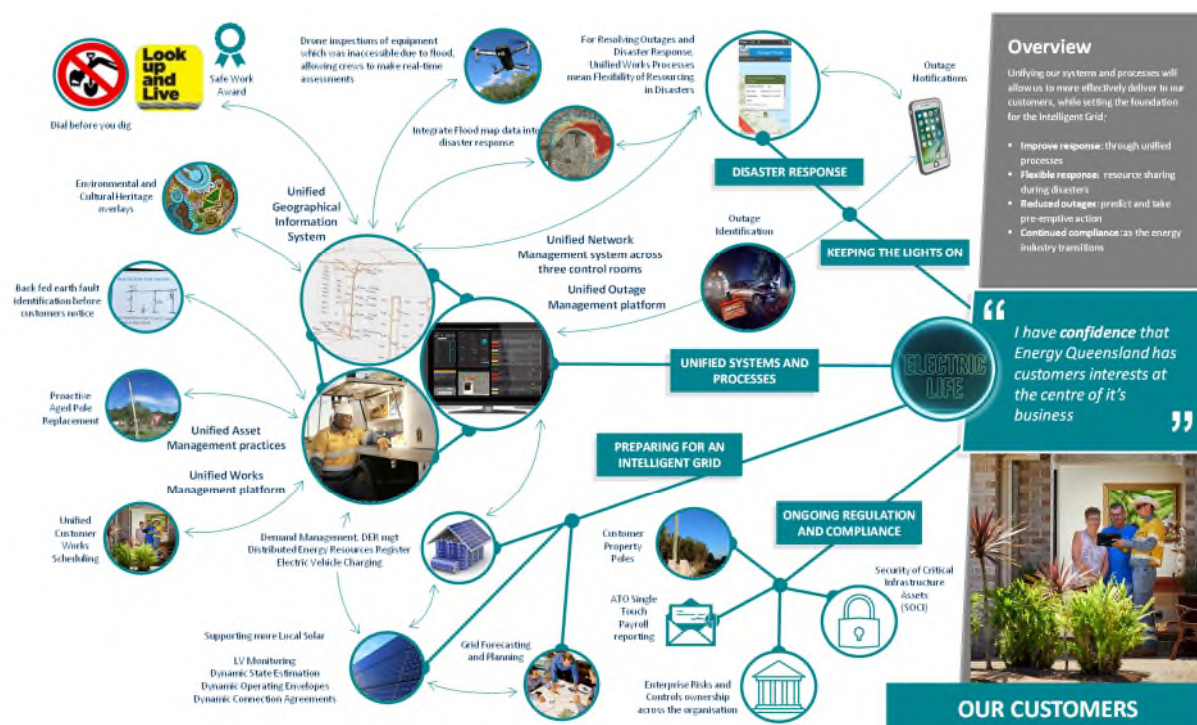
We have engaged with customers through our business-as-usual engagement channels, along with specific engagement with customer focus groups on elements of our proposed non-network ICT initiatives.

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3. NON-NETWORK ICT OVER THE 2020-25 PERIOD

Energex and Ergon Energy Network committed to and is delivering a major transformation and consolidation of some core systems and business processes in the current 2020-25 regulatory control period. The following figure² summarises some major outcomes of the current 2020-25 regulatory control period. This major transformation is still underway, with some significant parts due to deliver late in this regulatory control period.

Figure 4 Major Outcomes in 2020-25 Period



As with any major transformation of business processes and core systems, activities such as business standardisation, data transformation, transition from interdependent legacy applications and people change management have been challenging. Throughout the transformation, Energex and Ergon Energy Network have remained committed to the necessary effort and results.

In this 2020-25 regulatory control period, Energy Queensland has also significantly matured its Cyber Security capabilities as required by the *Security of Critical Infrastructure Act 2018*. Further maturation is required in the 2025-30 regulatory period.

Post-implementation reports for completed non-network ICT projects have been provided. The non-network ICT projects have been selected based on the criteria:

- Non-network ICT Projects for the 2020-25 regulatory control period which were completed and able to demonstrate benefits realisation at the time of submission of the Regulatory Proposals for Energex and Ergon Energy Network
- The projects with the most significant organisational change impacts, and
- Giving a cross section across the portfolio.

² Part of the outcomes pack for Customer Community Council September 2022

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The following table summarises the PIR's provided.

Table 1 Post-implementation Reports (PIR's)

Name	Cost (\$m)	Timeframe	Benefits	Variation
Cloud Broker	3.08 vs 3.07	7 weeks late	\$██████ pa	Delivered results expected
Greenslopes Fitout and Mt Gravatt Decommissioning (Energex only)	1.03 vs 1.45	Moved with Property construction schedule	Not applicable	Very Satisfied, Under Budget
Reporting Analytics Transition Sustainability	0.65 vs 0.63	2 years deferred	\$0.78m pa expected	Deferred due to competing priorities with Asset & Works Management activities
Cyber Security Uplift Program - Governance and Operating Model	3.95 vs 2.1	1 year extension	Non-financial	Delivered the foundational capabilities
Cyber Security Uplift Program – Network Security	4.80 vs 4.84	3 weeks late	Threat Impact Remediation	Delivered the capabilities
Digital Workplace Software & Apps	6.15 vs 6.15	2 months late	Enabled work from home capabilities prior to COVID lockdowns occurring	
Fieldglass Implementation	2.95 vs 3.05	On-time, Staged Release	Non-financial exceeded expectations	Very Satisfied, Under Budget

The improvements and lessons learned from post implementation reports are logged in a register and tracked until improvement actions have been taken.

The major business transformation program to consolidate and replace major interdependent legacy applications has been more challenging than expected. The business standardisation, data transformation and organisational change from legacy applications has been the most challenging aspects. We learned that dealing with business transformation and consolidation of legacy applications becomes exponentially more challenging the longer it is left.

In addition, operating legacy applications continuously increases our security risk posture. Regular recurrent upgrade cycles for core applications are more prudent, lowers Cyber Security risk and lowers delivery risks.

After careful consideration of our experience with implementing a major transformational program of work over the last few years, we have consciously planned for a continuous recurrent cycle of regular upgrades to applications and technologies (we call this “Evergreening”).

This change in approach has materially altered the composition of our business cases for the 2025-30 period. For the current period, the largest category of non-network ICT capital expenditure (capex) was “Non-Recurrent – New / Enhanced”. The largest categories for 2025-30 are “Recurrent” and “Non-recurrent – Maintain” which will have a materially lower delivery risk profile compared to the major business transformation programs implemented during the 2020-25 regulatory control period.

We expect our delivery risk for the 2025-30 regulatory control period to be significantly lower compared to the current period.

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4. NON-NETWORK ICT STRATEGY

The Energy Queensland Strategic Framework defines the overall Electric Life 2032 ambition, strategic vision, purpose, values and strategic building blocks to guide the organisation’s strategy.

There are four business investment drivers which will inform development of our expenditure plans and forecasts for the 2025-30 regulatory period. These business investment drivers are reliant on investment in network and non-network information technology to continuously maintain these business capabilities used to deliver our services to our customers.

Energex and Ergon Energy Network recognise non-network ICT as a key enabler of effective & efficient business operations, customer service and safety management.

To ensure Energex and Ergon Energy Network have continuing fit for purpose business capabilities to serve their customers, they need systems which operate effectively and efficiently, are continuously secure and maintained, adapt at pace with the industry transition and maintain the business effectiveness as the volume of devices and data on the network grows.

Our non-network ICT systems operate in an environment that is no longer static and consistent. Instead, our environment is gradually but continuously changing as the world transitions to net zero emissions and our customers and stakeholders expect that we will keep pace with this industry transition. Historically words such as Maintain³, Update and Replace have been used in the ICT industry, which have a static or cyclic meaning. We consciously use words such as Evolve⁴, and Evergreen⁵ as these reflect the continuous process to respond to our changing ICT requirements and standards expected by all stakeholders.

Figure 5 Energy Queensland’s Strategic Framework

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

Non-network ICT exists to enable our business, therefore the non-network ICT strategy underpins the Electric Life 2032 ambition, thus non-network ICT investment drivers are the same investment drivers as for the remainder of the business. Our non-network ICT business cases describe the

³ Merriam-Webster dictionary – Maintain - to keep in an existing state (as of repair, efficiency, or validity) : preserve from failure or decline

⁴ Evolution - a process of continuous change from a lower, simpler, or worse to a higher, more complex, or better state; a process in which the whole universe is a progression of interrelated phenomena

⁵ Evergreen – universally and continually relevant

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linkage to these strategic drivers, the strategic benefits, the non-network ICT response and the recommended initiatives.

The investment drivers are reliant on ICT 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.

The investment drivers are:

- **Network resilience.** Energy Queensland is committed to providing a secure, dynamic and reliable electricity network for a rapidly changing operating environment and increased resilience to external factors that influence our planning decisions, including climate change and severe weather events. The ICT business cases ensure our services are protected against resilience and security threats and provide improved capacity, response and recovery communications for customers and communities
- **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 ICT business cases facilitate the digitalisation and technological advancement of Energy Queensland customers and employees, maintaining compliant systems, secure data access, secure technology infrastructure, ensuring device resilience, and providing integrated services
- **Facilitate customer and community opportunities.** Energy Queensland is committed to facilitating customer opportunities in the transition to renewable energies, removing barriers to participation and providing our customers with choice and control, without compromising network security, supply quality or performance. The ICT business cases will enable customers to evolve their digital interaction and experiences with us, and to benefit from our evolving services and tariff choices, and
- **Evolving grid infrastructure.** Energy Queensland is planning for the 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 ICT business cases will enable the technology capability to manage the growing diversity assets, uptake of DER and the bi-directional flow of electricity throughout our networks.

4.1 Non-network ICT exists to enable our business

We must operate and support our non-network ICT systems as part of our business as usual processes, in a secure, efficient and effective manner. This includes regular administration, operational monitoring, ongoing business user support, performance tuning, data aging, problem/incident resolution, break fix updating, disaster recovery and business continuity. From a security perspective this includes administration, monitoring and patching.

We must prudently maintain our non-network ICT systems. We must continuously keep them on current secure supported versions. We must continuously evolve them as our business, consumers and industry expectations evolve. We must continuously keep pace with regular, predictable regulatory and compliance change.

While historically some systems required recurrent maintenance and some non-recurrent maintenance, we are moving towards all systems requiring recurrent maintenance.

We must keep pace with the significant changes expected in the industry transition while maintaining flexibility to adapt our business capabilities to changing business and operating

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models, growing service expectations of customers and other external drivers. Our systems must be adapted to support these significant changes.

We must keep pace with the growth of devices and data on the network. We must scale our systems to keep pace with that growth, The industry transition will bring a significant growth in the DER, devices, data, connections, etc on the network.

We must govern our non-network ICT investments within the corporate governance frameworks. Our governance frameworks must enable management of IT risks effectively and ensure they are aligned with overall business objectives. We must manage non-network ICT change with the business through business governance forums and business readiness networks.

We must partner with the business who will have ownership of each of the initiatives with joint accountability for delivery between Digital and the respective business areas and will continue to consult with industrial partners.

4.2 Cyber Security Strategy

Australia's critical infrastructure, including Energex and Ergon Energy Network's distribution networks, are facing an evolving risk landscape that encompasses increasingly interconnected global threats that directly impact customers and the community..

Energy Queensland's proposed Cyber Security program that forms part of the 2025-30 regulatory proposals of Energex and Ergon Energy Network, and is underpinned by Energy Queensland's strategic vision for Cyber Security, is as follows:

The cyber security challenges for Energy Queensland can be summarised in three themes:

- A need to protect data and systems from a wide range of sophisticated and evolving cyber threats
- A requirement to secure the transformational change that is happening in both Energy Queensland's digital and intelligent grid ecosystems, and
- A need to ensure that regulatory and compliance obligations are met.

The Energy Queensland Cyber Security Strategy Towards 2030 outlines a path forward to address these challenges. It updates Energy Queensland's cyber security mission and vision:

- **Mission:** Ensure the cyber security and cyber resilience of Energy Queensland's digital and intelligent grid ecosystems through collaboration on customer needs, business needs and cyber risk management, and
- **Vision:** Cyber security enables growth and innovation in Energy Queensland's digital transformation and the wider energy industry transformation.

The strategy has six core goals:

1. A cyber literate workforce and an organisation with a strong cyber security culture
2. An embedded approach to cyber security risk management
3. Information that is secure no matter where it resides or transits
4. Proactive defensive security arrangements
5. Prompt event detection and response, and
6. Resilience to cyber disruption.

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A successful implementation of this strategy will:

- Enable Energy Queensland to minimise its risks and vulnerabilities to cyber events
- Take full advantage of the benefits of its digital transformation and intelligent grid, and
- Meet its cyber security compliance obligations.

The Cyber Security business case has been developed to achieve these strategic outcomes. It includes both non-network (ICT) and network (OT) Cyber Security related investments.

4.3 Non-network ICT Asset Lifecycle Management

The Energex and Ergon Energy Network approach to non-network ICT asset management is documented in the Digital Asset Management Guidelines. This guideline ensures that rights and responsibilities for investing in, divesting from, utilising and administering digital assets throughout the asset life cycle are clearly assigned and communicated to asset users, administrators and budget holders to mitigate associated risks such as: contractual obligations, government regulations, data loss and prevention while optimising the enterprise technology assets.

These guidelines specify the infrastructure renewal timeframes for individual infrastructure asset classes and describe the approach to asset planning for application assets. These infrastructure renewal timeframes are summarised here, more detail is included in the Digital Asset Management Guidelines document.

Table 2 Digital Asset Management – Infrastructure Renewal Timeframes Summary

Category	Type		
End User Devices	Desktops		
	Laptops		
	Printers		
	Mobile Devices		
Server Infrastructure	Windows Servers Rack Mount – Edge Servers, Blade, Unix Servers HP / SUN		
Storage Infrastructure	Backup Storage		
	Disk Storage Tier 1, Disk Storage Tier 2		
Data Network Infrastructure	Core Devices		
	Special Devices (RADIUS / ACS / Call Mgr etc)		
	WAN - Site		
	LAN – Edge Switching		
Technology Software	VOIP Phones		
	Operating Systems		
	Security Software or Appliances		

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Category	Type	[REDACTED]	[REDACTED]
	Externally facing technology software	[REDACTED]	[REDACTED]
Video Conference	Video Conference Systems	[REDACTED]	[REDACTED]

The Digital Applications lifecycle management plans are planned at a platform roadmap level. Complex solutions, including on premise and as-a-Service solutions, are evaluated based on business value, business fit, risk, technology fitness and cost to determine appropriate replacement and decommissioning timeframes. Digital platform roadmaps and asset management plans are performed for each Digital platform, through business owners and business governance forums.

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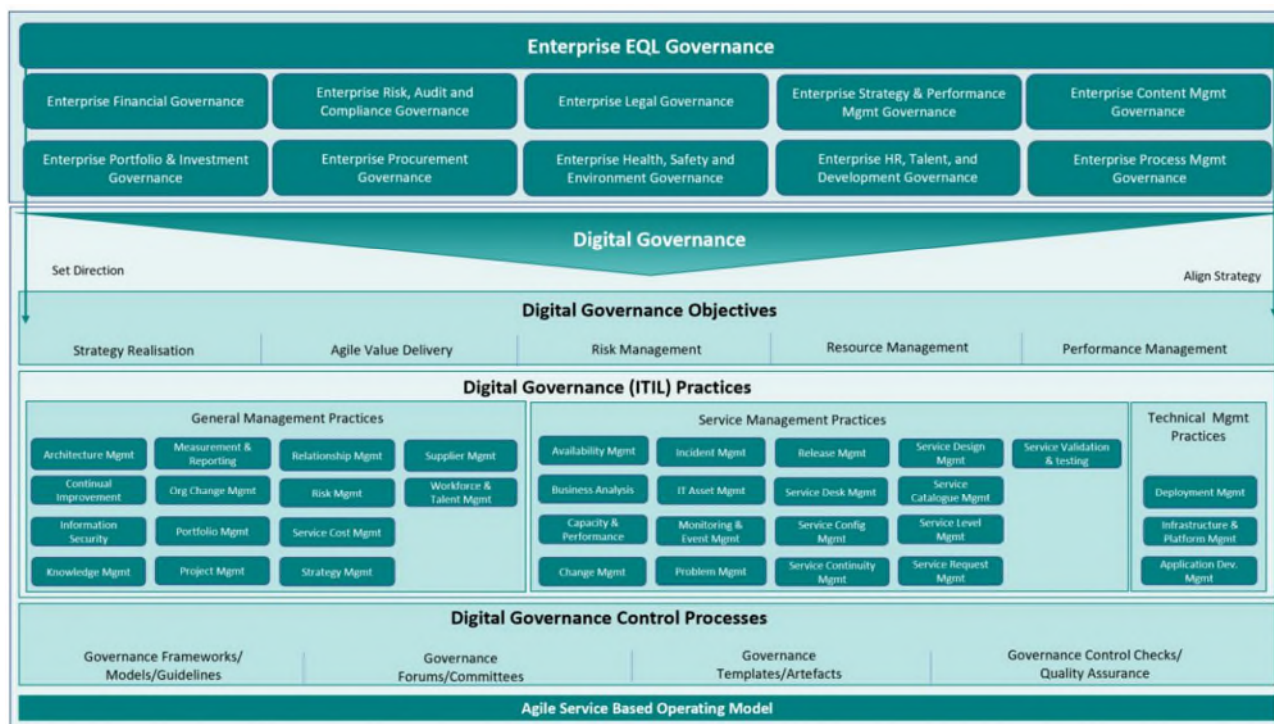
5. NON-NETWORK ICT PORTFOLIO DEVELOPMENT AND GOVERNANCE

This section summarises the overall “Digital Ways of Working”.

5.1 Digital Governance Framework

Digital governance is an element of the corporate governance model, aimed at improving the overall management of IT operations and services, and driving improved value from investment in information and technology. Digital governance frameworks enable management of IT risks effectively and ensure that the activities associated with information and technology are aligned with overall business objectives. In addition to the Enterprise Governance model, Digital Governance has also been designed around a number of best practice IT governance frameworks including Information Technology Infrastructure Library version 4 (ITILv4) and the Scaled Agile Framework (SAFe).

Figure 6 Digital Governance Model



The Digital Governance Model continuously evolves in response to required organisational changes, including lessons learned from post implementation reviews.

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5.2 Digital Governance Objectives

Key priorities and objectives of Digital governance are as follows:

1. **Strategy Realisation** - Align Digital Strategy to Business Strategy, enable transformation agility and ensure focus on and progression of business priorities
2. **Agile Value Delivery** – Improve customer experience and maximise the value of IT investments through rapid Agile delivery. This includes ensuring that governance is applied in line with the Agile principles (i.e. “just enough” governance)
3. **Risk Management** – Minimise risk and improve compliance. Investigate and mitigate IT risks and issues in a timely manner
4. **Resource management (financial and non-financial)** – Ensure availability of appropriate IT resources to meet current as well as projected business demand. Improve employee engagement and productivity, and
5. **Performance management** – Monitor IT performance effectively. Reduce outages and impacts.

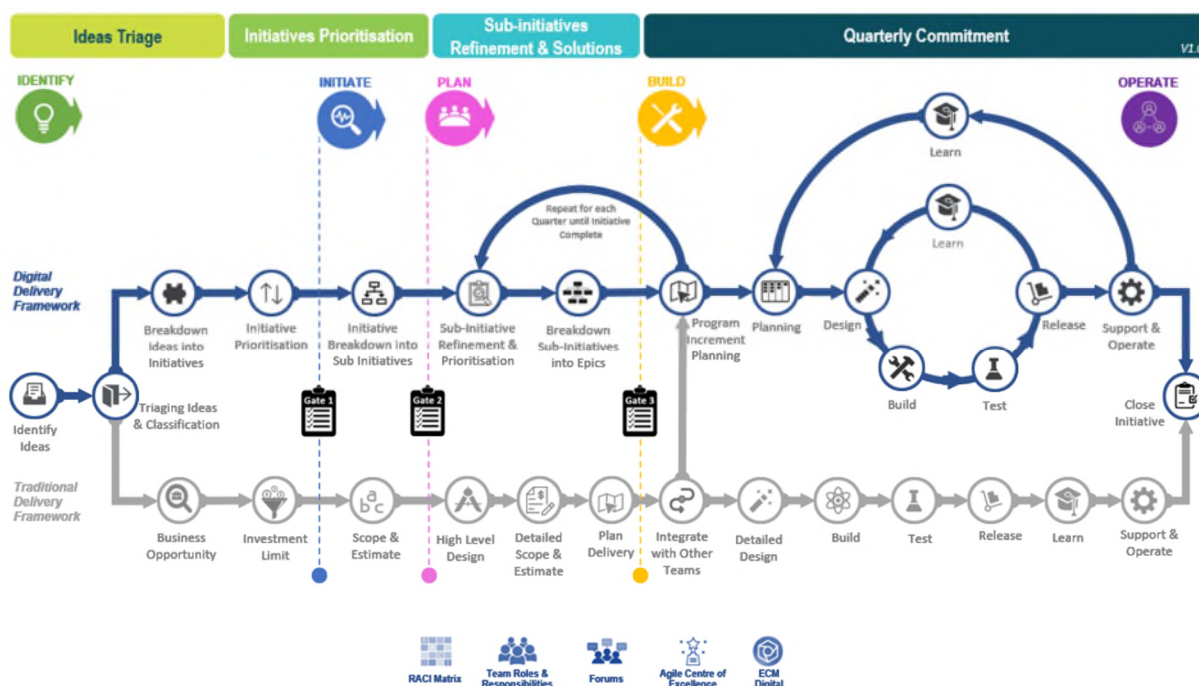
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5.3 Agile Service based Operating Model

In addition to ITIL Practice Management and governance, the Digital Operating model also incorporates the Scaled Agile Framework (SAFe) ways of working. While the ITSM framework outlines the key Digital governance practice areas (the what and the why), the Agile methodology provides the approach to day to day delivery of IT services (the how), and incorporate layers of operational governance to Digital planning, prioritisation, and execution activities. This links through to the governance objective of 'Agile Value Delivery'.

The Platform Management & Delivery Framework drives the delivery of all 'work' from a single Platform Backlog, and provides the flexibility to deliver a backlog item(s) through Agile workstreams or independent waterfall projects.

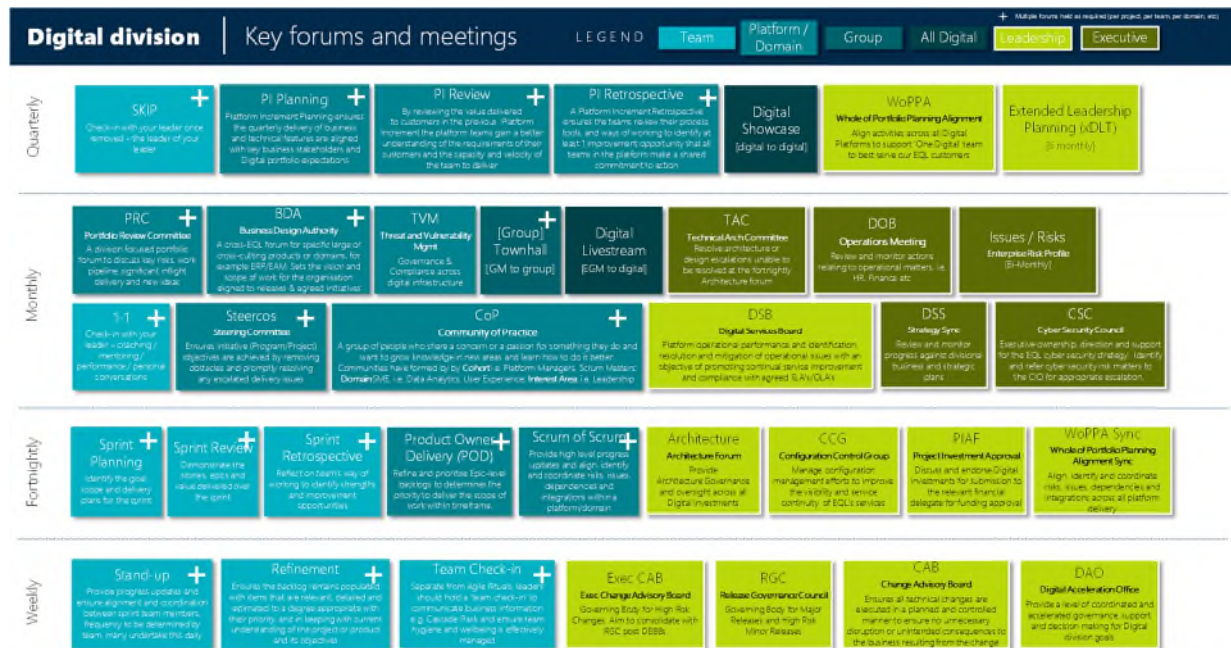
Figure 7 Agile Service based Operating Model



The following diagram articulates how governance is outworked within Digital through a set of key forums and meetings.

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Figure 8 Key Forums and Meetings



The above governance meetings are intended to facilitate the capture, prioritisation and execution of activities at a platform level. Additional Portfolio Management Governance is also overlaid across all platforms to ensure adherence to budget constraints, alignment to strategy, and realisation of value.

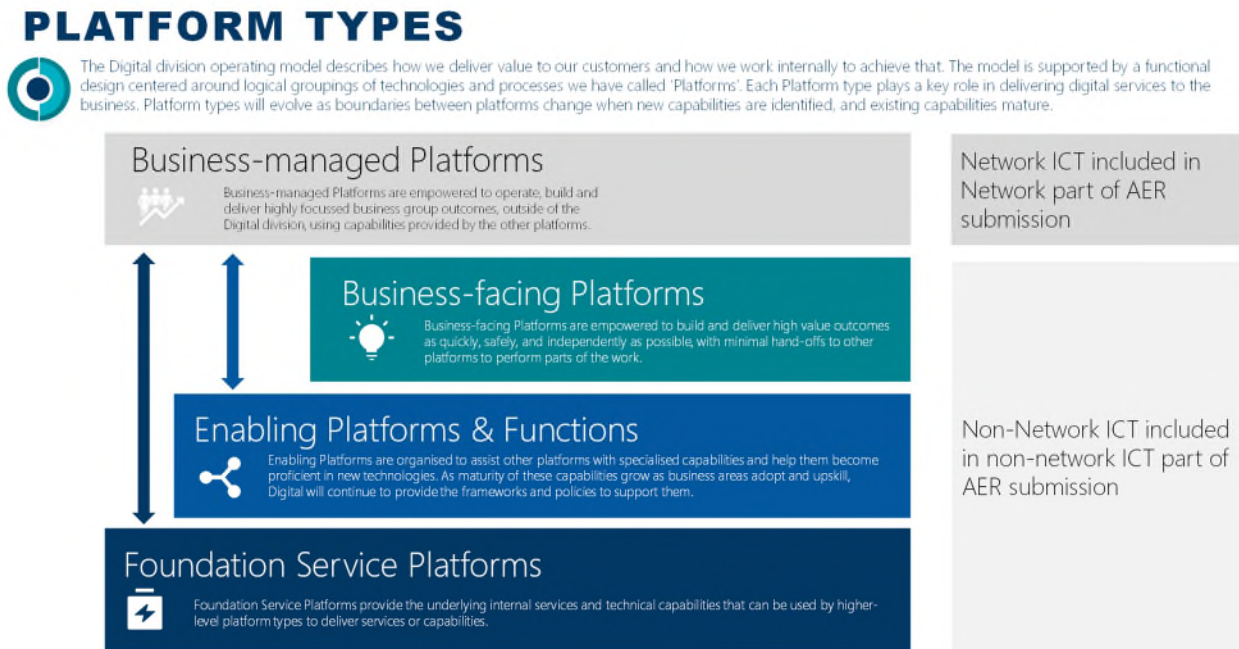
The Operating Model continuously evolves in response to required organisational changes, including lessons learned from post implementation reviews.

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6. 2025-30 NON-NETWORK ICT PLAN AND ROADMAP

The Digital part of Energy Queensland has moved from an infrastructure/technology/applications service provider model performed by a separate subsidiary to an organisational division using a platform based model. Digital Platforms are continuously maintaining and developing their capabilities, with lower level platforms enabling the higher level platforms to serve the business which serve the customer. Digital Platforms continuously develop and deliver their platform roadmaps. The Digital Platforms enable the Business-managed platforms. The ownership and expenditure for Business-managed platforms are predominately in the network part of the business.

Figure 9 Non-network ICT Platform Types

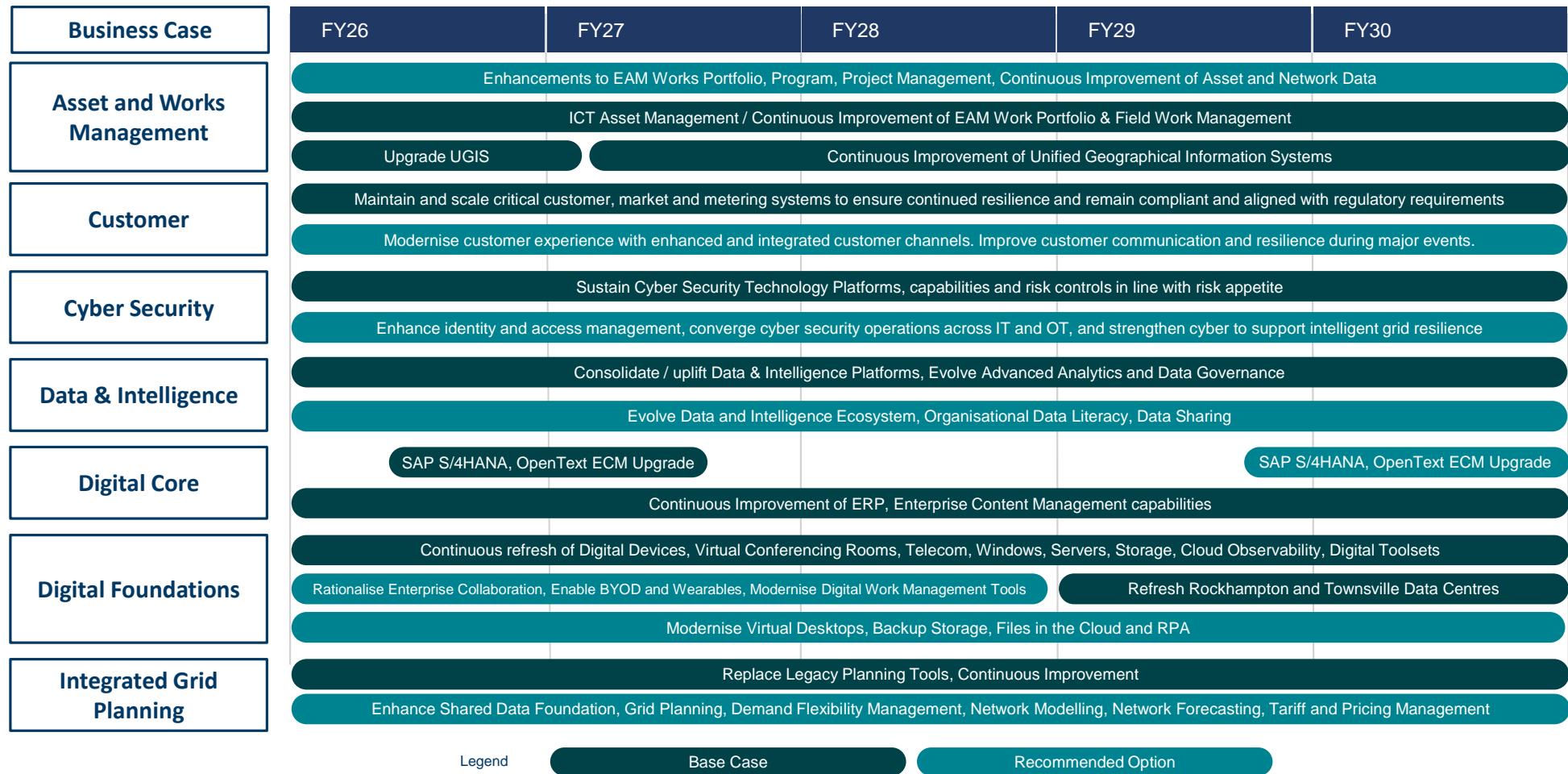


Energex and Ergon Energy Network will be delivering these business cases as per our standing “Digital ways of working” using a continuous iterative Agile methodology and platform-based approach. Energex and Ergon Energy Network will have ownership of each of the projects, partnering with Digital, with joint accountability for delivery, and will continue to consult with industrial partners.

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

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Figure 10 Non-network ICT Planning Roadmap



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7. NON-NETWORK ICT EXPENDITURE

7.1 Costing Approach for non-network ICT expenditure

The Queensland DNSP's Energex and Ergon Energy Network are part of the Energy Queensland group. Energy Queensland provides shared business and non-network ICT services to the DNSP's so they can efficiently and effectively serve the Queensland community. Many non-network ICT applications and technologies are implemented by Energy Queensland as shared solutions across its portfolio of businesses. This allows for improved efficiencies and a lower cost overall compared to if each business was to independently implement non-network ICT services. Energy Queensland non-network ICT costs are attributed and allocated across the portfolio via the Cost Allocation Method (CAM). The CAM ensures, that where practical, non-network costs are directly attributed to the entity that is incurring those costs and that shared non-network costs are allocated to each business and service based on the business rules of the CAM. For the purposes of the non-network ICT business cases, these costs are inclusive of both Standard Control Services and Alternative Control Services and includes costs for the entire Energy Queensland portfolio. The split of the costs to each DNSP are provided for in *Appendix Reconciliation Table* of each non-network ICT business case.

7.2 Summary of non-network ICT expenditure

Energex and Ergon Energy Network manage delivery of non-network ICT non-recurrent capital expenditure through an interdependent set of investments. This section summarises the forecast non-network ICT total (capital and operating) expenditure and the key benefit areas enabled by the planned business cases.

The Energex and Ergon Energy Network assumptions on the expected level of industry transition is detailed in the shared assumptions document.

Key points to note:

- Decrease in total non-network ICT expenditure of 14%
- Growth period for Energex and Ergon Energy Network
- Total non-network ICT expenditure returns to comparable non-network ICT totex per user benchmark levels
- Decrease in non-network ICT capex of 38%, with increase in non-network ICT operating expenditure (opex) of 9%
- Current period transformation focus areas (Asset and Works Management, Digital Core) move into continuous evolution, and
- Cyber Security and Customer are major investment focus areas for the next period.

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Figure 11 Non-network ICT Total Expenditure Summary⁶

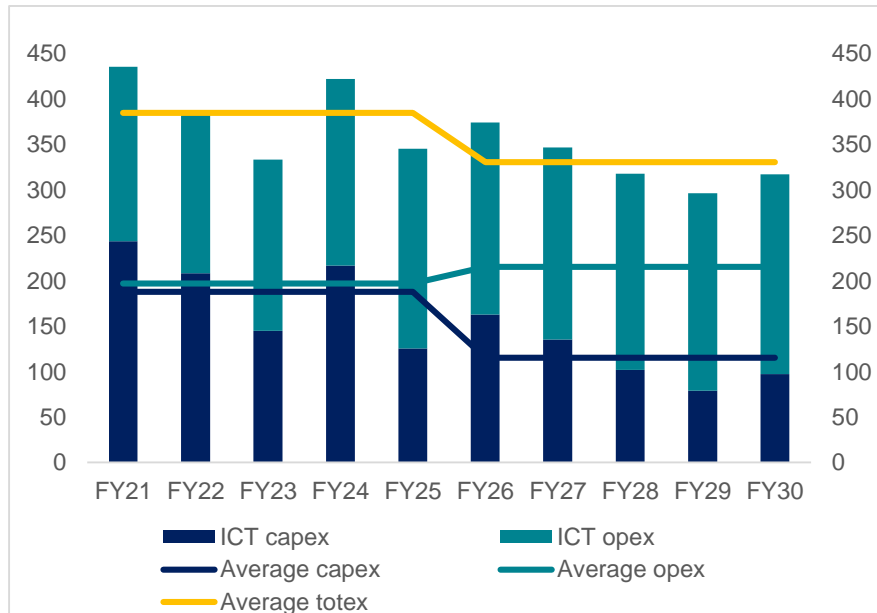


Table 3 Non-network ICT Total Expenditure Summary

ICT totex	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
ICT capex	243.5	208.4	144.8	216.8	125.4	163.1	135.1	101.7	79.1	97.1
ICT opex										
ICT totex										
Average capex	187.8	187.8	187.8	187.8	187.8	115.2	115.2	115.2	115.2	115.2
Average opex	196.8	196.8	196.8	196.8	196.8	215.2	215.2	215.2	215.2	215.2
Average totex	384.6	384.6	384.6	384.6	384.6	330.4	330.4	330.4	330.4	330.4

Further information regarding performance against planned non-network ICT investments in the 2020-25 regulatory control period can be found in the *Capex Ex Post Justification – Non-network ICT* (Ergon Energy Network Attachment 5.3.11).

7.3 Capital Expenditure Summary

Key points to note:

- Downward change in non-network ICT capex of 39%, moving out of the current period of major transformation programs and return to comparable non-network ICT totex per user benchmark levels
- Non-recurrent material reduction as current period transformation focus areas (Asset and Works Management, Digital Core) move from non-recurrent new/expanded to recurrent ongoing evergreening
- Cyber Security and Customer are major investment focus areas for the next period, and

⁶ The ICT capex portion of this figure includes both SCS and ACS capex and includes Minor Works. Forecast capex relates only to the IT portion of the non-network ICT business cases (excluding OT and opex). ICT opex portion is based on the non-network ICT opex from the ICT Forecast.

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- Increase in recurrent capex as move to consciously planning for continuous recurrent cycle of regular upgrades to applications and technologies (“Evergreening”).

Figure 12 Non-network ICT Capex Summary⁷

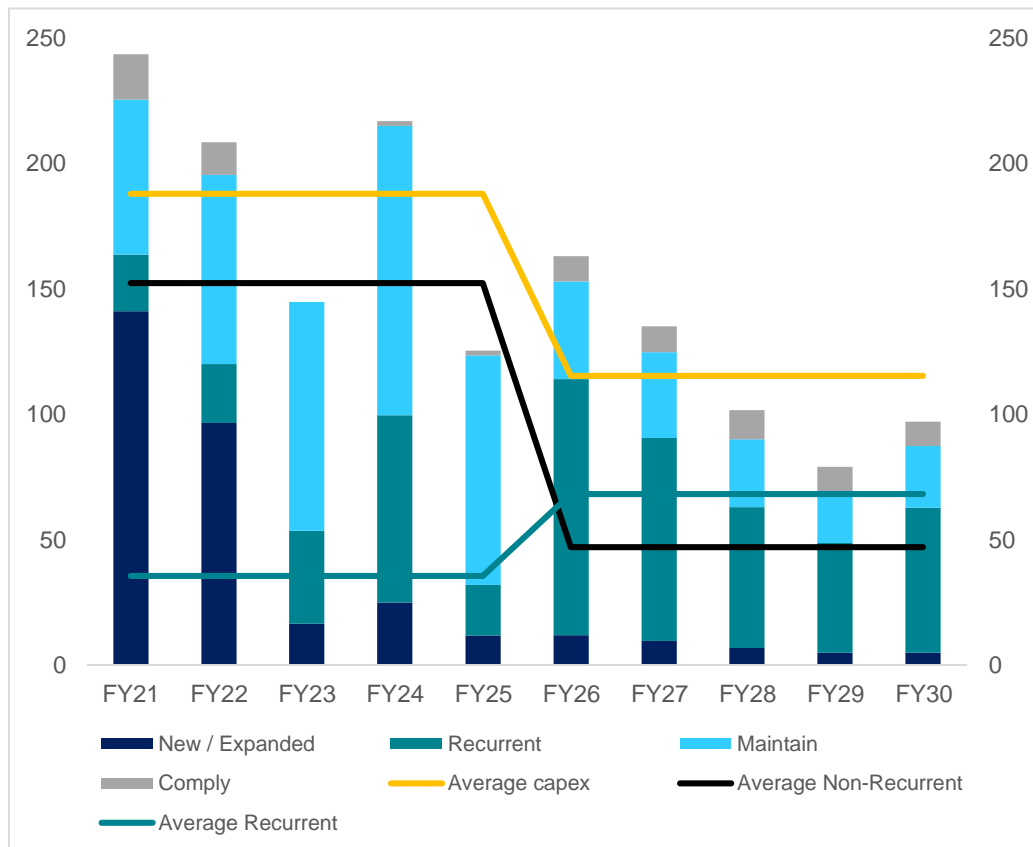


Table 4 Non-network ICT Capex Summary

ICT capex	FY21	FY22	FY23	FY24	FY25	5YR	FY26	FY27	FY28	FY29	FY30	5YR
Maintain	61.8	75.4	91.1	115.2	91.7	435.3	38.9	34.1	27.1	20.4	24.6	145.0
Comply	18.1	13.0	0.0	1.9	1.8	34.8	10.2	10.4	11.7	9.9	9.7	51.8
New / Expanded	141.1	96.6	16.5	24.9	11.8	291.0	11.9	9.7	6.8	4.8	4.8	38.1
Non-Recurrent	221.0	185.0	107.7	142.1	105.3	761.1	60.9	54.2	45.6	35.2	39.1	234.9
Recurrent	22.5	23.4	37.1	74.7	20.1	177.9	102.1	80.9	56.2	43.9	58.0	341.2
Total capex	243.5	208.4	144.8	216.8	125.4	938.9	163.1	135.1	101.7	79.1	97.1	576.1
Average capex	187.8	187.8	187.8	187.8	187.8		115.2	115.2	115.2	115.2	115.2	
Average Non-Recurrent	152.2	152.2	152.2	152.2	152.2		47.0	47.0	47.0	47.0	47.0	
Average Recurrent	35.6	35.6	35.6	35.6	35.6		68.2	68.2	68.2	68.2	68.2	

Further detailed analysis of investment expenditure can be seen in Appendix 1.

⁷ This figure includes only IT capex (SCS and ACS), including Minor Works, and excludes OT and opex.

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7.4 Operating Expenditure Summary

Key points to note:

- While opex increases 9%, as part of overall drop in Total Expenditure
- Labour costs increases 7%, while contractors increase 5%
- Increase in L&M of 16%
 - as more applications and technologies are costed as ‘as-a-service’,
 - as more applications and technologies are hosted on cloud platforms
 - as more ‘as-a-service’ costs are linked to workforce, and
- Telco decreases 2% as data usage continues to grow.

Figure 13 Non-network ICT Opex Summary

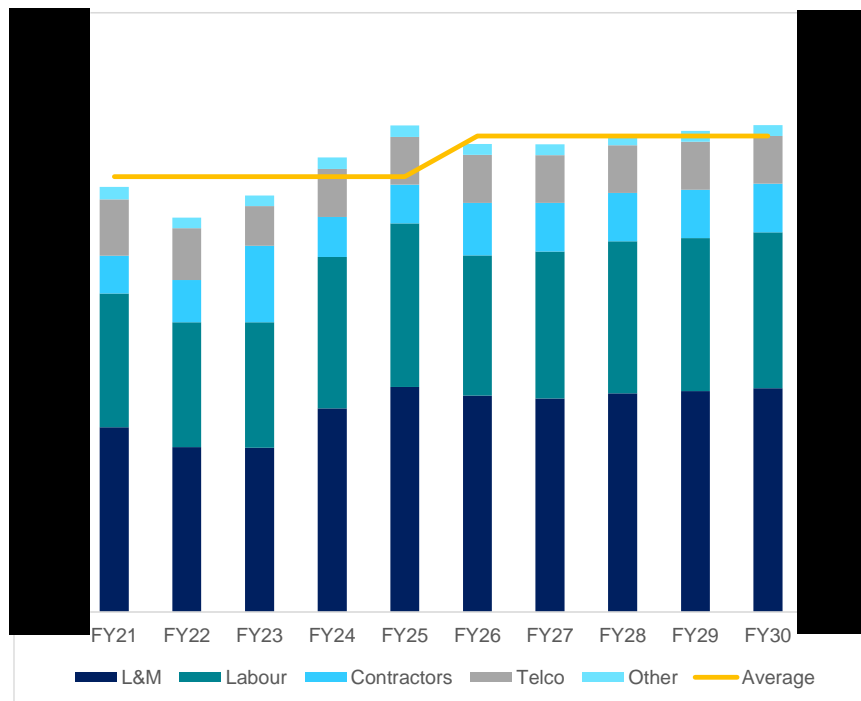


Table 5 Non-network ICT Opex Summary

ICT opex	FY21	FY22	FY23	FY24	FY25	5YR	FY26	FY27	FY28	FY29	FY30	5YR
Labour												
Contractors												
Other												
L&M												
Telco												
Total opex												
Average	196.8	196.8	196.8	196.8	196.8		215.2	215.2	215.2	215.2	215.2	

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8. APPENDICES

Appendix 1: Overview of Non-network ICT Major Investment Expenditure

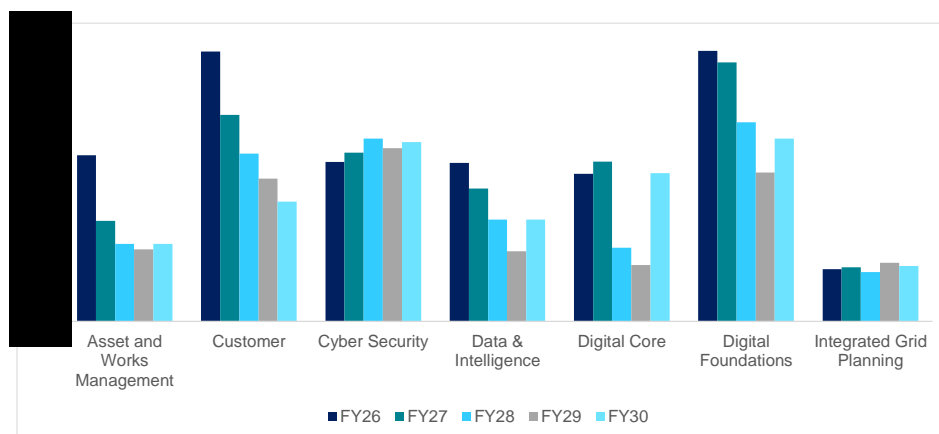
Table 6 Overview of ICT Business Cases capex⁸

Business Case capex		Recurrent	Non-Recurrent	Total capex
Asset and Works Management	IT			
Customer	IT			
Cyber Security	IT			
Cyber Security	OT			
Data & Intelligence	IT			
Digital Core	IT			
Digital Foundations	IT			
Integrated Grid Planning	IT			
Total Non-Network ICT	IT			
Total Network OT	OT			
Total ICT and OT				

Table 7 Non-network ICT Business Case Investment Expenditure by Year⁹

Business Case	FY26	FY27	FY28	FY29	FY30	capex	opex	TOTAL
Asset and Works Management								
Customer								
Cyber Security								
Data & Intelligence								
Digital Core								
Digital Foundations								
Integrated Grid Planning								
Total Non-Network ICT								

Figure 14 Non-network ICT Business Case Expenditure by Year



⁸ Table includes capex (SCS and ACS) only and excludes Minor Works and opex.

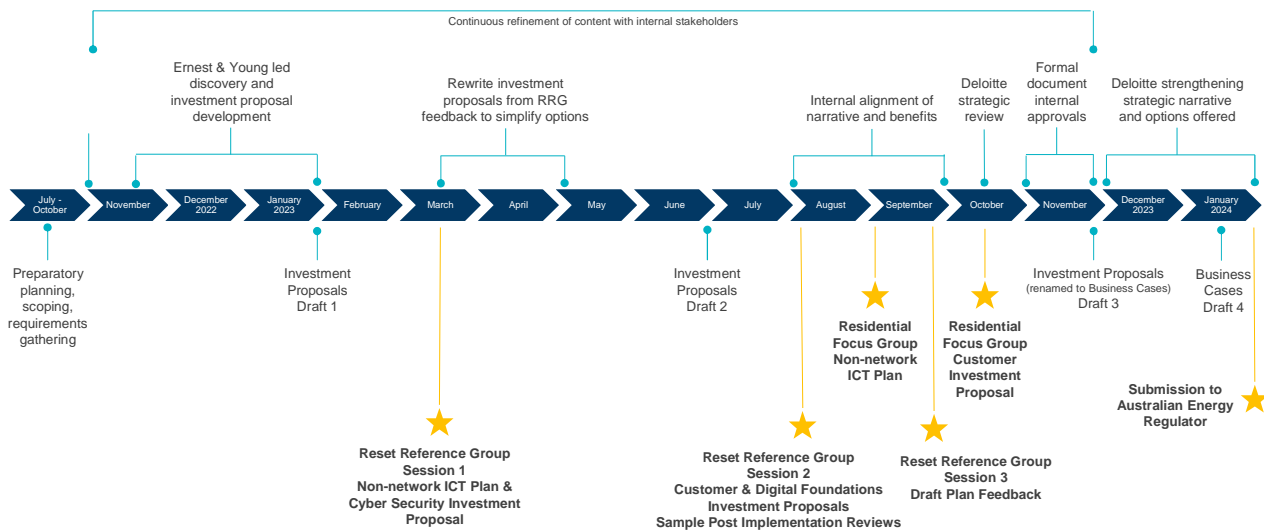
⁹ Table includes IT expenditure and excludes Minor Works and OT expenditure.

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Appendix 2: Non-network ICT Engagement Process

Throughout the development of the non-network ICT Plan and Business Cases, we have maintained relationships with stakeholders to incorporate their feedback. Engagement with independent consultancy firms and customer stakeholder groups occurred on a regular basis. Figure 15 is a timeline of forums/workshops that occurred since July 2022, demonstrating our consistency in engaging our key stakeholders whose feedback shaped our ICT Plan and Business Cases for the 2025-30 regulatory control period.

Figure 15 Non-network ICT Stakeholder Timeline



We engaged with EY and Deloitte to seek independent review and expertise to inform the development of our ICT Plan and Business Cases, ensure alignment across the document suite and review our approach for consistency with other DNSP regulatory submissions.

From March 2023, we also commenced presenting material to the Reset Reference Group (RRG) and later, the Residential Focus Group sessions, to test feasibility of the Cyber Security, Customer and Digital Foundations business cases. Feedback received was not only incorporated to the specific material presented but was also applied to the ICT Plan and other Business Cases where applicable for consistency and alignment.

Appendix 3: Non-network ICT Business Cases Options

During the initial analysis of future business needs and how ICT will enable this through the 2025-30 regulatory period, there was consideration of a range of options for each business case. This included a Counterfactual option to consider a “Do Nothing” but bare minimum support of ICT assets.

This initial analysis quickly resulted in the Counterfactual option to be considered not credible for further consideration. Counterfactual would only create technology debt, increase business disruption risk and the cyber threats/incidents risk. On this basis, we therefore disregarded the Counterfactual option and concentrated on three options analysed in more detail.

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Figure 16 Non-network ICT business case considered options

Counterfactual - Do nothing (Rejected)	Option 1 – Base Case (Keep the Lights On)	Option 2 – Keeping pace with the industry transition (Recommended)	Option 3 – Develop capabilities in advance of the industry transition need
<ul style="list-style-type: none"> Keep ICT operating 	<ul style="list-style-type: none"> Keep ICT operating, secure, up to date Keep the business capability maintained at the current level 	<ul style="list-style-type: none"> Adapt and Scale the business capabilities and ICT systems to support the expected industry transition 	<ul style="list-style-type: none"> Adapt and Scale the business capabilities and ICT systems in advance of the expected industry transition
<ul style="list-style-type: none"> Not prudent nor efficient Not consistent with customer or stakeholders requirements for the expected industry transition 	<ul style="list-style-type: none"> The minimum change to ICT systems to achieve the NER capex and opex objectives to 2030 	<ul style="list-style-type: none"> What a prudent and efficient DNSP would do to ensure they can continue to achieve the NER capex and opex objectives to 2030 through the continued expected industry transition 	<ul style="list-style-type: none"> Not prudent nor efficient Not consistent with customer or stakeholders requirements for the expected industry transition
<ul style="list-style-type: none"> No ICT Asset Management No adaption to the expected regulatory and compliance changes to support the industry transition No scaling of ICT systems for the expected level of growth No adaption to business capabilities Increased Cyber Security risk profile due to no application of vendor upgrades 	<ul style="list-style-type: none"> Includes prudent ICT Asset Management Requirement for ongoing predictable conservative level of change Known predictable regulatory and compliance change 	<ul style="list-style-type: none"> Assumptions of indicators, drivers and triggers based on a likely expected change scenario Adapt to the expected level of regulatory and compliance changes to support the industry transition Scale ICT systems for the expected level of growth 	<ul style="list-style-type: none"> Assumptions of indicators, drivers and triggers based on more active change scenario More active adaption in advance of regulatory and compliance changes to support the industry transition Proactive scale of ICT systems in advance of expected level of growth

The majority¹⁰ of non-network ICT business cases present three options, with Option 2 being the recommended. The option themes are:

- Option 1 – Base Case (Keep the Lights On)
- Option 2 – Keeping pace with the industry transition (Recommended)
- Option 3 – Develop capabilities in advance of the industry transition need

Each non-network ICT business case has described their business case options with a title that describes the context of the option being proposed. Consequently, each non-network ICT business case will have varying option titles. While these option titles are different, they do align to the option themes listed above and detailed below.

¹⁰ Cyber Security business case propose slightly different versions of these options.

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Table 8 ICT Business case option titles¹¹

Business Case	Option 1 - Base Case (Keep the Lights On)	Option 2 - Keeping Pace with the Industry Transition	Option 3 - Develop capabilities in advance of the Industry Transition need
ICT Asset and Works Management	Maintain and upgrade GIS and Field Works Management solutions	Enhance EAM Works Portfolio, Program and Project Management	Leading Asset Management Practices
ICT Customer	Maintain and scale critical customer and market systems to ensure continued resilience and remain compliant and aligned with regulatory requirements	Adapt and enhance modern and integrated digital channels for customer experiences to support customers with enhanced interactions, information and meaningful insights during emergency and major events	Pioneer industry leading customer experiences with advanced technologies and new product and service offerings
Cyber Security	Evolve Current Cyber Security Capabilities	Evolve Current Cyber Security Capabilities and provide basic capability uplift to support grid evolution	Strengthen all current, and build new, Cyber Security capabilities
ICT Data & Intelligence	Maintain intelligence platform	Keep Pace with Industry Advancements and the Scale of Data	Lead industry in data and intelligence
ICT Digital Core	Maintain secure platform and minimum ERP and ECM capability	Improve access provisioning and improve ERP, Operational Risk and Emissions Reporting	Enhance access provisioning, business process design, Operational Risk and Emissions Reporting
ICT Digital Foundations	Minimum sustainment of existing foundation capability	Enable office and field worker collaboration and modernise cloud storage capabilities	Modernise digital foundations for future operations
ICT Integrated Grid Planning	Minimum sustainment for slow pace of change	Keeping pace with the Industry Transition	Hyper-automation of Integrated Grid Simulation and Planning

¹¹ bold text denotes Recommended Option

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Figure 17 Non-network ICT business case options

Option 1 – Base Case (Keep the Lights On)	Option 2 – Keeping pace with the industry transition (Recommended)	Option 3 –Develop capabilities in advance of the industry transition need
<ul style="list-style-type: none"> Keep ICT operating, secure, up to date Keep the business capability maintained at the current level 	<ul style="list-style-type: none"> Adapt and Scale the business capabilities and ICT systems to support the expected industry transition 	<ul style="list-style-type: none"> Adapt and Scale the business capabilities and ICT systems in advance of the expected industry transition
<ul style="list-style-type: none"> The minimum change to ICT systems to achieve the NER CAPEX and OPEX objectives to 2030 	<ul style="list-style-type: none"> What a prudent and efficient DNSP would do to ensure they can continue to achieve the NER CAPEX and OPEX objectives to 2030 through the expected industry transition (conservative scenarios) 	<ul style="list-style-type: none"> What a prudent and efficient DNSP would do to ensure they can continue to achieve the NER CAPEX and OPEX objectives to 2030 through expected industry transition (progressive scenarios)
<ul style="list-style-type: none"> Includes prudent ICT Asset Management Requirement for ongoing predictable conservative level of change Known predictable regulatory and compliance change 	<ul style="list-style-type: none"> Assumptions of indicators, drivers and triggers based on a likely expected change scenario Adapt to the expected level of regulatory and compliance changes to support the industry transition Scale ICT systems for the expected level of growth 	<ul style="list-style-type: none"> Assumptions of indicators, drivers and triggers based on more active change scenario More active adaption in advance of regulatory and compliance changes to support the industry transition Proactive scale of ICT systems in advance of expected level of growth

The Option 1 - Base Case (Keep the Lights On) is the ongoing requirement that a prudent and efficient DNSP would do to achieve the NER capex and opex objectives in 2030, based on ongoing predictable conservative growth. Prudent ICT Asset Management (both recurrent and non-recurrent) is essential to keep the lights on. 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 changing environment. This option focuses on compulsory expenditure to operate Energy Queensland’s ICT assets and systems, including ongoing/mandatory upgrades. These upgrade, replacement and continuous improvement initiatives are intended to maintain Energy Queensland’s business capabilities with only minor improvements in efficiency outcomes.

The Option 2 – Keeping pace with the industry transition (Recommended) builds on the Base Case (Keep the Lights On) option, by adapting and scaling them to keep pace with the expected industry transition. While our shared assumptions of the expected external drivers, triggers, timing and growth indicators in this industry transition are documented, Energex and Ergon Energy Network will implement in anticipation of the actual consumer and industry needs. This option may include expected regulatory and compliance change, scaling for the expected level of growth and in some cases new/expanded ICT capability. This option focuses on foreseen regulatory/compliance requirements as well as adaptation to predictable productivity opportunities in line with the priorities of all business divisions.

The Option 3 – Develop capabilities in advance of the industry transition need builds on the Base Case (Keep the Lights On) and the Keeping pace with the industry transition options, by developing and implementing technology solutions to enable business capabilities in advance of the expected industry transition. This includes increasing business maturity and implementing leading practices across Energex and Ergon Energy Network through advanced technology services. This option focuses on future technologies in anticipation the business will increase their process maturity and be ready to adopt these technologies to service staff and customers. In the majority of business cases options analysis, this option 3 was discounted. We heard clearly that our customers and stakeholders expect that we will keep pace (not behind nor in advance, (with exception of Cyber Security), just at pace) with the expected industry transition. We also recognise

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AER feedback to other distributors that investment too long in advance of need is not warranted, not prudent, nor efficient.

Option 2 is the recommended option, with exception of Cyber Security¹², as it is the only option that demonstrates prudent and efficient ICT support and management through the maintenance of existing business capabilities in a fit-for-purpose state as the industry transitions. Option 1's lower investment only keeps the business capabilities current (including prudent ICT Asset Management), without keeping pace with the expected industry transition, data growth and cyber threats.

We had heard through our business-as-usual engagement channels that customers want support to navigate the transition to a low emissions future, especially around how to reduce their energy costs through energy efficiency or investment in DER. In August 2023, we explored with a focus group of customers from Energex and Ergon Energy Network what type of support we could provide (e.g. advice through our call centre or on-line channels). We then requested input from a wider audience through our Draft Plan released in September 2023. Respondents were generally comfortable with the provision of on-line tools provided and that the information was unbiased and understandable by customers.

In October 2023 we presented to our Energex and Ergon Energy Network customer focus groups on optionality in customer experience to test their preference of investment. This ranged from aiding customers in what we do today, to more customer channels of choice, to more channels plus DER education and awareness with the provision of on-line tools to manage their own energy generation units (e.g. Rooftop Solar). Ergon Energy Network participants showed unanimous support for the full suite of proposed customer initiatives, while Energex participant response was mixed, with only 60% showing preference for the same features. Based on this, we have tempered advanced customer experience initiatives with a focus on improving communication channels of choice (i.e., web site, contact centres, etc) and keeping customers informed through emergency and major events. We believe this is a low cost option that will provide benefits to customers and communities as they navigate the complexities of a fast-changing energy industry. We have also taken on board customers feedback about benefits (to the organisation) and incorporated this into our Business cases.

¹² Option 3 – develop capabilities in advance of the industry transition need is the recommended option for Cyber Security as this is only option that demonstrates prudence and efficiency to mitigate security risks and remain ahead of emerging cyber threats as Energex & Ergon Energy Network head towards the Electric Life 2032 ambition.

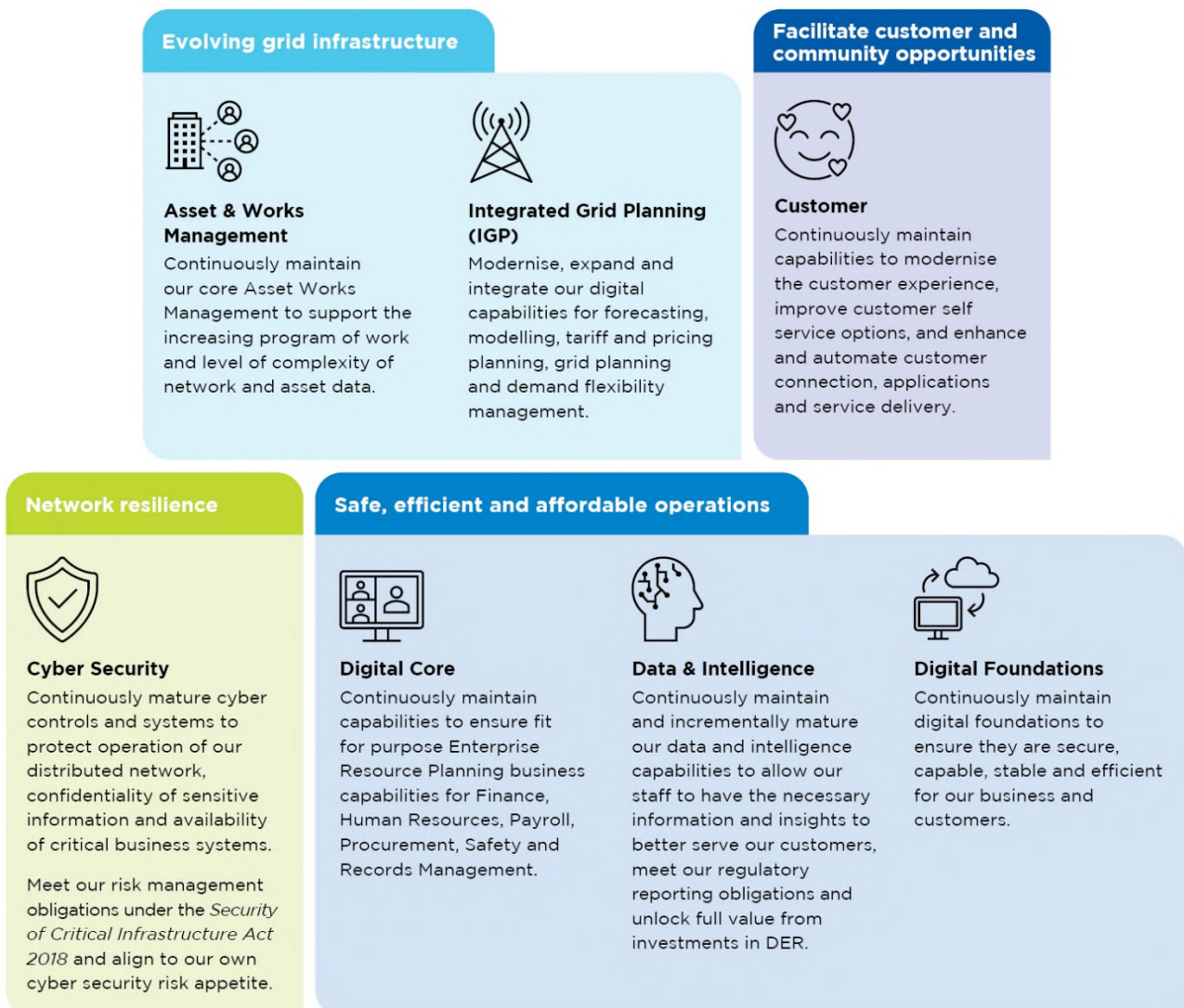
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Appendix 4: Overview of Planned Non-network ICT Business cases

The sections below summarise the key planned areas of expenditure in each non-network ICT business case.

The following figure provides an overview of the key planned investments outlined in the non-network ICT business cases.

Figure 18 Non-network ICT business case overview



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The following table provides an overview of the drivers supported by each of the non-network ICT business cases.

Table 9 Non-network ICT Business case to Strategic Drivers

Driver / Business Case	Network resilience	Safe, efficient and affordable operations	Facilitate customer and community opportunities	Evolving grid infrastructure
ICT Asset and Works Management		Digitalisation of asset and works information		Growth in network and distributed energy resource assets
ICT Integrated Grid Planning	Maintain safety, security and reliability of network	Support affordability and sustainability of network and ICT services	Enable customers to benefit from tariff choices and investments in DER	Support renewable energy transition and growing electrification
Cyber Security	Maintain critical service provision, address malicious attacks, support evolution of electricity grid			
ICT Customer	Enhance response and recovery of customers during emergency and major events	Maintain compliant customer, market and metering systems	Support customers and maintain service standards through enhanced digital channels	
ICT Digital Core	Maintain secure core solutions	Scale back-office functions, Meet operational risk and environment focused outcomes		
ICT Data and Intelligence		Extract value from data to improve operating performance and customer experience		
ICT Digital Foundations		Maintain secure access of people and systems to data, devices, collaboration tools, storage and telecommunications, Enable a managed growth of technology infrastructure to support energy transition.		

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The following figure provides an overview of the key planned investments outlined in the non-network ICT business cases using the recommended options.

Table 10 ICT Business case Capex Summary

									
	Evolving grid infrastructure		Network Resilience	Facilitate Customer & Community opportunities	Safe, efficient & affordable operations				
	Asset and Works Management	Integrated Grid Planning (IGP)	Cyber Security	Customer	Digital Core	Data & Intelligence	Digital Foundations		
Objective	<ul style="list-style-type: none"> Continuously maintain capabilities to maintain the distributed network Ensure reliability of the network Support increasing program of work, level and complexity of network asset data and Distributed Energy Resources (DER) on the network 	<ul style="list-style-type: none"> Adapt IGP capabilities to continue to meet evolving compliance requirements under the NER Make prudent and efficient network investment decisions Maintain a resilient network to benefit customers and communities 	<ul style="list-style-type: none"> Continuously mature cyber controls and systems to protect operation of our distributed network, confidentiality of sensitive information and availability of critical business systems Meet our risk management obligations under the SOCI act and align to our own cyber security risk appetite 	<ul style="list-style-type: none"> Continuously maintain capabilities to modernise the customer experience Improve customer self-service options available through preferred channels of choice Enhance & automate customer connection applications and service delivery 	<ul style="list-style-type: none"> Continuously maintain capabilities to ensure continuing fit for purpose ERP business capabilities for Finance, Human Resources, Payroll, Procurement, Safety and Records Management 	<ul style="list-style-type: none"> Continuously maintain and incrementally mature capabilities to address the needs of an evolving digital utility & energy industry Keeping pace with emerging capabilities to better serve our customers Meet regulatory obligations and unlock full value from investments in CER 	<ul style="list-style-type: none"> Continuously maintain digital foundations to ensure they are secure, capable, stable and efficient for our business and customers Continue to take advantage of cloud technologies Improve internal experience by modernising end user devices, simplifying collaboration technologies for field and office workers, improving delivery of services to customers 		
			ICT OT					Total ICT	Total ICT/OT
Recurrent	[REDACTED]								
Non-recurrent	[REDACTED]								
Total capex	[REDACTED]								
Benefits[^]	[REDACTED]								

*Un-escalated capex \$, inclusive of both SCS & ACS \$ and represented in real December 2022
 Excludes minor works capex of [REDACTED]
 OT indicated Network OT capex \$
 Proposal figures are based on ICT forecast submission January 2024
[^]Gross benefits quantified and agreed

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Appendix 5: Overview of Benefits Areas

The non-network ICT business cases support the achievement of Energex and Ergon Energy Network's strategic priorities by providing the following benefits:

- Keeping pace with Cyber Security risks
- Keeping pace with ongoing business changes through continuous improvements
- Keeping pace with customer and stakeholders evolving expectations in the expected industry transition
- Prudent ICT Asset management using secure supported contemporary solutions
- Maintain and improved customer standards for interactions with products and complex services.
- Improved awareness of new products and services for the energy transition, and
- Improved communications with customers during emergency and major events.

For more details on the benefit areas and which part of the overall expenditure forecast they relate to, refer to the individual non-network ICT business cases.

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Appendix 6: Related Documents

Table 11 Related Documents

Document Date	Document Name	Document Type
19/04/2023	Energex Business Narrative Ergon Energy Network Business Narrative	Direction
28/11/2019	AER - Non-network ICT capex assessment approach	Guidance note
07/04/2022	Energy Queensland Strategic Framework	Infographic
	Energy Queensland Cyber Security Strategy Towards 2030	Document
25/01/2025	Non-network ICT Forecast Model	Excel model
13/06/2023	Digital Asset Management Guidelines	Guideline
01/11/2022	Digital Governance Framework	Framework
03/10/2023	Digital Delivery Framework	Framework
31/10/2023	RDP 2025 Project – Shared Assumption	Assumptions Document
25/01/2024	Non-network ICT Common Glossary	Document

Table 12 Mapping of Business Cases to SCS Capex Model (Attachment 5.2.01)

Business Case	SCS Capex Model Reference
	ICT Business Case 1 - Non-network capex
	ICT Business Case 2 - Non-network capex
	ICT Business Case 3 - Non-network capex
	ICT Business Case 4 - Non-network capex
	ICT Business Case 5 - Non-network capex
	ICT Business Case 6 - Non-network capex
	ICT Business Case 7 - Non-network capex