

# Capability Uplift Project – Tranche 2 and 3

Regulatory Business Case (RBC) 2024-29

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# 1. Summary

This business case has been prepared to support the 2024-29 Regulatory Proposal. It demonstrates that Power and Water has undertaken appropriate analysis of the needs and, from a suite of credible options, has identified a preferred option that will resolve those needs and ensure that Power and Water continues to meet the National Electricity Objective, satisfy the capital and operating expenditure criteria and factors, and manage the network prudently and efficiently. It also describes how the Capability Uplift (CU) Project core initiatives enable Power and Water's overarching strategy in the enactment of the Operation Model Roadmap.

The Operating Model Program and the Capability Uplift Project span the full scope of Power and Water's business; while the business case necessarily therefore spans that full scope, the costs and the benefits of different elements of the project differentially affect elements of Power and Water's business and are allocated accordingly.

Figure 1 Power and Water 2022 Operating Model Roadmap



The initiatives identified in this business case will undergo further assessment and scrutiny through Power and Water's normal governance processes prior to implementation. It is also important to note that given the span of time across the regulatory period, it is expected that refinement of solutions, delivery sequencing, costs and benefits will be required and subsequently fully articulated in the "final" initiative business cases.

## 1.1 Business need

As a multi-utility Power and Water faces a unique operating environment with high complexity, a small customer base, and aged asset network. Complexity is compounded by a large geographical footprint across four customer segments, not typical to most other jurisdictions in the National Electricity Market (NEM); Major urban centres, Minor urban centres, Indigenous Essential Services, and Mining and four

products, electricity (including generation, network and retail services), water, sewerage and gas. Historical under-investment in technology has meant that core technology systems across Power and Water are outdated and unable to support the growing needs of the business, the industry, and government renewable mandates. This has created severe inefficiencies resulting in Power and Water being heavily reliant on manual, time consuming, and error-prone processes to deliver essential services to customers.

Power and Water has delayed investment in core systems over an extended period. Systems have not kept pace with the evolving needs of the business, the customer base, or the broader Power and Utilities sector. Continued delays in investment will further raise the risk profile, increase costs to serve, prevent us from meeting our compliance and governance mandates, and lead to further degradation in the performance of systems and ultimately core business operations.

Power and Water has performed a significant body of analysis to inform a proposed resolution. A focussed and key window of opportunity exists to address these challenges and to create a platform for a material improvement in ways of working, service provision and customer management. The business is acting now to replace or upgrade these core systems and to provide the basic system capabilities to operate as a prudent, efficient, cost-effective, and future ready essential services provider.

In October 2020, a Transformation Preliminary Business Case was approved recommending a 3-Tranche delivery strategy for the full scope of the CU Project. In November 2021, the Tranche 1 final Business Case was approved for the replacement of Power and Water's unsupportable Retail Management System that was originally implemented in 2004; the replacement project is known as the Capability Uplift Meter to Cash Project (CU M2C Project). The scope of the CU M2C Project involves the delivery of a regulatory compliant, secure, efficient, and customer-focussed Meter Data Management System and customer billing operations capability; it will also implement foundational cloud integration capability that will be used for Tranche 2 and 3 initiatives and is a major uplift of capability for Power and Water and an enabler for the Northern Territory Department of Digital and Corporate Development (DCDD).

This business case reflects changes to Tranches 2 and 3 of the original 3-Tranche delivery strategy, further refined in the June 2021 Transformation Program Reset and updated and finalised by the Power and Water Board in October 2021. At this Board meeting, the introduction of an Advanced Distribution Management System (ADMS) to prevent 'system black' was prioritised over elements of the original CU Project sequencing. After this decision, the Energy Management System (EMS) upgrade project (undertaken by Power and Water Power Services) was confirmed to address the system black issue enabling a reprioritisation of CU M2C Project Tranche 2 and 3 initiatives; the options are described in this business case.

## 1.2 Options analysis

The following options have been considered for addressing the business need.

Table 1 Summary of credible options

Option No.	Option name	Description	NPV (\$m) <sup>1</sup>	Recommended
1	Deliver Tranche 1 (CU M2C Project) (do nothing more)	Maintain current baseline of service capability for the remaining aging legacy systems.	N/a	No. Does not address fundamental system limitations, serviceability, compliance, or risk.
2	Deliver Tranches 2 and 3 as part of current multi-tranche delivery strategy	Continue implementing full scope of CU Project subject to separate (final) time-based final business cases and commercial activities for Tranches 2 and 3.	+4.1	Yes. Provides for deliverability confidence in a whole of business perspective while enabling cost efficiency and prudence.
3	Deliver Tranche 2 only	Deliver base capability in components of Tranches and defer Tranche 3 (Service Delivery) to following regulatory period (2029-34).	-11.9	No. Inefficient sequencing that separates interrelated capabilities, increases costs due to stop start nature and does not address business cost efficiency opportunities in this area.
4	Deliver Tranche 2 only, but with extended timeframes	Deliver Physical to Financials post Tranche 1 (CU M2C Project) then pause Asset Management & Capital Project Delivery to July 2026.	-2.4	No. This option was discounted as Asset Management & Capital Project Delivery and Physical to Financials have core interdependencies and need to be delivered in phased approach.

The following key assumptions were considered for the option analysis:

- KPMG project costing and benefits analysis completed in 2020 remain valid
- The financial model adopts a 10-year timeframe (from completion of each project)
- Project phasing and costing will align with Power and Water Statement of Corporate Intent government approved funding
- Project maintains momentum created with Meter to Cash project with no start/stop of projects

<sup>1</sup> NPV (to 2022) based on 10-year analysis. (Specifically, because the individual projects are sequenced, the analysis assumes a 10-year benefit period for each project, once deployed). NPVs are expressed in \$2020 real terms, consistent with the denomination of cost and benefit information.



- Most benefits are not expected to be realised until one-year post implementation of Tranche projects
- Renewable mandates will not impact program delivery

### 1.3 Recommendation

Option 2 is the recommended option. Option 2 had the highest business benefits with a positive NPV of \$4.1M and addresses the strategic and operational business need. The phased implementation in this option will ensure that it is deliverable, after considering deliverability in a whole of business perspective, and builds on the track record and considerable in-house delivery capability of the project team currently delivering the CU M2C Project as part of Tranche 1.

The analysis of the identified options that form the basis for choosing the most efficient and prudent option is set out in Section 3 of this document. The information that forms the basis of the recommendation is set out in Section 4 of this document.

The scope for Tranche 2 and Tranche 3 of the Capability Uplift project is as follows:

- Tranche 2: Physicals to Financials, Asset Management & Capital Project Delivery, and
- Tranche 3: Service Delivery (includes Works Management and Mobility).

Table 2 shows a summary of the recommended Option 2 expenditure requirements for the period from FY24 and the corresponding cost allocated to Standard Control Services (SCS) based on Power and Water's AER approved Cost Allocation Methodology. The Cost Allocation Methodology is comprised of the total portion of Capex that is attributed to regulated services and then further reduced by the percentage allocated to SCS.

*Table 2 Forecast annual capital and operational expenditure (\$m, real FY20)*

Item <sup>2</sup>	FY24	FY25	FY26	FY27	FY28	FY29	Total
Capex	2.1	12.25	13.3	5.95	2.1	0	35.7
Opex	0.9	5.25	5.7	2.55	0.9	0	15.3
Total	3.0	17.5	19.0	8.5	3.0	0	51.0

We have calculated the NPV for each of the options by considering net annual benefits with a 1-year realisation delay from each implementation to account for solution embedding and FTE reduction process. Benefits are then counted for 10 years from that point, and for the purpose of the assessment are then assumed to drop to zero. For NPV assessment purposes, the costs and benefits commence from FY24 (which is the commencement of Tranche 2) and continue to FY38 (which is point at which the last implementation has provided benefits for 10 years).

Benefits for each implementation are as derived by KPMG and further discounted by Power and Water to ensure a conservative assessment. These are as follows:



<sup>2</sup> Costings based on KPMG detailed analysis for 2020 CU Project Preliminary Business Case



Table 3 Recommended Option 2 Net Present Value (NPV)

Item	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31-38	Total
Total Cost	3.0	17.5	19.0	8.5	3	0	0	0	51.0

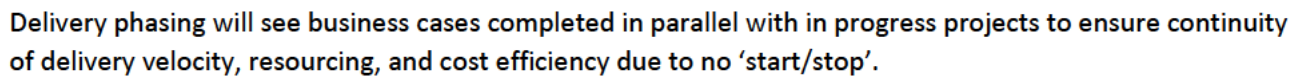
Applying conservative benefit assumptions, this option has a positive NPV of \$4.1M (noting a Weighted Average of Cost of Capital of 2.75%)

## 1.4 Deliverability

Deliverability is managed across a whole of business portfolio view both from a schedule dependency and through business resource capacity and demand perspectives. Figure 4 illustrates the monthly major project tracking where insights are provided, and prioritisation calls are discussed where conflicts occur. This business case was developed in consideration of capacity to deliver and through resource availability.

<sup>3</sup> Benefits based on KPMG detailed analysis for 2020 preliminary business case

**Cross Business Initiatives (Major)** as of 02 Nov 2022  
**Portfolio View**





## 2. Identified need

This section provides the background and context to this business case, identifies the issues that are posing increasing risks to Power and Water and its customers, describes the current management program, highlights challenges and emerging issues, and provides a risk assessment of the inherent risk if no investment is undertaken.







### 2.1 Background to Capability Uplift Project

Key to Power and Water's Statement of Corporate Intent (SCI) was the commitment to becoming a more accountable organisation, with simplified systems and processes. An Operating Model Program has been established to progress the implementation of the Future Operating Model as a multi-year, multi-work stream initiative.

During development and implementation of the Future Operating Model, Power and Water identified that it would significantly benefit from uplifting the technical competencies across a range of core capability business functions. This uplift in technical competencies will be delivered through the CU Project. The full scope of the CU Project involves the replacement or upgrade of legacy IT system capabilities across six functional domains and delivered through 6 projects/workstreams. The first project, Meter to Cash, is well progressed and will be delivered in the current regulatory period. The next project, Transform Customer Experience, is also well progressed with most of the capability to be delivered as part of the CU M2C Project and the remainder expected to be fully delivered in the current regulatory period.







Power and Water is currently supported by an ecosystem of disparate IT solutions. Several solutions are end-of-life and significant customisation has impacted the ability to maintain IT currency, support business practices, and align to regulatory obligations. The CU Project represents a major undertaking for Power and Water, replacing legacy IT solution capabilities across six functional domains.

Figure 3 CU project – 6 x Projects/Workstreams

CU Project Workstream	Description	Current Maturity	Systems to be Upgraded / Replaced	Key Customer Outcomes
Tranche 1	 <b>Meter to Cash</b> Deliver compliant and efficient metering and billing systems in line with NER requirements & address revenue management issues	LOW	Retail Management System <sup>1</sup> (Gentrack)	<ul style="list-style-type: none"> <li>✓ Delivers mandatory NT NER regulatory obligations by January 2024</li> <li>✓ Accurate tariff management and billing</li> <li>✓ Addresses core operational inefficiencies</li> </ul>
	 <b>Transform Customer Experience</b> Deliver a quality customer experience across the business with a single customer view	LOW	Retail Management System (Gentrack)	<ul style="list-style-type: none"> <li>✓ Advanced customer service and customer experience capabilities</li> <li>✓ Improved brand and reputation</li> </ul>
Tranches 2	 <b>Physicals to Financials</b> Improve the efficiency of financial processes to enable improved financial management and decision making	LOW	Financial Management System (Oracle)	<ul style="list-style-type: none"> <li>✓ Resolves technical issues of P2F being at end of life</li> <li>✓ Addresses core operational inefficiencies</li> <li>✓ Addresses external financial reporting issues</li> </ul>
	 <b>Standardise Asset Management</b> Enable the optimisation of assets by effectively balancing cost, risk, and performance	MEDIUM	Asset Management System (Maximo)	<ul style="list-style-type: none"> <li>✓ Improved operational performance and leveraging economies of scale (as a multi-utility) by standardising processes and systems</li> </ul>
	 <b>Capital Project Delivery Consolidation</b> Deliver projects effectively and efficiently from capital project planning, scoping, project management, and execution	LOW	Project Server (Microsoft)	<ul style="list-style-type: none"> <li>✓ Improved capital planning and maintenance strategies</li> <li>✓ Improved network performance and resiliency</li> <li>✓ Improved support for regional and remote communities</li> </ul>
Tranche 3	 <b>Optimise Service Delivery</b> Support efficient and effective work planning, scheduling, dispatching, and closeout processes	MEDIUM	Asset Management System (Maximo)	<ul style="list-style-type: none"> <li>✓ Optimise planning and delivery of works management activities across field operations</li> </ul>

Note: The replacement of the Retail Management System will deliver a set of core Transform Customer Experience capabilities; with remaining capability known as the "Customer Portal" and "Enhanced IVR" outstanding but expected to be delivered in parallel with Meter to Cash in the current regulatory reporting period.

Figure 4 CU Project – Outcomes and Functional Scope

Capability Uplift Outcomes					
<b>Transform Customer Experience</b>  <ul style="list-style-type: none"> <li>• Deliver a <b>consistent customer experience</b> across the business with seamless interactions across all channels.</li> <li>• Support <b>account management</b>, on-boarding of customers, handle service orders, enquiries and customer feedback.</li> </ul>	<b>Meter to Cash</b>  <ul style="list-style-type: none"> <li>• Deliver <b>compliant and efficient M2C systems, processes and roles</b> in line with AER requirements and to support market operations and reduce revenue leakage.</li> </ul>	<b>Optimise Service Delivery</b>  <ul style="list-style-type: none"> <li>• Support <b>efficient work planning, scheduling, dispatching</b> and work closeout processes.</li> <li>• Support <b>resource scheduling and dispatch</b> across internal and contractor workforces, across multiple regions in the NT.</li> </ul>	<b>Standardise Asset Management</b>  <ul style="list-style-type: none"> <li>• Realise the <b>value from assets</b> by effectively balancing cost, risk and performance.</li> <li>• Develop the asset investment plan, balancing competing needs of the network and asset based with constrained resources to <b>optimise the portfolio and investments</b>.</li> </ul>	<b>Physicals to Financials</b>  <ul style="list-style-type: none"> <li>• Improve the <b>efficiency of cost allocation, accounting and reporting processes</b> to improve decision making and enhance the connection between assets, work and financials.</li> <li>• Improve how <b>accounting and finance</b> functions are managed.</li> </ul>	<b>Capital Project Delivery Consolidation</b>  <ul style="list-style-type: none"> <li>• Deliver <b>projects effectively and efficiently</b> from capital project planning, scoping and sourcing, project management and execution.</li> <li>• Support <b>consistent project estimation providing traceability</b>, consistency and efficiency of design and estimates for projects.</li> </ul>
Capability Uplift Functional Scope					
Setup Customer Credentials	Metering Compliance	Work and Resource Planning	Asset Strategy Management	Plan to Perform	Project Development
Contract Lifecycle Management	Metering Provision	Scheduling	Asset Planning Management	Record to Report	Project Delivery
Customer Self Service	Metering Data Provision	Dispatch and Monitor	Asset Portfolio	Acquire to Retire	Project Review
Manage Interactions	M2C Service Transaction	Work Closeout		Project to Result	
Account Management	Billing of Electricity and Water			Quote to Cash	
Customer Data Governance	Payment and Collections			Source to Pay	
Customer Service Improvement	Cash Governance & Compliance				
Customer Hardship Support					

### 2.1.1 Business Architecture Development

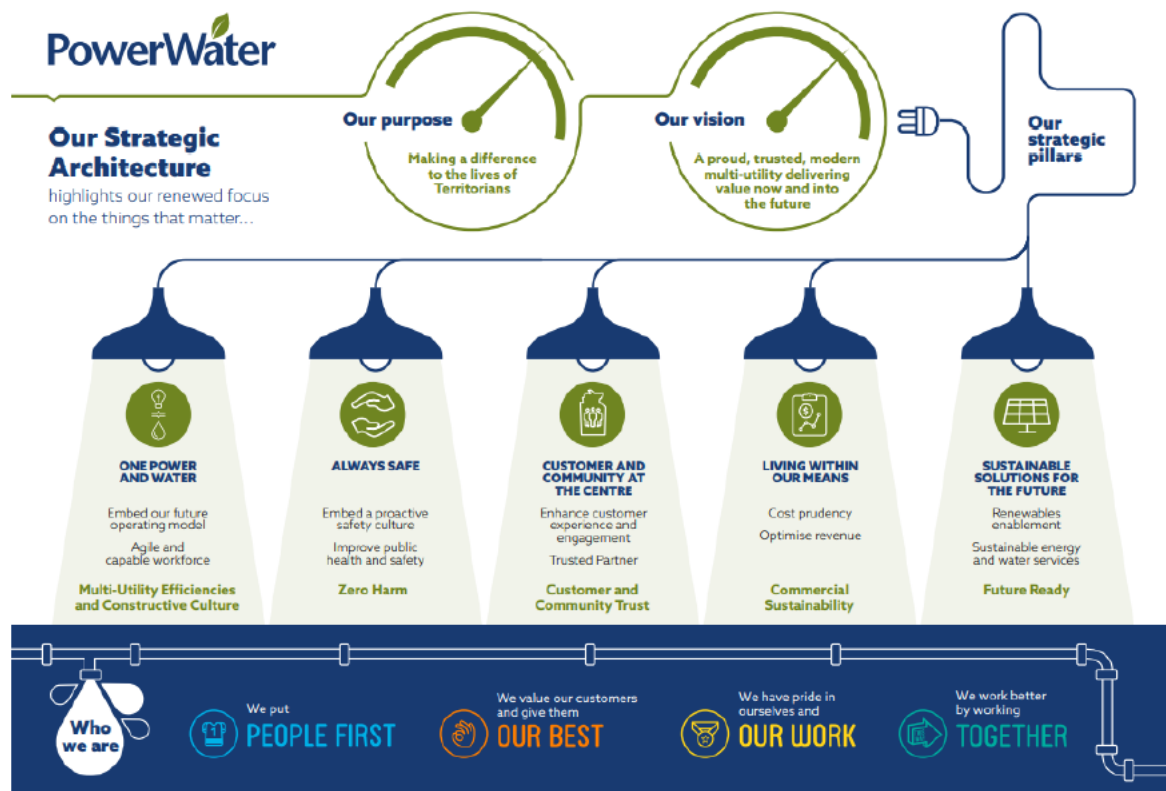
Power and Water has undertaken an initiative to develop the future state Business Architecture in support of the CU Project. A significant investment has been made in defining a set of artefacts that will inform the future state operating model, and the design of the associated systems. These artefacts include:

- **Future State Process Design** (level 1 -3 decompositions): Documents the key activities, interactions and dependencies required to deliver the scope of services associated with each workstream. These have been prepared in a system agnostic manner prior to engagement of the product vendor and were used to inform requirements
- **Accountability and Capability Models**: Define the roles, titles, functions, and the responsibilities to operate an effective business architecture across the target processes
- **Data Flows**: Map the movement of information and data across dependent systems to support identified processes
- **Functional and Non- Functional Requirements**: Outline the specification of business requirements, highlighting the solution capability and functionality necessary to support Power and Water in operating in their target state. The specification includes non-functional requirements which outline the technical system properties required for the systems in scope
- **Future State Technology Architecture and Roadmap**: Defines the future state system capabilities required to support the needs of the CU Project and their technical dependencies. The roadmap provides an indicative view on the logical sequencing of activity required to deliver the CU Project and the relevant interdependent projects and programs of work at Power and Water

## 2.2 Strategic alignment

The SCI identifies the strategic direction for Power and Water underpinned by five key pillars:

Figure 5 SCI pillars



The CU Project is a significant program of work within Power and Water and is individually identified within the SCI. Power and Water is on the path to major change in line with its vision and purpose. The SCI identifies a series of Key Result Areas that will drive the execution of Power and Water's strategic goals and objectives. The replacement of core systems associated with the CU Project is a key enabler to delivering several Power and Water's Priority Focus Areas, including:

1. **One Power and Water:** Three strategic focus areas have been identified to enable the 'One Power and Water' pillar, the first of which is 'Embed our future Operating Model'. The CU Project is captured within the four Waves of the Operating Model Roadmap (see Figure 1). These waves are designed to create greater efficiencies and more defined accountabilities within Power and Water. They are aimed at better organising Power and Water as a multi-utility, leveraging synergies and improving systems to provide services customers expect of a utility. The approach includes a combined roadmap of capability building projects (including major ICT re-platforming) and implementing efficiency reforms. The major ICT re-platforming projects are the subject of this Regulatory PBC.



Table 4 – SCI – One Power and Water

Big rock	Strategic Programs	Start Timeframe	Success Outcome
Embed our Future Operating Model led by Operating Model Program	<b>Implement Wave 1 Operating Model –</b> Implementation of a new Meter to Cash ICT solution with improved business processes, Supply Chain Fundamentals – aimed at optimising supply chain and Revenue Assurance.	Ongoing	Multi-utility efficiencies and constructive culture
	<b>Implement Wave 2 Operating Model –</b> Continuation of Power and Water ICT solutions uplift.	2023-28	
	<b>Organisational and Process Alignment –</b> Aligning structures and processes to future state Operating Model.	Ongoing	
Agile and Capable of Workforce led by People, Culture and Safety	<b>Workforce Capability and Cultural Uplift –</b> Deliver safety, leadership, behavioural, compliance and technical training.	Ongoing	
	<b>Strengthen Leadership Capability –</b> Embedding a more constructive and positive culture through developing leaders to build a high performing, capable, accountable, and engaged workforce.	Ongoing	

2. **Customer and community at the centre:** Growing customer expectations are mandating Power and Water to enhance its customer focus and customer experience. This is partly being addressed through the delivery of the CU M2C Project as part of Tranche 1 to replace the legacy Retail Management System which is unable to support basic customer management system capabilities including a single view of the customer, robust billing management or systemised case management. Tranches 2 and 3 will continue to build on Power and Water’s foundational technology to support Power and Water in leveraging industry trends to improve and future proof service delivery including in the areas of customer and meter data analytics, digital metering, predictive maintenance, and renewable energy investment. The new systems will also enable Power and Water to engage customers as a multi-utility, seamlessly across all lines of business.
3. **Sustainable solutions for the future:** Power and Water will drive improvements in operational performance and position itself as an efficient and effective provider of essential services, in line with legislative and regulatory obligations. Power and Water’s ability to operate sustainably and to efficiency targets is impacted by limited process standardisation, a fragmented and highly customised technology environment, and dated legacy systems. The replacement of the relevant systems will improve Power and Water’s ways of working using automation to reduce manually intensive work, the streamlining and simplification of processes, and the adoption of system based best practices to support efficient business operations.

## 2.3 Key operational challenges

Core operations across Power and Water are inefficient and broken. Challenges associated with manual, and error prone processes combined with legacy systems that cannot support business needs. This impacts Power and Water's ability to operate sustainably.

The key operational challenges include:

- **Manual and time-consuming business operations.** Manually intensive processes and system workarounds have led to significant time spent on inefficient and administrative activities across the Power and Water business. Poor system capabilities and inadequate data management has led to significant and reportable data breaches
- **Inconsistent and immature work practices.** Processes have limited standardisation and have varying maturities across different lines of business. This reduces collaboration across teams, limits operational efficiencies, and impacts the ability to deliver multi-utility synergies
- **Extensive customisation and legacy systems.** Extensive customisation of legacy IT systems has constrained Power and Water's ability to maintain IT currency, apply product updates and has driven increasing costs to meet business requirements
- **Limited system integration.** There is limited ability to integrate ageing systems. For example, the lack of integration between the Asset Management and Finance solutions creates multiple sources of asset costings and creates data integrity challenges. There is no single source of truth for data, because of lack of integration across systems

Four out of six CU Project work streams have been rated as having low process maturity, driven by poor system capabilities, inconsistent work practices, and poor data management practices. This is further illustrated in Figure 6 and Figure 7 below.

Figure 6 CU Project Maturity Assessment Insights by Workstream

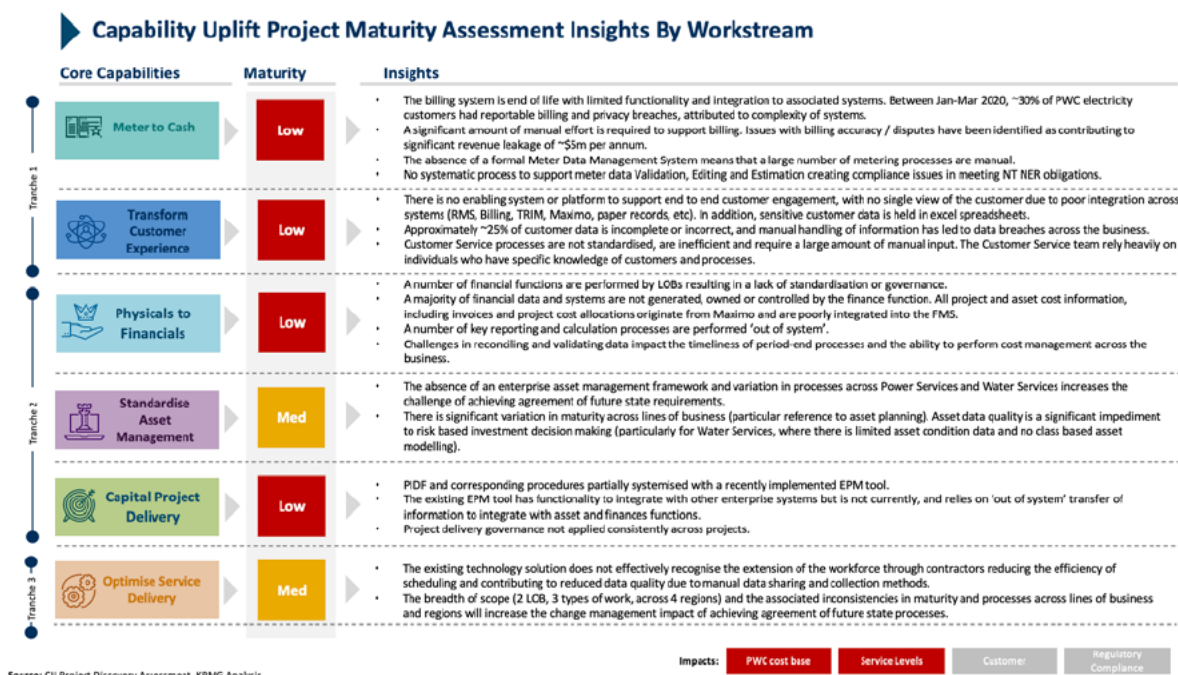
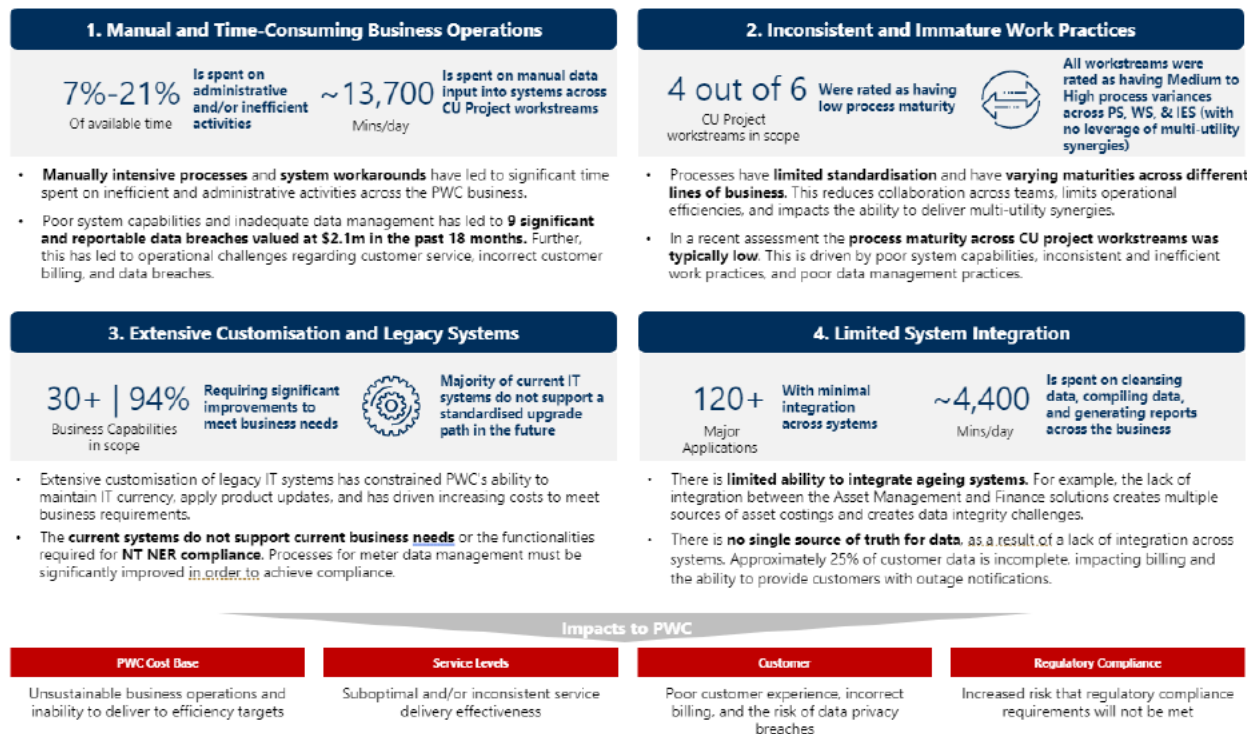


Figure 7 Operational Challenges





## 2.4 Corporate and Strategic Risks

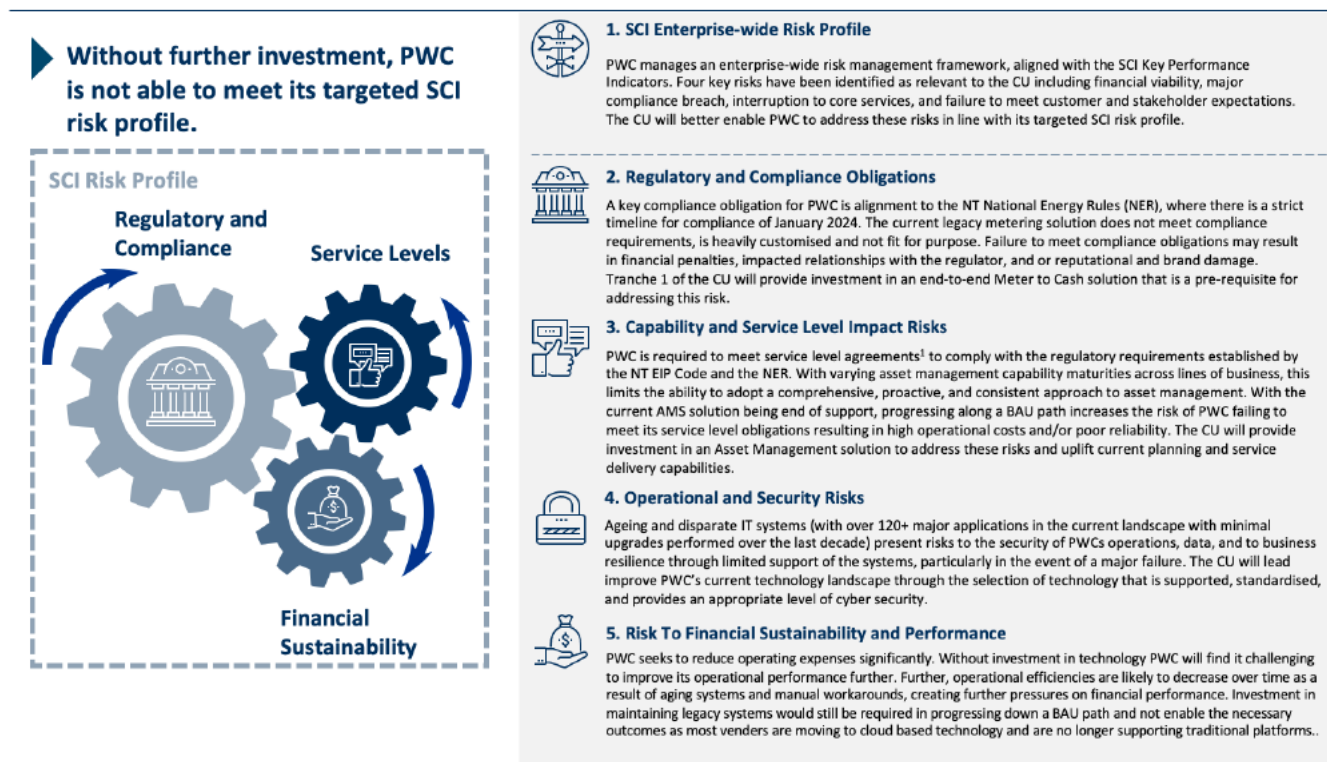
Implementing Tranche 2 and 3 mitigates a number of strategic and corporate risks for Power and Water. These risks are captured in Power and Water's enterprise-wide risk register.

Power and Water currently manages a series of corporate risks across regulatory and compliance obligations, financial sustainability, and service level requirements, and investment in technology is a critical enabler to addressing these risks, as follows:

- **SCI Enterprise-wide risk profile:** Power and Water manages an enterprise-wide risk management framework, aligned with the SCI Key Performance Indicators. Four key risks have been identified as relevant to the CU Project including financial viability, major compliance breach, interruption to core services, and failure to meet customer and stakeholder expectations. The CU Project will better enable Power and Water to address these risks in line with its targeted SCI risk profile.
- **Regulatory and compliance obligations:** A key compliance obligation for Power and Water is alignment to the Northern Territory National Electricity Rules (NT NER), where there is a strict timeline for compliance of January 2024. The current legacy metering solution does not meet compliance requirements, is heavily customised and not fit for purpose. Failure to meet compliance obligations may result in financial penalties, impacted relationships with the regulator, and or reputational and brand damage. Tranche 1 of the CU Project will provide investment in an end-to-end Meter to Cash solution that is a pre-requisite for addressing this risk.
- **Capability and service level impact risks:** Power and Water is required to meet service level agreements to comply with the regulatory requirements established by the NT Electricity Industry Performance Code and the NT NER. With varying asset management capability maturities across lines of business, this limits the ability to adopt a comprehensive, proactive, and consistent approach to Asset Management. With the current Asset Management solution (implemented in 2000) and at end of support, progressing along a business-as-usual path increases the risk of Power and Water failing to meet its service level obligations resulting in high operational costs and/or poor reliability. The CU Project will provide investment in an Asset Management solution to address these risks and uplift current planning and service delivery capabilities.
- **Operational and security risks:** Ageing and disparate IT systems (with over 120+ major applications in the current landscape with minimal upgrades performed over the last decade) present risks to the security of Power and Water's operations, data, and to business resilience through limited support of the systems, particularly in the event of a major failure. The CU Project will support improvements in Power and Water's current technology landscape through the selection of technology that is supported, standardised, and provides an appropriate level of cyber security.
- **Risk to financial sustainability and performance:** Power and Water seeks to reduce operating expenses in line with current and future AER Determinations. Without investment in technology Power and Water will find it challenging to improve its operational performance further. Further, operational efficiencies are likely to decrease over time because of aging systems and manual workarounds, creating further pressures on financial performance. Investment in maintaining legacy systems would still be required in progressing down a business-as-usual path.

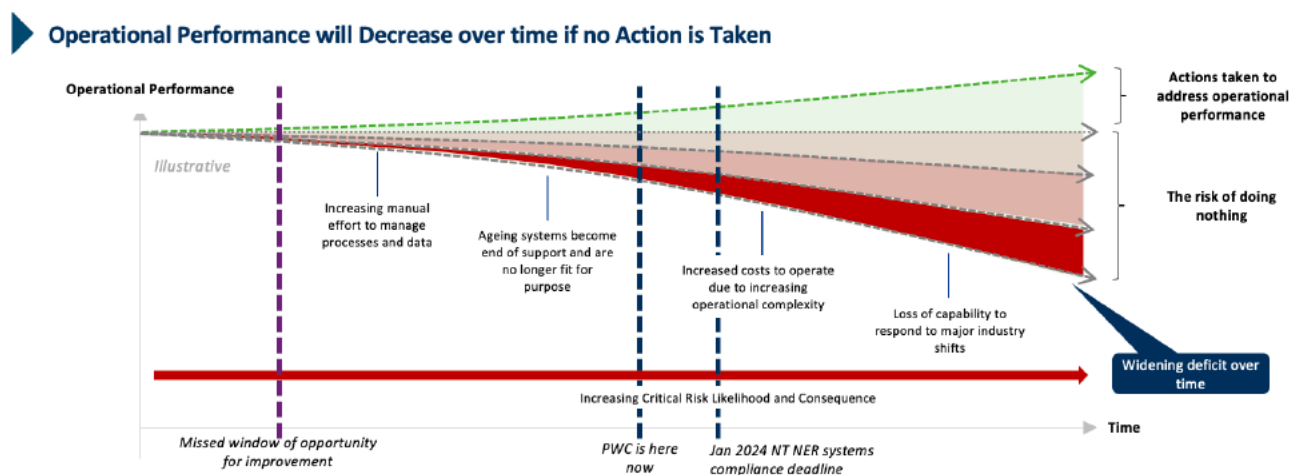
These risks are further illustrated in Figure 8.

Figure 8 Managing corporate risks



If current challenges are left unaddressed Power and Water's operational performance, business resilience, and customer service are expected to worsen. In the absence of technology investment significant manual effort is required to perform core business operations. This impact is illustrated in Figure 9.

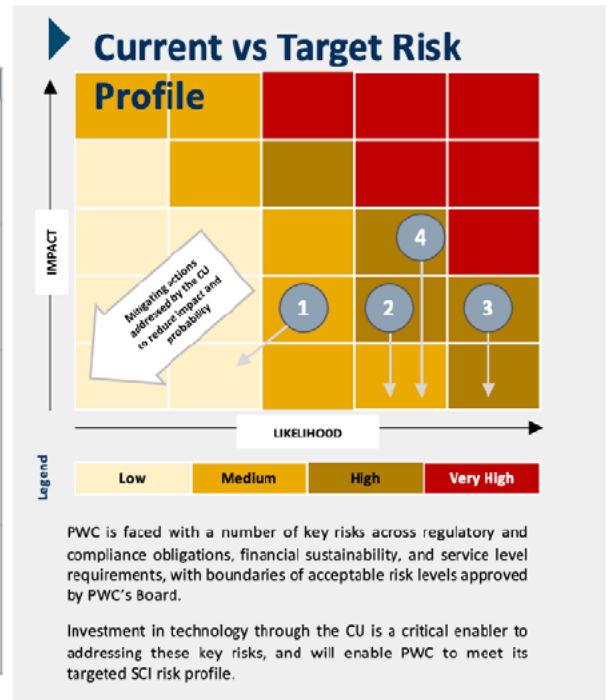
Figure 9 Operational Performance Over Time



Mitigating actions are required to reduce the impact and probability of the identified SCI 2019-20 risks, in line with the targeted risk profile. These mitigations will be planned and realised through the successful delivery of the CU Project.

Figure 10 Selected SCI Risks

Selected SCI Risks		
Risk	Details	
1	<b>Financial viability</b>	<p>The failure to identify and manage financial risks (such as failure to manage costs to the business or unfavourable decisions by the regulator) may impact the financial sustainability of Power and Water.</p> <p><b>Relevancy to the CU:</b> PWC needs to reduce operating expenses in line with the AER Final Determination. The CU will significantly improve productivity for business functions in scope.</p>
2	<b>Major compliance breach</b>	<p>There is a risk that PWC may fail to identify and/or breach its legal and regulatory compliance obligations which could result in financial sanctions and reputational damage.</p> <p><b>Relevancy to the CU:</b> It is critical that PWC achieves compliance with the NT NER by Jan 2024. The M2C work stream (Tranche 1) of the CU will uplift PWC's systems and process capabilities to achieve compliance.</p>
3	<b>Interruption to core services</b>	<p>As a provider of essential services an interruption to core services will have a significant impact on the community. For example, end of system support and/or a major system failure would present a significant impact on business resiliency and operations (customer invoices of \$35m per month generated by RMS, and supplier invoices of \$20m per month processed by AMS).</p> <p><b>Relevancy to the CU:</b> The CU will significantly improve asset planning and condition based maintenance to support asset performance and network resiliency. This will also include improvement in systems to support service delivery and work order management.</p>
4	<b>Failure to meet customer and stakeholder expectations</b>	<p>There is a risk that PWC may fail to effectively engage, understand and address the needs of its customers and stakeholders (including the government, workforce, business, regulators and the public), which could result in loss of funding, financial loss, reputational damage and regulatory changes.</p> <p><b>Relevancy to the CU:</b> The CU will deliver a single customer view, improve accuracy associated with customer billing, and support consistent customer engagement and management processes across all channels.</p>



## 3. Options analysis

This section describes the various options that were analysed to address the increasing risk, to identify the recommended option. The options are analysed based on ability to address identified needs, prudence and efficiency, commercial and technical feasibility, deliverability, benefits and an optimal balance between long term asset risk and short-term asset performance.

### 3.1 Comparison of credible options

The following options have been identified:

- Option 1 - Do nothing (Deliver Tranche 1 only)
- Option 2 - Deliver Tranches 2 and 3 of the CU Project (Recommended)
- Option 3 - Deliver Tranche 2 Only
- Option 4 - Deliver Tranche 2 only in a delayed sequence approach

A comparison of the four identified credible options and the issues they address in meeting the identified need is depicted in the table below. A detailed discussion of each option is provided below.

Table 4: Summary of options analysis outcomes

Criteria	Option 1	Option 2	Option 3	Option 4
NPV <sup>4</sup>	N/a	+\$4.1	-\$11.9	-\$2.4
BCR <sup>5</sup>	N/a	1.09	0.70	0.94
Addresses business needs	○	●	○	○
Aligns AER guidance on prudent and efficient	○	●	◐	○
Commercial and Technical Viability	●	●	●	◐
Deliverability	●	●	●	◐
Preferred	✗	✓	✗	✗



Fully addresses the issue



Adequately addresses the issue



Partially addresses the issue



Does not address the issue

<sup>4</sup> Calculated in \$2020 real terms, to FY38, and accounting for 10 years ROI on each domain implementation

<sup>5</sup> Calculated as PV of Benefits / PV of costs. \$2020 real terms



Options analysis has included both a qualitative and quantitative benefits assessment. The qualitative analysis was performed to assess strategic fit in alignment with Power and Water’s strategic goals, ability to meet Power and Water’s compliance requirements, operational fit in alignment with the future operating model vision, and ability to support an enhanced staff and customer experience.

Quantitative analysis was performed to assess indicative cost-benefit analysis outcomes. Detailed financial analysis was conducted to assess the benefits and costs expected through project implementation. The evaluation criteria previously considered, and the respective scoring weightings of each criterion are shown in the figure below.

Figure 11 Assessment Criteria

		Assessment Criteria	Weighting	Description of Criteria (the option provides / contributes to...)
Qualitative	Compliance Obligations	1. Ability to meet NTEM compliance obligations	●●●●● Very Important	<ul style="list-style-type: none"> <li>The ability to support regulatory compliance requirements (AER, Utilities Commission) in an efficient manner.</li> <li>Ability to meet the Jan 2024 NT NER compliance deadline for IT systems.</li> </ul>
	Capability Uplift	2. Ability to meet business requirements and deliver a “best fit solution” for PWC	●●●●○ Very Important	<ul style="list-style-type: none"> <li>Provides the foundational technology that enables the capability uplift to support PWC’s current and future needs.</li> <li>Opportunities to leverage out of the box functionality to provide standard capabilities for delivering the business requirements.</li> </ul>
		3. Ability to scale to meet future needs of PWC	●●●●○ Important	<ul style="list-style-type: none"> <li>Provides a future proof solution that enables the scalability and flexibility to support future needs (e.g., Supply Chain Management or Procurement).</li> </ul>
		4. Ability to support an enhanced staff and customer experience	●●●●○ Important	<ul style="list-style-type: none"> <li>The ability to support an improved and consistent staff and customer experience across channels in line with evolving customer expectations.</li> <li>The ability for customers to engage with PWC through digital platforms, to have increased access to data and insights, and to be offered value add services.</li> </ul>
	Risk Profile	5. Ability to manage ongoing ICT and business risks	●●●●○ Very Important	<ul style="list-style-type: none"> <li>Reduction in the complexity of the future ICT environment (including integration) post solution implementation.</li> <li>Improvement in the security of the future ICT environment through IT system currency.</li> <li>Ability to proactively respond to asset performance risks in a timely manner to avoid asset failures and unplanned outages.</li> </ul>
	Implementation Risk	6. Management of implementation complexity	●●●●● Very Important	<ul style="list-style-type: none"> <li>Reduced risk borne by the business through the degree of implementation complexity and length of time required for end-to-end deployment.</li> </ul>
		7. Management of business acceptance and change	●●●●● Very Important	<ul style="list-style-type: none"> <li>Ensures sufficient time and capacity is accounted for to ensure business understanding and advocacy for the transition to the future ways of working.</li> <li>Minimisation of organisational change impacts through other concurrent initiatives underway within the organisation.</li> </ul>
Quantitative	Investment Profile	8. Alignment to PWC budgetary constraints and SCI obligations	●●●●● Very Important	<ul style="list-style-type: none"> <li>Expenditure incurred aligns to the SCI budget available.</li> <li>Expenditure incurred falls within the 2019-24 expenditure parameters agreed with the AER (for Power Services).</li> </ul>
		9. Ability to deliver net benefits outlined in the business case (Cumulative Net Benefits)	●●●●○ Very Important	<ul style="list-style-type: none"> <li>Evaluation of the attractiveness of the project, compared to other investment opportunities available, based on its net present value.</li> <li>Assessment of the cost profile of the project based on a Total Cost of Ownership basis, including PWC-side resource costs, implementation costs and ongoing license and support costs.</li> </ul>

Key: ●○●○●○ Least Important   ●●○●○ Slightly Important   ●●●○ Important   ●●●●○ Very Important   ●●●●● Very Important

Source: KPMG Analysis.

Through the Investment Planning and Investment Development phases the CU Project has assessed and reviewed options for delivery of the full scope of all tranches of delivery. These initially considered single stage (i.e., all scope in one project) and multi-stage (i.e., prioritising scope between packages) options with considerations of deliverability, business capacity to support and change and cost identifying a recommendation for multi-stage options. In evaluating these options Power and Water engaged external consultancies including:

- Accenture – Operating Model Blueprint
- IG Partners for Operating Model
- KPMG for CU Project preliminary business case
- External assurance reviews:
- NT Government ICT Governance Board
- Power and Water Board

- Deloitte's for M2C Business Case

Work completed as part of the 2020 KPMG preliminary business case included:

1. **Technical Architecture Review:** Analysis was undertaken of Power and Water's current technology architecture including the ICT strategy and ICT Foundational Roadmap, incorporating this into the options analysis with additional input from a series of future state architecture definition workshops with selected Power and Water stakeholders.
2. **Benefits Analysis:** A detailed benefits analysis was performed to determine the benefits associated with each proposed option. Industry benchmarking analysis was used to provide direction on the comparative performance of Power and Water against industry peers and then complemented with a detailed analysis of the Power and Water operating model. This included a productivity survey, structured interviews, and desktop analysis of cost structures.
3. **Expression of Interest:** An Expression of Interest exercise was performed to engage the Systems Integrator (SI) market and determine the market's capability and capacity to deliver the scope of the CU Project.
4. **Request for Proposal:** An RFP exercise was performed with select integrators identified through the Expression of Interest to validate solution fit, delivery options and pricing.
5. **Delivery Model:** To underpin the shift to an internal integrator model, Power and Water engaged specialist program management to develop a Delivery Model specific to supporting the delivery of a Utility Meter to Cash project for Power and Water. The Delivery Model identified the key capabilities required to deliver the program and associated principles and approaches for operation. The Delivery Model was scalable for delivery of Tranches 2 and 3 of the CU Project.
6. **Supporting Strategies:** Supporting the Delivery Model, the CU M2C Project has established foundational delivery strategies including a Change Management Strategy, Migration Strategy, Testing Strategy and Resource Management Strategy. Each of these strategies will be leveraged and re-purposed for delivery of Tranches 2 and 3 of the CU Project.
7. **Detailed cost model:** A detailed bottom-up cost model was prepared identifying the resources, phasing, sourcing, and cost treatment for all elements of the project. The cost model enabled activity and resource level application of CAPEX / OPEX aligned to agreed Power and Water accounting standards. The cost model will be further evaluated as part of the phased business cases.
8. **Benefits Review:** Benefits were assessed in detail under prior phases from a qualitative and quantitative perspective, each of these have been reviewed to validate their value, attribution, and achievability and will be further assessed as part of the phased business cases.

## 3.2 Summary of options assessed

### 3.2.1 Option 1 – Do nothing (i.e. Deliver Tranche 1 only) - Base Case

The scope of Option 1 focusses on seeking to maintain the current baseline of service capability across the five remaining in scope work streams (with the CU M2C Project currently in the delivery phase). Whilst some investment will be required in core system maintenance, there will be no replacement or significant upgrade. It is expected that all other committed ICT projects will continue. This option would not meet



Power and Water's requirements for the reasons stated earlier. However, it represents that counterfactual against which options 2, 3 and 4 have been measured.

### **3.2.2 Option 2 – Deliver Tranches 2 and 3 of the CU Project (Recommended)**

Option 2 involves the implementation of the full scope of the remaining four identified CU Project work streams under the existing multi-tranche strategy. Tranche 2 and Tranche 3 will be delivered through a phased implementation for each domain. The Physical to Financials discovery phase completed and final business case planning commencing in early 2023 in parallel with the final stages of delivery of Tranche 1, Tranche 2 will commence in FY24, ramping up significantly as core work is undertaken in FY25 to FY27, with work in the final project being completed in FY28.

### **3.2.3 Option 3 – Deliver Tranche 2 only**

Option 3 involves deferring the Service Delivery workstream until the next regulatory period (2029-34) with the primary focus on addressing the lowest maturity capabilities in FY25-27.

Service delivery is a critical business risk and represents a minimum of \$3 million annually in quantitative benefits once implemented. Components of Service Delivery include integrated works management and mobility and are dependent on the foundational systems of Meter to Cash, Asset Management, Physical to Financial systems being in place and fully integrated. Deferring Service Delivery hampers the businesses capability to operate as a fit-for-purpose organisation noting field integration to back-end systems is predominantly manually intensive and will becoming increasingly challenging to meet current and future demands.

Option 3 provides for a -\$11.9 million NPV noting that delivering the foundational capabilities across Meter to Cash, Physical to Financials, and Asset Management do not enable the end-to end systemised capabilities associated with field work integration and further places our business at risk.

### **3.2.4 Option 4 – Deliver Tranche 2 only with extended period between initiatives**

Option 4 would see an extended break between Physical to Financials and Asset Management & Capital Delivery and the subsequent deferral of Service Delivery to next determination period. This option introduces very high risk due to the interdependencies between these domains and the significant technical debt that would be incurred.

This option would see a stop start approach to delivery and require the sourcing and mobilisation of a qualified team in the already constricted technical resource environment.

Option 4 provides for a -\$2.4 million NPV as broader business benefits are achieved only through the integration of foundational systems of Meter to Cash, Physical to Financials, and Asset Management and the systemisation of process as part of Capital Project Delivery and Service Delivery.

The cost / benefits of this option have been based on the KPMG 2020 analysis and has been applied linear. The expected increased cost of the delay has not been factored into the NPV analysis and will be further analysed as part of the full business cases.

### 3.3 Non-credible options

Our analysis also identified other options found to be non-credible and which were not taken through to detailed analysis for the reasons provided:

#### **3.3.1 Upgrade to supported versions of existing solutions (where possible)**

This option does not address efficiency or compliance requirements nor enable upcoming government and regulatory mandates; customer and business employee satisfaction are also compromised

#### **3.3.2 Extend service support of existing solutions**

This option does not address efficiency or compliance requirements nor enable upcoming government and regulatory mandates; customer and business employee satisfaction are also compromised.

# 4. Recommendation

The options analysis presented in the previous section has identified Option 2 – Deliver Tranches 2 and 3 of the CU Project at an estimated cost of \$51M TOTEX to be most prudent and efficient to meet the identified needs and address risk. The program will be delivered over the period FY24 to FY28, and therefore to some extent overlaps the commencement of the FY25 to FY29 regulatory period.

To the extent that a proportion of these costs are to be allocated to the Power Services regulated SCS and ACS, the proposed program is consistent with the National Electricity Rules Capital Expenditure Objectives as the expenditure is required to maintain the quality, reliability, and security of supply of standard control services and maintain the safety of the distribution system and is a prudent and efficient means of meeting those requirements.

## 4.1 Strategic alignment

Power and Water’s strategic direction is to meet the changing needs of the business, and our customers, and is aligned with the market and future economic conditions of the Northern Territory projected out to 2030.

This proposal aligns with the Policies, Strategies and Plans that contributes to the D2021/260606 ‘Power and Water Strategic Direction’ as indicated in the table below.

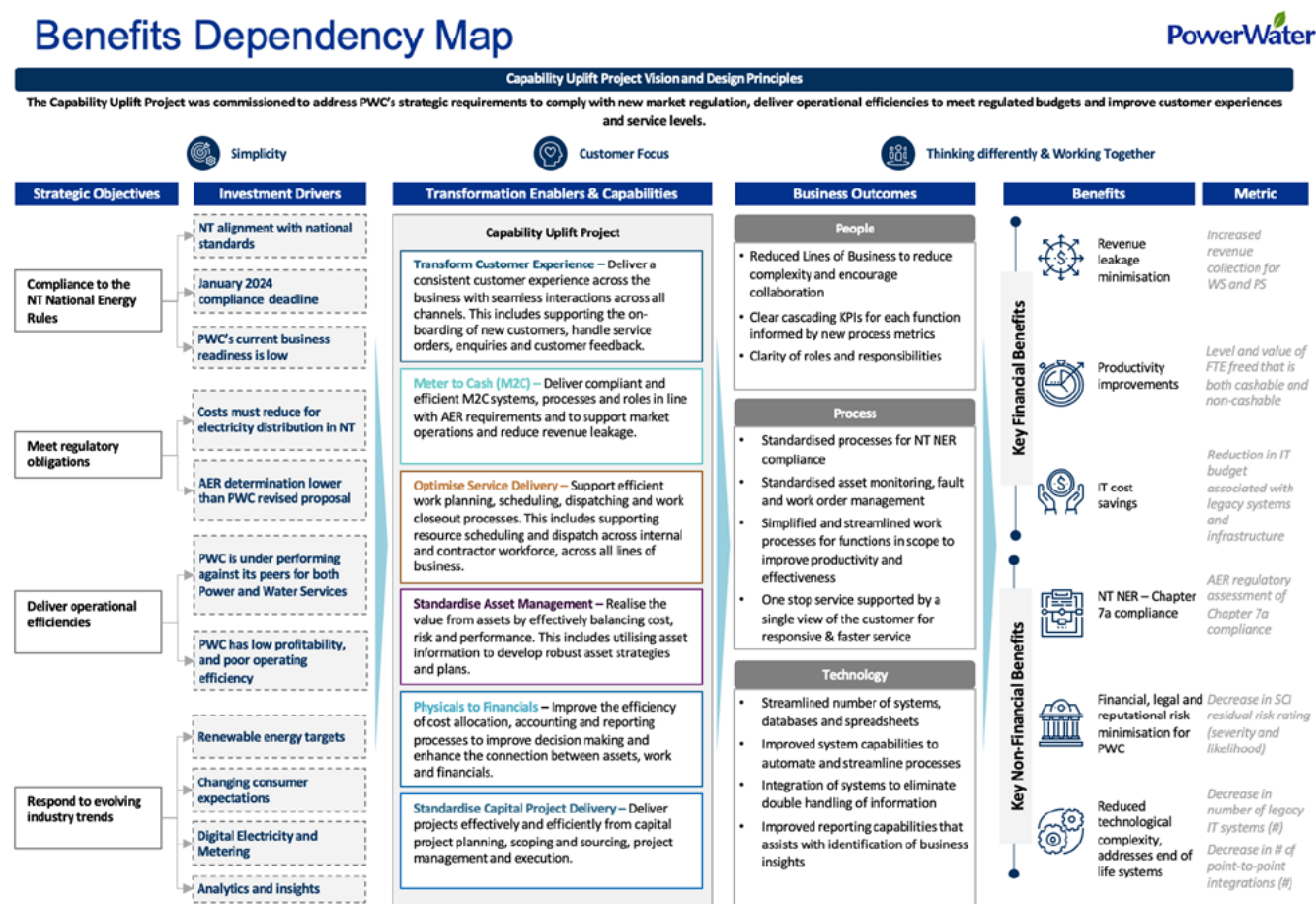
Table 5: Strategic alignment

Strategic direction focus area		Strategic direction priority
1	One Power and Water	Embed our Future Operating Model
2	Customer and the community at the centre	Enhance Customer Experience and Engagement
3	Sustainable solutions for the future	Cost Prudence

## 4.2 Benefits overview

Benefits alignment to strategic objectives and investment drivers is pivotal to ensuring project alignment to business needs and customer focus outcomes.

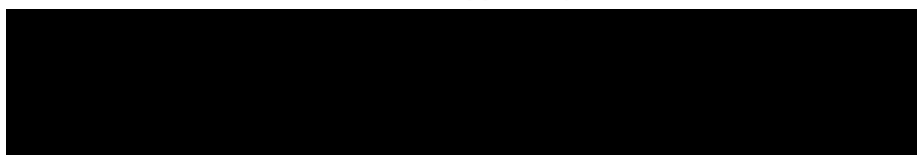
Figure 12 Benefits Dependency Map



## 4.2.1 Quantified Benefits

Detailed analysis was conducted to determine quantifiable annual benefits and the one-off redundancy costs associated. Benefits are assumed to commence 1 years after implementation to account for Northern Territory redundancy lag and to provided opportunity for the new solutions to be properly embedded before being fully switched across.

Benefits attributed to workstreams once realised, as estimated by KPMG and further discounted by Power and Water to ensure a conservative approach, are as follows:



Annualised Productivity Benefits and Avoidable ICT costs are provided in the figures below.

In addition to Productivity and ICT Avoidable cost benefits, additional benefits of Optimised Asset Spend have been calculated at circa \$2 million per annum. This benefit has not been factored into this business case noting estimations were based on 2020 KPMG analysis and that increased ICT spend to support platforms and redundancy costs for FTE reductions are expected impact net benefits. In line with the finalisation of the CU business cases phased according to implementation schedule, updates to benefit profiles will be made.

Figure 15 Optimised Asset Spend

#### Consolidated optimised contractor spend

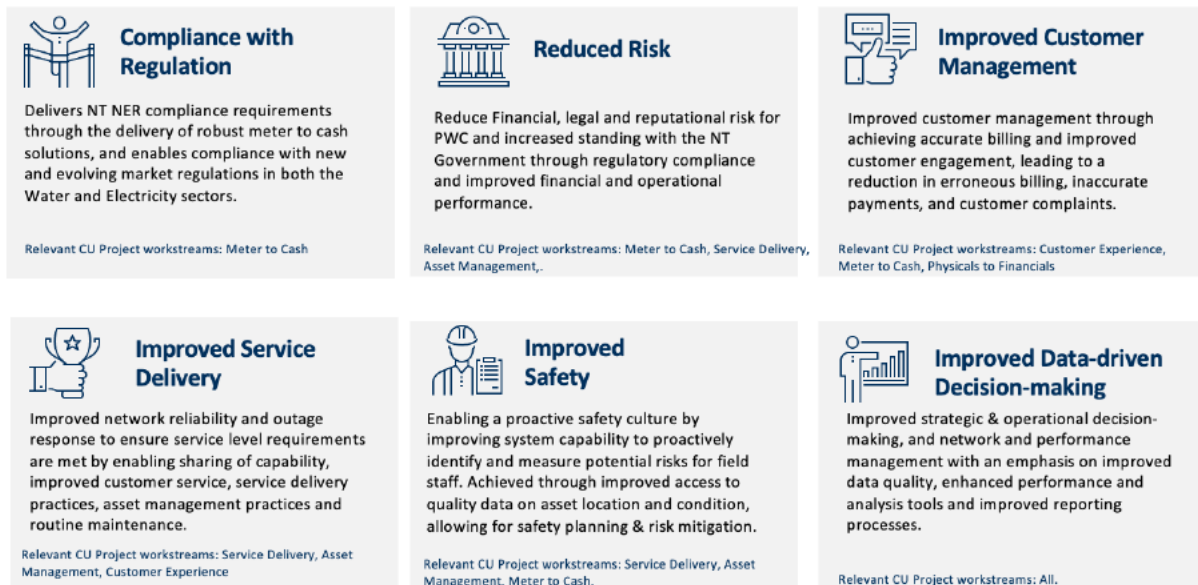
Category	Benefit p.a.	Workstream mapping
Water Services	\$ 1,377,221	
Power Services	\$ 418,198	
IES	\$ 339,912	
<b>Total</b>	<b>\$ 2,135,331</b>	
	<b>\$ 1,067,665</b>	Asset Management and Capital Program Delivery
	<b>\$ 1,067,665</b>	Service Delivery

#### 4.2.2 Qualitative Benefits

A summary of the qualitative benefits expected from this projects is provide din the figure below.



Figure 16 Qualitative Benefits



### 4.2.3 Benefit Realisation

Benefit realisation is managed through finance with the projected benefits accounted for in the forecasts of Business Unit annual budgets. Changes to business benefit profiles will be managed through change process to ensure bottom line projections are not compromised.

## 4.3 Dependent projects

The CU Project is dependent on the sequencing of projects set out in this business case. The projects have been planned to build on the capabilities of antecedent projects and to minimise technical debt.

## 4.4 Deliverability

### 4.4.1 Project delivery risks

Several risks have been identified in relation to project delivery. These risks are captured in the project risk register and managed and mitigated on a day-to-day basis.

Key delivery risks have been identified with mitigation strategies developed accordingly as shown in Appendix A. As part of detailed planning and implementation activities, these risks will be closely monitored to ensure transformation outcomes are realised.

### 4.4.2 Delivery Model for Tranche 2 and 3

In June 2021, as part of approving the re-scoping of Tranche 1 (Meter to Cash), the Transformation Committee (sub-committee of the Power and Water Board) also approved the “internal SI” delivery model



where Power and Water retains direct accountability for delivery of the required outcomes. For Tranche 1, in its role as “internal SI”, Power and Water is accountable for:

- delivery of the Meter to Cash solution
- delivery of Microsoft Azure as the preferred integration solution
- data migration
- Commercial and contracting including procurement of the relevant solution/s and services needed across the above streams

The Delivery Model for Tranche 1 is detailed in the document “CUP M2C Delivery Model.pdf” which underpins Tranche 1 to ensure prudent and efficient delivery. More specifically, that document outlines the following:

- provides an overview of the Tranche 1 delivery methodology
- describes the process for managing the Tranche 1 delivery through the design, build, test, deploy, schedule and support stages
- Power and Water’s expectations regarding solution delivery
- Key deliverables at each stage in the delivery process
- Guidance on how Power and Water will interact and co-operate with suppliers to deliver Tranche 1 objectives and the behaviours it expects from suppliers in this regard.

For Tranche 2 and 3, the same “Internal SI” delivery model will be deployed with the delivery methodology documented in a detailed document. The Delivery Model will set out, among other things, guiding principles on a range of matters relevant to design, delivery, testing, transition, and post ‘go live’ support, detail on the delivery approach and methodology and a list of project deliverables. While the final list of project deliverables is yet to be confirmed, it is expected that these deliverables will include the following:

- **delivery team deliverables:** project management plan, financial forecasts, monthly reports, governance forum packs, governance artefacts, master schedule and timesheets
- **design deliverables:** conceptual designs, requirements traceability matrix, detailed design specification and interface / integration design
- **build deliverables:** solution components and release notes
- **test deliverables:** test strategy, test plans and test summary reports
- **deploy deliverables:** release management plan, detailed install and rollback schedule, deployment task sheets, deployment readiness criteria and early lifecycle support (hypercare) plan
- **transition deliverables:** service transition plan, operations manual applications, hand over to production document and service acceptance certificate and checklist
- **change management deliverables:** change management plans, communication and engagement plan, training needs analysis, training strategy and approach, training plans and training materials.

#### Design stage

The design stage will take place adopting a hybrid agile approach (see Figure 14 below). To ensure the appropriate governance is applied, the following steps will be integrated:

- a review will be conducted of the relevant design inputs with other members of the deliver team and key business stakeholders to develop the detailed design and solution requirements
- following the design review and collaboration the required design deliverables will be produced as detailed in the relevant partner statement/s of work
- all deliverables will undergo a design review where quality assurance and deliverable acceptance will be assessed in accordance with the process outlined in the TMO Charter

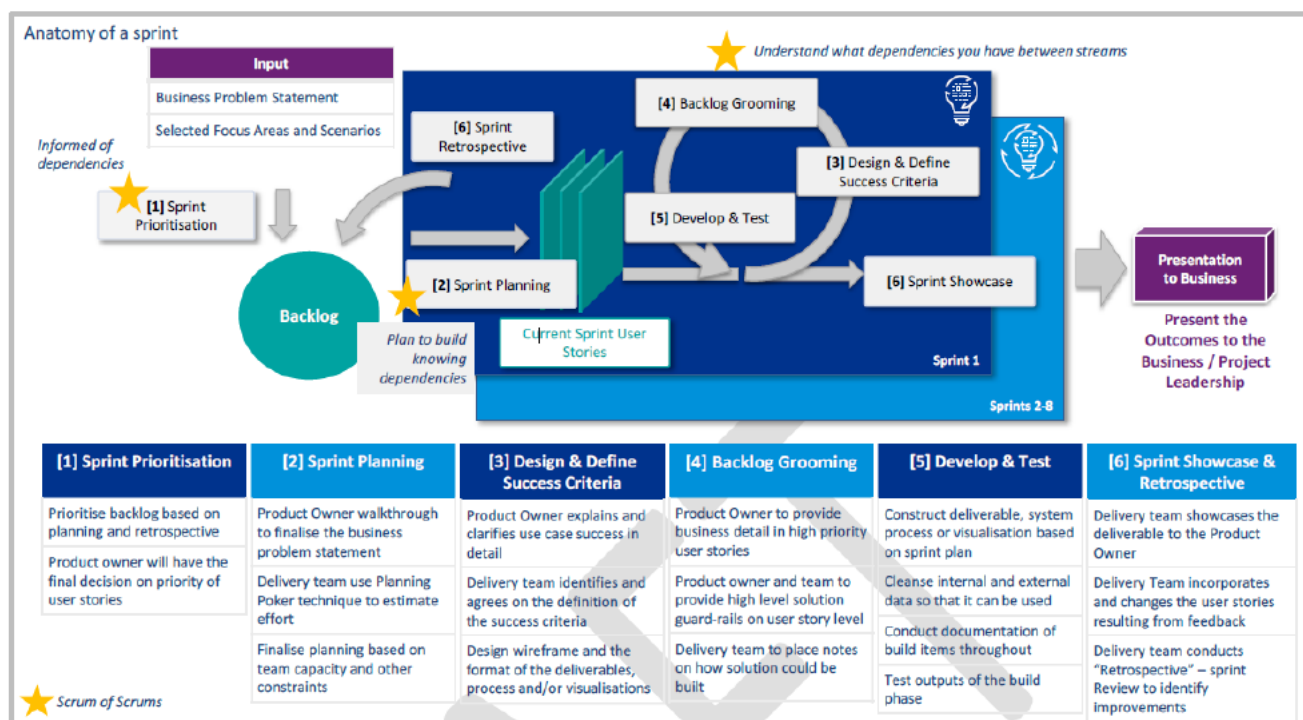
### **Build stage**

The objective of the build stage is to ensure that all solutions are built on time and in a manner which meets the approved designs and relevant Power and Water build standards for each program increment. The Build stage ensures deliverables align to the detailed designs, solution architecture and fulfil the requirements required by the project, ICT operations and the relevant business units.

As a general rule as part of the hybrid agile methodology, the build stage will take place in parallel with the design and system test stages. Figure 14 provides an outline of the build process and how it relates to the hybrid agile delivery methodology. During this stage all teams (including partner teams) will be accountable for the delivery of solutions which align to the accepted detailed designs and technical specifications. As part of solution delivery, all teams (including partner teams) will conduct unit and system testing in accordance with the documented test strategy.

The project delivery team will be involved throughout development (rather than review at completion). All deliverables will undergo a series of acceptance reviews in the form of quality assurance review. The build stage concludes when the build 'packages' have been accepted by Power and Water as per the Power and Water TMO Charter for the deliverables review process.

Figure 17 Build process overview



#### 4.4.3 Lessons learned from CU M2C Project and Other Industries

One of the key lessons learned from the CU M2C Project is the need to invest more time upfront to ensure that the project team and partner delivery teams are fully aligned on the “ways of working” and schedule. This is expected to involve agreeing with the partner delivery team and Power and Water business teams upfront the demonstration schedule and associated key deliverables so that the project team can clearly demonstrate progress against the each of the core functions required to be delivered by the project.

This will require more investment of time and effort upfront by the project team and has been accommodated in the high-level schedule for Tranche 2 and 3. The project has completed a 6-week discovery and due diligence activity focussed on ‘Physical to Financials’ supported by an external partner to re-validate the scope of delivery and key functional and non-functional requirements previously compiled with support from KPMG. In addition, two additional pre business cases phases will further inform the “final” business case to ensure maximum accuracy (Charter of Accounts and Business Decisions).

We have also leveraged lessons learned from other industries who have implemented the same technology solution we are intending to align to ensure maximum deliverability confidence.

#### 4.4.4 Resourcing requirements

Key to the successful delivery of this Project is knowing what is needed to deliver this type of Project and understanding the capability skillsets required across several functional areas as well as considering the overall effort required and the appropriate phasing of resources – the combination of these components provides key inputs into the Resource Management Plan.

The following section provides a high-level overview on the principles and approach to be adopted in the development of the resource plan and profile. This will be formally documented in a Resource Management Plan. To underpin the development of the resource plan, the Project has considered inputs through ongoing discussions with key Power and Water SME's as well as leveraged the experience and expertise of the CU Project Leadership team who bring deep experience in delivering these types of Projects.

The breakdown of Resource capabilities by functional areas, identified as required, across the lifecycle of this project include:

- Dedicated Program & Project Management
- Solution Design & Business Analysts
- Core Build developers
- Integration specialists – Covering Internal & External systems as well as overall Cloud/Azure
- Data Migration & Reporting specialists
- Environment Management
- Release & Transition Management
- Testing resources across Functional, Non-Functional, Security & Penetration testing
- Change, Training and Communication

The approach to sourcing the required Project resources is based on the following principles:

- The overarching guiding principle is, where possible, the Project will endeavour to source appropriate resources from Power and Water and partner NT Government agencies and, look to leverage expertise from within key areas such as ICT, Business units, Department of Corporate and Digital Development (DCDD) etc.
- For the Core Build component, the Project will engage partner resources as required to support application build, integration, data migration, and delivery into Go Live and will provide the required skilled resources needed
- When contingent labour is required, (as Power and Water are not able to provide the resources and skillsets required) leveraging the existing NT Vendor Panel arrangements, the Project will look to source local Darwin/NT resources. Contingent appointments will always be guided by the principle of the “right resource for the right role”
- In the case that resources, with the required skillset, capabilities and experience are not available within the NT/Darwin area, then direct sourcing will be considered from areas such as Melbourne, Sydney, and Brisbane where the appropriate resource pool is larger
- To leverage efficiencies and cost economies, it is customary practice to also consider, when sourcing resource effort for a large-scale Project, to look at the “grouping” of specific components of the Project and bundling them up to be provided “as a service” by specialist providers rather than engaging individual resources. This approach works well in areas such as Testing, Security and Penetration Testing, as these areas are usually discrete pieces of work and in some cases like Security & Penetration testing, are better suited to be delivered by specialist suppliers who are better equipped to conduct the work and who would provide a better outcome, and a more effective timeframe and cost.



Recognising that there are several contingent and Vendor resources on this Project that are not resident within Darwin, the Resource Management Plan will also consider the need for travel i.e., when necessary for these resources to be in Darwin and the duration.

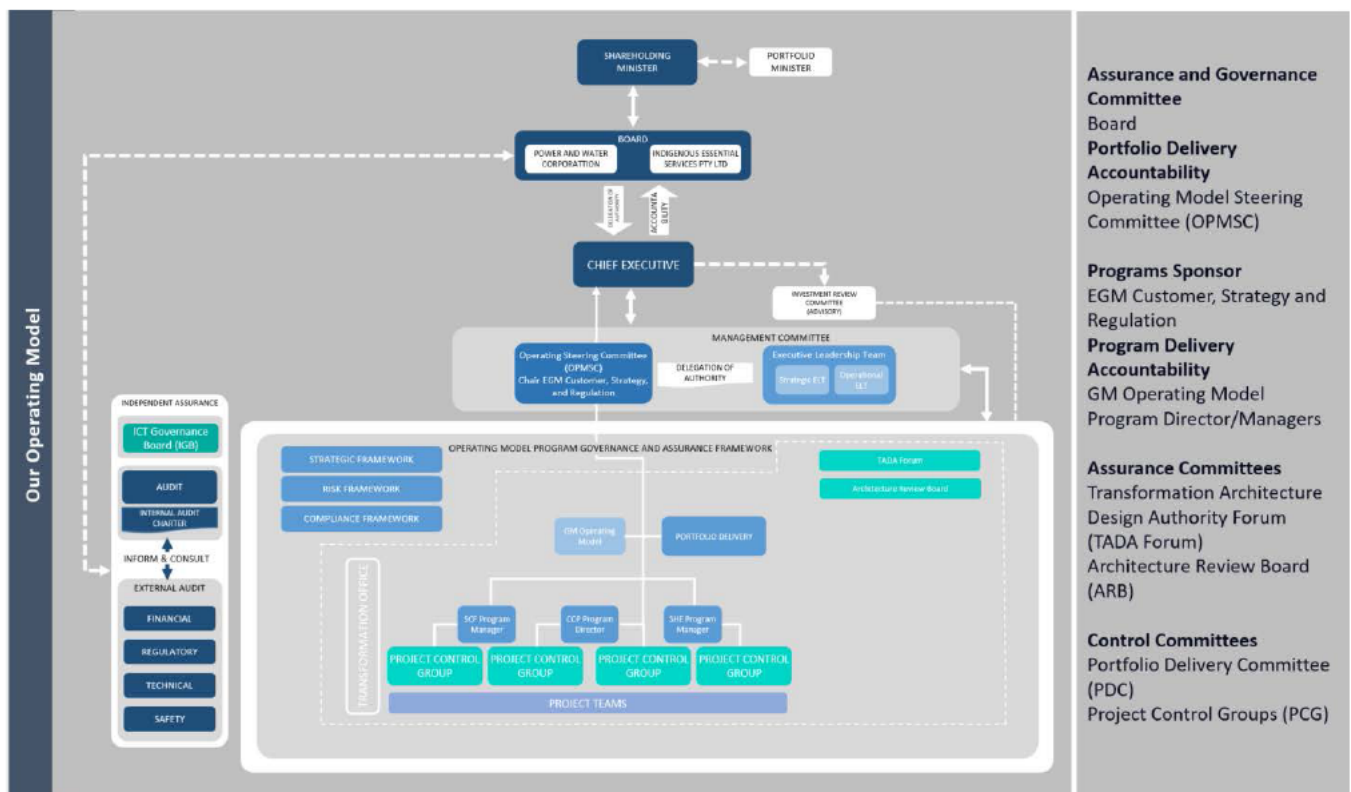
Noting the skill shortages in the NT, the CU M2C Project team will consist of local and interstate team members. Remote working will be a necessary requirement and has been proven highly effective across multiple industries and has been further validated through COVID restrictions. The project leadership team recognises the importance of onsite presence to foster team cohesion, clarity, and support collaboration. To that end, the approach regarding locating at the Darwin Office (restrictions permitting), the Project leadership team will plan to be onsite across a 2-week period each month with planned onsite leadership presence spanning across 3 weeks per month. Similarly at key project stages (end of build, training etc.) key members from these teams will also be onsite.

To continue the “one team” theme, the Project will retain a central location to work out of in Melbourne to again maintain collaboration and interaction. Additionally, the Project has documented risks around the impacts of COVID and travel challenges and will continue to work on mitigation actions to address.

#### **4.4.5 Program and Project governance**

As part of Tranche 1 delivery, Power and Water implemented a new governance model taking into consideration recommendations from previous project reviews. Power and Water has also directly engaged utilities professionals with considerable experience in delivery of large-scale ICT projects to work customer side providing guidance and direction on delivery of the project. It is expected that this governance model will continue for Tranche 2 and 3. The Governance model is illustrated below.

Figure 18 Governance Model



## 4.5 Customer considerations

As required by the AER's Better Resets Handbook, in developing this program Power and Water has taken into consideration feedback from its customers through its customer engagement forums.

Feedback received through customer consultation undertaken at the time of writing this business case, has demonstrated strong support amongst the community for appropriate expenditure to enable long term reliability, maintainability, cost effectiveness and safety of the Network and its enabling systems.

## 4.6 Expenditure profile

This business case supports inclusion of allowances for capex in the 2024-29 regulatory period.

While the Totex included in this business case is \$51 million (in \$2020), a significant proportion of this is not allocated to the regulated services (SCS and ACS). Further, a significant amount of the Totex in this business case will be opex, and Power and Water will absorb this within the opex benefits that it expects to achieve during the next regulatory period from the Tranche 1 elements of the program that will have been implemented within the current period, and from the progressive realisation of benefits from the Tranche 2 and Tranche 3 components of the program that are included in this business case.

The net result of this is that Power and Water requires capex of \$18.44 million for SCS and \$0.79 million for ACS (in \$2022). No opex is required.



The tables below shows the allocation of the overall totex estimate, to SCS and ACS capex.

Table 6: Total capital and operational expenditure (\$m)

Item	Capex	Opex	Totex
Expenditure (real \$2020) - FY24 to FY29	35.70	15.30	51.00
Expenditure (real \$2022) - FY24 to FY29	39.35	16.86	56.22
Expenditure (real \$2022) - Next RCP (FY25 to FY29)	37.04	15.87	52.91

Table 7: Allocation of capex for next RCP FY25 to FY29 (\$m, real FY22)

Item	Capex
Allocation of capex (in \$2022) to SCS	18.44
Allocation of capex (in \$2022) to ACS	0.79
Allocation of capex (in \$2022) to Other	17.81
Total	37.04

The following table shows the required allowances for the 2024-29 regulatory period, for SCS and ACS respectively.

Table 10 – Annual capital– for next regulatory period (real \$2022)

Item	FY25	FY26	FY27	FY28	FY29	Total
SCS	6.72	7.30	3.26	1.15	-	18.44
ACS	0.29	0.31	0.14	0.05	-	0.79
Other	6.49	7.05	3.15	1.11	-	17.81
Total capex	13.50	14.66	6.56	2.31	-	37.04

## 4.7 High-level scope

The scope for the recommended option of Tranche 2 and Tranche 3 of the Capability Uplift project is as follows:

- Tranche 2: Physicals to Financials, Asset Management & Capital Project Delivery, and
- Tranche 3: Service Delivery (includes Works Management and Mobility).

### 4.7.1 Previous AER Determination 2019-2024

In April 2019, Power and Water received a final determination for the 2019-2024 regulatory proposal. The approved determination for the Non-Network ICT CAPEX was \$59.4 million (\$32.1 million SCS). While the current Transformation Program was developed after the AER's Final Determination, the Determination

nevertheless included \$36.7 million (\$19.8 million SCS) for the Transformation initiatives that Power and Water had proposed at that time.

#### **4.7.2 Previous approvals**

In October 2020, a Transformation Preliminary Business Case was approved recommending a 3-Tranche delivery strategy for the full scope of the CU Project.

A Transformation Reset plan was approved at Power and Water Board on 28 June 2021 and provided the necessary direction for business prioritisation including the necessity to focus on the Capability Uplift Project - Meter to Cash and to defer the Physical to Financials capability to the following Tranche 2, both of which were included within the 2019 AER submission although highly underestimated. The reset also enabled Power and Water to remain within its AER Non-Network Capital allowance for Transformation noting costs and benefits for some projects were deferred.

In November 2021, the Tranche 1 final Business Case was approved for the replacement of Power and Water's unsupportable Retail Management System that was originally implemented in 2004; the replacement project is known as the Capability Uplift Meter to Cash Project (CU M2C Project). The scope of the CU M2C Project involves the delivery of a regulatory compliant, secure, efficient, and customer-focussed Meter Data Management System and customer billing operations capability; it will also implement foundational cloud integration capability that will be used for Tranche 2 and 3 initiatives and is a major uplift of capability for Power and Water and an enabler for the Northern Territory Department of Digital and Corporate Development (DCDD).

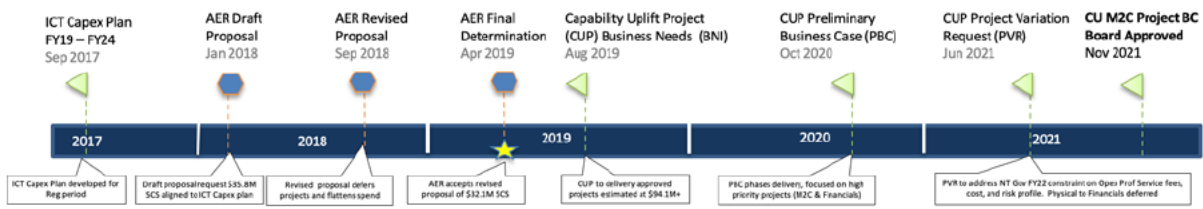
#### **4.7.3 Focus of this business case**

This business case reflects changes to Tranches 2 and 3 of the original 3-Tranche delivery strategy, further refined in the June 2021 Transformation Program Reset and updated and finalised by the Power and Water Board in November 2021. At this Board meeting, the introduction of an Advanced Distribution Management System (ADMS) to prevent 'system black' was prioritised over elements of the original CU Project sequencing. After this decision, the Energy Management System (EMS) upgrade project (undertaken by Power and Water Power Services) was confirmed to address the system black issue enabling a reprioritisation of CU M2C Project Tranche 2 and 3 initiatives; the options are described in this business case.

This business case looks to complete the Capability Uplift projects during the 2024-29 regulated period and build upon the high deliverability capability of the existing project team.

*Figure 19 Timeline of regulatory determination and evolution of Operating Model/Transformation program changes*

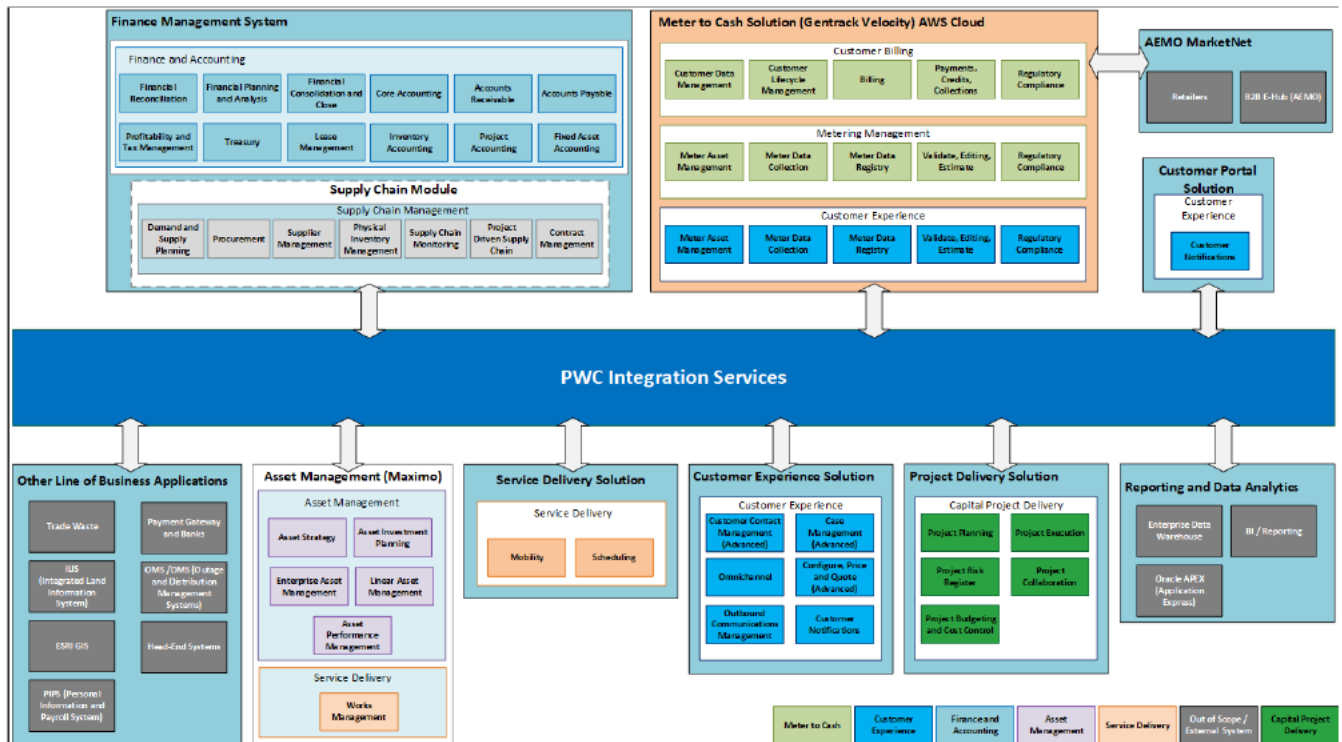
## ICT Non-Network Capex Plan & Regulatory Timeline (Transformation)



### 4.7.4 Conceptual Future State Architecture

The conceptual future state architecture depicts the architectural solution and how each of the 6 workstreams contribute to the outcome. As the CU project progresses through each of the tranches, architectural and detailed solution decisions will be governed by the Power and Water Architectural Review Board (ARB).

Figure 20 Conceptual Future State Architecture



## Appendix A. Project delivery risks

Key delivery risks have been identified with mitigation strategies developed accordingly. As part of detailed planning and implementation activities, these risks will be closely monitored to ensure transformation outcomes are realised. These risks and corresponding mitigation strategies will be updated in the final business case for each system that is to be replaced as part of Tranche 2 and Tranche 3.

Table 6 represents current risks with ratings of high or above; for a comprehensive list refer to the CU Project Risk and Issues register.

Table 7 represents risks relevant to the delivery of Tranches 2 and 3 of the Capability Uplift Project.

Table 6 – Risks with a residual rating of high or above.

Risk Description	Mitigation	Current Risk Rating			Treatment Plans	Post Project Delivery		
		Consequence	Likelihood	Rating		Consequence	Likelihood	Rating
1 Government Funding Cuts impacts project outcomes and delivery schedule	<p>MC1 - Program Board to encourage efficiencies in the deployment of resources across Projects.</p> <p>MC2 - Program Board to encourage maximisation of benefits available from program activities through acceleration of benefit and rigorous identification of benefits.</p> <p>MC3 - Program Board to seek opportunities to reallocate costs between Programs and operational spend to account for delays to expenditure profile caused by approval delays.</p> <p>MC4 - Program Board to ensure procurement process, implementation agreement/s and program implementation plan (for the implementation phase) have some flexibility built in so that components can be de-scoped or deferred in a way that minimises</p>	Major	Possible	High	RT1 – Program Board to attempt to get a commitment from Treasury at the appropriate time around their turnaround time for final business case approval.	Moderate	Unlikely	Medium



2	<p>COVID-19 Driven Inefficiencies and Delay</p> <p><b>Note:</b> Portfolio Risk tracked through the Power and Water Risk and Resilience team</p>	<p>sunk cost impacts.</p> <p>MC1 - Program Team to implement technology solutions that support continuation of Program activities with maximum effect and efficiency, i.e. Microsoft Teams meetings.</p> <p>MC2 - Program Team to increase vigilance in meeting preparation, including communication of meeting objectives, agenda, and materials.</p> <p>MC3 - Program Leadership to communicate plans for new ways of working to all personnel impacted by the changes.</p> <p>MC4 - ELT to communicate agreed priorities to all staff and encourage continued participation in CCP activities aligned to the priorities.</p>	Moderate	Likely	High	<p>1. Continually monitor Commonwealth and Territory Government announcements about restrictions and assess impacts to business and program.</p> <p>2. Ensure regular check-ins with team members to manage and assess.</p>	Minor	Likely	Medium
3	Availability of SME Resources	<p>MC1 - Develop a whole of business SME capacity-based model to enable visibility of pinch points.</p> <p>MC2 - Set up business management meeting to ensure appropriate prioritisation.</p>	Moderate	Likely	High	RT1 - Develop a whole of business SME capacity-based model to enable visibility of pinch points.	Moderate	Possible	Medium

						RT2 - Set up business management meeting to ensure appropriate prioritisation.			
4	Unanticipated effort to deliver Physicals to Financials	MC1 - Seek to leverage out of the box wherever possible and minimise customisation drivers. MC2 - Seek to leverage Microsoft blueprints to ensure standardised implementation and configuration of integration solution. MC3 - Ability to engage industry expertise to assist with complex issues that arise.	Moderate	Likely	High	RT1 - Agree SOW/s with proposed vendor/s for delivery of relevant components of the Project. RT2 - Leverage vendor/s implementation methods and tools. RT3 - Engagement and recruitment of resources experienced in delivering P2F programs of work.	Moderate	Unlikely	Medium
5	Impact to operations as a result of solution implementation	MC1 - Considered rollback plan	Moderate	Unlikely	High	RT1 - Ensure Business Continuity planning. RT2 - Detailed Rollback plan. RT3 - Experienced test team.	Moderate	Possible	Medium
6	Project Business Case as NPV Negative impacts business case approval timelines	MC1 – Detailed stakeholder formal and informal engagement plans. MC2 – Business Case highlights primary and secondary drivers (project is predominantly Lifecycle replacement and efficiency improvements.	Major	Possible	High	RT1 – Stakeholder plans enacted. RT2 – Independent Assurance review.	Moderate	Possible	Medium
7	Vendor/s underperform	MC1 - Documented, tracked and	Moderate	Unlikely	High	RT1 Ensure detailed	Moderate	Possible	Medium

	/ under deliver on commitments	monitored project plan MC2 - documented progress and outcomes against plan. MC3 - Escalation to vendor/s senior management / CEO.				Statement/s of Work describing scope and activities and required outcomes. RT2 regular communication with vendor/s at a delivery, commercial and senior level. RT3 Adherence to the agreed governance processes (Monitored through PCG) RT4 Visibility of vendor/s project activities through project schedule and tracking and monitoring of same. RT5 A clear issue escalation process. RT6 a Power and Water contract management plan for managing performance.			
8	Data quality and missing data causes delays on go live or impacts to customers and workflow	MC1- Data dress rehearsals have been programed in the project schedule to provide data quality assurance. MC2- Testing activities will identify data quality issues prior to go live.	Moderate	Unlikely	High	T1- Data custodians have funding and resourcing to perform data quality issues. T2 - The EDM will monitor improvements in data quality but also prioritise and prove data custodians with the work packages (data cleansing) that need to perform. T3- Put in place data quality management plan.	Unlikely	Possible	Low

**Table 7 – Delivery Risks**

	Risk Description	Risk Rating	Mitigation Strategy	Residual Risk Rating
1.	Poor management of vendors resulting in timeline delays, low quality outcomes and cost increases.	High	<ul style="list-style-type: none"> <li>Ensure vendors contracts are delivery focused. Develop and agree contracts that have the appropriate commercial levers to incentivize vendors to meet delivery outcomes, while protecting Power and Water against the commercial risk of delays.</li> <li>Ensure that appropriate 'client-side' project management and technical resources are engaged to manage the vendors and delivery effort.</li> </ul>	Medium
2.	Poor quality of current data may impact the ability of the system(s) going live successfully.	High	<ul style="list-style-type: none"> <li>Ensure close collaboration between the technical delivery work stream and the relevant business functions with a focus on early exploration and remediation of current data quality.</li> <li>Develop/validate Power and Water information data model prior to project delivery to ensure there is clear definition of the required attributes and standards.</li> </ul>	Medium
3.	Resource constraints and capability across Power and Water to successfully execute on the project due to current BAU commitments.	High	<ul style="list-style-type: none"> <li>Ensure appropriate representation and buy-in from the key stakeholder groups to be invested in the success of the project.</li> <li>Ensure project accounts for business SME time investment in the costing of the project financials, and that key stakeholders and resources are identified early in the project and detailed planning is conducted.</li> <li>Generate forward forecasting of total project and SME resource effort required so that SMEs can appropriately plan for both BAU and project delivery activities.</li> </ul>	Medium
4.	The cultural change that is required to make the project successful may not be realised without leadership and direction.	High	<ul style="list-style-type: none"> <li>Ensure the design of comprehensive change project and that executives are well informed of the project objectives and properly and regularly engaged throughout the project duration.</li> </ul>	Medium
5.	Change fatigue across Power and Water may inhibit stakeholder engagement	High	<ul style="list-style-type: none"> <li>Ensure strong executive sponsorship and engagement for the project, with the appropriate investment in change management activities.</li> </ul>	Medium

	and buy-in to the project.			
6.	New solution training may not be sufficient to drive user adoption, good understanding of the new system and change ways of working.	High	<ul style="list-style-type: none"> <li>• Ensure clear and open communication across all levels of the project.</li> <li>• Develop a comprehensive change strategy and adoption of change champions at a functional level to help drive system adoption and change current ways of working.</li> <li>• Ensure close collaboration between the project team and business users to drive understanding of ways of working and the transition to the future approaches.</li> </ul>	Medium
7.	Risk of disruption to BAU due to potential technical integration issues between new systems deployed and existing systems.	High	<ul style="list-style-type: none"> <li>• Perform early discovery of detailed system integrations required.</li> <li>• Ensure accountability from the technical delivery work stream and vendor team(s) to develop and own a robust integration plan.</li> </ul>	Medium
8.	Competing BAU and project obligations impact the ability of Power and Water representatives to support project delivery.	High	<ul style="list-style-type: none"> <li>• Detailed resource and back fill planning across the project will need to be conducted as part of transitioning in and project mobilisation.</li> <li>• Prepare forecast effort required to ensure all resources can appropriately plan BAU and project activities including preparing a detailed project schedule following completion of the discovery phase.</li> </ul>	Medium
9.	Limited clarity on CAPEX and OPEX allowances may influence project scope.	High	<ul style="list-style-type: none"> <li>• Collaborate closely with the Power Services regulatory team to ascertain the exact CAPEX and OPEX allowances available for the Capability Uplift Project and its separable Tranches.</li> <li>• Set expectations with key stakeholders early on the interdependencies of the project with the available Power Services regulatory allowance.</li> </ul>	Medium



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