TasNetworks Summary Report - Project Implementation Review (PIR)

Authorisations

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Responsibilities

This document is the responsibility of the Transformation, Strategy and Digital Group, Tasmanian Networks Pty Ltd, ABN 24 167 357 299 (hereafter referred to as "TasNetworks").

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1   Introduction

This document summarises the Post Implementation Reports (PIRs) findings for some of TasNetworks most recent ICT investments.

The projects were assessed according to the criteria outlined in the *AER - Guidance Note - Non-network ICT capex assessment approach for electricity distributors*[1] (**Guidance Note**), published for the first time within the current 2019-2014 regulatory control period:

- a comparison of the actual cost to the proposed cost in the business case;
- a comparison of the actual timeframe to complete the project with the forecast timeframe;
- a comparison of the actual achieved benefit to the forecast benefit (as best estimated) in the business case;
- an explanation of any material variations in costs, delivery timeframe, and benefits realised

2   Background

TasNetworks is preparing its Transmission Revenue Proposal and Distribution Regulatory Proposal covering the period from 1st July 2024 to 30th June 2029, which it will lodge with the Australian Energy Regulator (AER) by 31st January 2023.

Adjacent to the revenue proposals the AER requires Post-Implementation Reports (PIRs) for large Digital projects undertaken during the previous regulatory period.

TasNetworks commissioned independent consultants to conduct post implementation reviews of its large Digital projects. These reviews and resultant reports were in the form of standard IT industry post-project reviews (with the content of each report differing by consultant and by project), and while they answer many of the criteria presented by the AER in their Guidance Note, for some projects there are some aspects that are not fully addressed.

This document summarises these reports and provides the key details required by the AER. Where the PIR did not contain all of the information required by the AER TasNetworks has obtained the necessary information from internal sources.

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[1]https://www.aer.gov.au/system/files/AER%20-%20Guidance%20Note%20-%20Non-network%20ICT%20capex%20assessment%20approach%20for%20electricity%20distributors%20-%2028%20November%202019.pdf

3   Overview – Summary of Project Implementation Reviews

This overview provides a summary of the content contained in the individual PIR's that TasNetworks commissioned from independent consultants and whether they contain adequate detail required by the AER. If insufficient information was contained in the PIR, TasNetworks obtained the relevant information from other internal sources.

Investment	Budget	Timeframe	Benefit
5 Minute and Global Settlement	✓	✓	✓
Voice of the Customer - Transitional Customer Service Platform	✓	✓	✓
Voice of the Customer - Website	✓	✓	✓
Automated Fault Restoration	✓	✓	✓
Customer Connections Refresh	✓	✓	✓
Data Centre Network Refresh	✓	✓	✓
✓ *criteria met in PIR* ✓ *criteria met in other documentation* ✖ *criteria not met* ✖ *insufficient information**			

*Labelled as insufficient information where not all tangible benefits realised have been documented

4 Analysis – Summary of Project Implementation Reviews

This section provides analysis of each programme and its associated PIR comparing it to the criteria set in the AER's guidance note. Note: Most the benefits are non-financial and are described in further sections. The table contains the Actual budget, timeframe and benefit realised compared to the initial business case values.

Investment		Budget ($M)	Timeframe
5 Minute and Global Settlement	Initial	7.62	Feb 2020 – Feb 2021
	Actual	6.82	May 2022
Voice of the Customer - Transitional Customer Service Platform	Initial	1.74	Jan 2018 – Jun 2019
	Actual	1.91	Oct 2019
Voice of the Customer - Website	Initial	0.73	Jan 2018 – Oct 2018
	Actual	0.88	Apr 2019
Automated Fault Restoration	Initial	6.81 (7.50)	Aug 2018 – Jun 2020
	Actual	7.30	June 2021
Customer Connections Refresh	Initial	3.20 (3.97)	Mar 2020 – Jun 2021
	Actual	3.53	August 2021
Data Centre Network Refresh	Initial	1.28 (1.32)	Jan 2017 – Jun 2018
	Actual	1.61	May 2020

Notes: values in brackets are inclusive of variations approved for the project. Actual budget/timeframe are within approved project variations.

Detailed assessments of each project are provided below.

4.1 5 Minute and Global Settlements

This investment project is to implement modifications to TasNetworks' Distribution Network Service Provider (DNSP) Market Systems to comply with the following Australian Energy Market Commission (AEMC) market rule changes. The Australian Energy Market Operator (AEMO) has combined the implementation of these two rule changes to reduce costs for the industry.

Review

There were variances from the original budget and timeframe, however the expected outcomes and benefits were realistic and have been realised.

The $0.833M variance in the project spend and timeframe can be largely attributed to three main reasons

1. Project team size – The 5MS & GS Project team was resourced with many fewer resources than has traditionally been used for a project of this size. The reason the project was able to be delivered with such a lean team was due to having experienced resources across all streams and with project members taking on multiple roles and accountabilities throughout the life of the project. Whilst this was a contributing factor to the underspend, the project was also fortunate that the few key dependent resources on the project were available for its entirety.

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Outcome 1

Upgrade market systems to store and process 5 minute granularity data therefore allowing the spot market to perform settlements every 5 minutes which aligns with the current 5 minute dispatch timeframe.

Benefits	Expected Benefit	Realised Benefit
Improved price signals will stop and reverse the trend of price distortion (which was encouraged under the old 30 minute settlement rules) leading to efficient generation and use of electricity. Note that this is a whole of industry benefit, rather than TasNetworks specific benefit.	Intangible	✓
Increase market innovation and investment in an efficient mix of generation assets and demand side technologies which will reduce supply costs and lead to a more reliable power system. Note that this is a whole of industry benefit, rather than TasNetworks specific benefit.	Intangible	✓
Maintain the ability of TasNetworks to produce accurate network invoices and forecast consumption	Intangible	✓

TasNetworks continues to operate within the NEM whilst meeting all regulatory and compliance obligations	Intangible	✓
More rapid price signalling in the market may lead to lower costs for customers as they are able to better respond to high spot prices by reducing their energy consumption. Note that this is a whole of industry benefit, rather than TasNetworks specific benefit.	Intangible	✓

Outcome 2

Upgrade market systems to support the introduction of the 'Global Settlements' framework which will allow UFE to be fairly distributed amongst retailers on a pro-rata basis

Benefits	Expected Benefit	Realised Benefit
Improved transparency during AEMO's settlement process will enable more efficient and accurate energy reconciliation leading to lower settlement dispute costs. Note that this is a whole of industry benefit, rather than TasNetworks specific benefit.	Intangible	✓
The ability for AEMO to analyse UFE levels and recommend actions to reduce UFE;	Intangible	✓
Fairly distributing UFE costs on a pro-rata basis will facilitate long term competition and improve incentives to innovate and reduce UFE;	Intangible	✓
More accurate accounting of UFE across the networks should lead to fairer distribution of networks costs to customers. Note this benefit is not relevant for Tasmania given it is the only Network operator in the State.	Intangible	TBC

4.2 Voice of the Customer

The VOC Program was initiated from the 2017/18 Customer Service Strategy and comprised of two major projects with funding secured for implementation from two separate Business Cases in November 2017:

Transitional Customer Service Platform

$1.7M in CAPEX to develop a Transitional Customer Service Platform to consolidate six existing and unsupported customer systems and implement alternative communication channels with customers (SMS, Smart Form, Webchat and Knowledge Base).

Website Redevelopment

$728K in CAPEX to design and implement a new website with contemporary design, improved content and interactive capability to address customer experience and accessibility requirements.

Review

Both the Website Redevelopment ($169,405) and Transitional Customer Services Platform ($152,086) programs came in over budget by a combined total of $321,492. Additional funding was required to progress and complete the program during 2018/19, the overall project was also subject to delays.

The schedule delays were due to a combination of factors including:

- The need to engage a new vendor to develop the TasNetworks website impacted the Podium release due to integration requirements
- Complexity faced during development activities and by way of example the Outage map and SMS capabilities (planned functionality which was abandoned in three other previous TasNetworks projects due to the complexity)
- Additional requirements added during development such as new case types for the Podium and additional Cyber Security measures imposed on the program late in its lifecycle
- The sheer amount of scope included and delivered within the program coupled with a desire to take pressure off the delivery team over the increased duration of the project.

A formal Benefits Realisation Assessment has not been undertaken following the closure of the VOC Program. Notwithstanding this, the program is widely perceived as a huge success in terms of business efficiencies gained and positive customer outcomes which have been derived by the VOC deliverables.

Intangible benefits observed:

- Customer satisfaction based on phone surveys is trending upwards from 73% (December 2018) to 74% (December 2019), and above the electricity distribution industry average of 72% in Australia.
- Customer satisfaction based on on-line surveys is 7.1 and is on target with Balanced Business Plan (BBP) KPIs. The online rolling average for customer satisfaction is now 75%.
- Net Promoter Score (NPS) based on phone surveys increased from +0.8 (December 2018) to +5.9 (December 2019).
- NPS based on on-line surveys has increased from +14 (June 2019) to +28.6 (March 2020) and is well above the Balance Business Plan (BBP) KPI for on-line surveys. The online rolling average for NPS is 19.1.
- 39% reduction in escalated customer complaints.
- 15,000 1st span defects issued to customers with 13,000 being resolved (now caught up on large backlog and back at normal BAU levels). This effort has mitigated the serious risk to TasNetworks of identifying and closing off these defects by properly communicating them to the public.
- Call volumes reduced by 11% with over 10,000 on-line requests lodged by customers since go-live.
- Over 4,000 people followed outages in December/January 2020 while over 2,000 people have signed up for SMS updates at their property.
- Customer Service Group saw a 25% increase in employee engagement between March 2019 – March 2020.

Outcome 1 – Transitional Customer Service Platform

Improve Customer Experience through more effective tools, data & Processes

Benefits	Expected benefit	Realised benefit
Time savings from swapping thought multiple systems to access information to resolve customer enquiries	$127,400 p.a.	✓
Reduction in Customer Service Centre call handling times	$10,021 p.a.	✓
Avoidance of manual dissemination of claim forms by providing customer with an online self-service claims form	$8,098 p.a.	✓
Avoidance of current monthly complaints data validation process by enhanced data capture & reporting capabilities	$20,160 p.a.	Partially Realised
Avoidance of costs associated with escalated cases due to higher levels of 1st call resolution	$15,820 p.a.	✓

Outcome 2 – Transitional Customer Service Platform

Improve the way we communicate with our customers

Benefits	Expected benefit	Realised benefit
Avoidance of truck roll revisits due to timely SMS feedback from customers regarding power outage status	$126,315 p.a.	Partially Realised
Reduction (1%) in GSL payments for duration outages due to SMS notification to customers providing timely feedback on power outage restoration	$32,351 p.a.	Partially Realised
Reduction (35%) in the number of meter reading complaints due to proactive SMS notifications	$23,520 p.a.	✓
Savings in access card distribution costs by using SMS to advice customers that meter had been read	$13,897 p.a.	✓

Outcome 3 – Transitional Customer Service Platform

Improve the way our customers can engage with us

Benefits	Expected benefit	Realised benefit
Avoidance of costs associated with registering streetlight faults due to customers using online forms to report and resolve issues	$4,190 p.a.	✓

Outcome 4 – Transitional Customer Service Platform

Gaining real-rime insights on customers

Benefits	Expected benefit	Realised benefit
Avoidance of outsourced survey costs including internal processing efficiencies Survey functionality was de-scoped from the project.	$75,200 p.a. (yrs 4-10)	NA

Outcome 5 – Transitional Customer Service Platform

Development Constructive Customer Culture

Benefits	Expected benefit	Realised benefit
Training cost savings for Customer Support Staff due to more effective systems and process synergies as well as access to accurate and up to date knowledge base across teams.	$28,773 p.a. (yrs 4-10)	✓

Outcome 6 – Transitional Customer Service Platform

Improve Customer Experience through more effective tools, data and processes

Benefits	Expected benefit	Realised benefit
Improvement in overall customer satisfaction results including a 1pt uplift in results for ease of business, feeling valued and friendliness of service	Intangible	✓

Outcome 7 – Transitional Customer Service Platform

Development of Constructive Customer Culture

Benefits	Expected benefit	Realised benefit
Improvements in access to information and work task variety for customer facing staff leading to a 5% positive improvement in Customer Experience Questions for CSG People and Engagement results	Intangible	✓
Increased willingness for staff to volunteer to assist CSC during critical incidents due to simplification of tasks requiring support such as online, webchat, SMS freeing up properly trained staff to deal with customer calls	Intangible	✓
Deliver on foundations required to support ongoing continuous improvement activities as required to achieve our customer experience goal	Intangible	✓

Outcome 8 - Website

Improve Customer Experience through more effective tools, data & processes

Benefits	Expected benefit	Realised benefit
Costs avoided in dealing with outage related complaints enquires due to improved information on website (reduction in phone calls to the Customer Service Centre)	$21,518 p.a.	✓
Reduction in enquiries and complaints from media outlets and customers via social media during severe weather events	$5,250 p.a.	Insufficient information
Avoidance of manual processing of cable PI form by providing customers with an online self-service form with back end integration	$23,333 p.a.	✓
Avoidance of manual processing of Complaints and Enquiries by providing an improved form with back end integration	$15,604 p.a.	✓

Outcome 9 - Website

Improve the way our customers can engage with us

Benefits	Expected benefit	Realised benefit

Benefits	Expected benefit	Realised benefit
Costs avoided in recording vegetation issues over the phone by customers self-registering issues online	$8,015 p.a.	✓
Reduction in time processing vegetation issue acquittals by customers self-registering acquittals online	$10,500 p.a.	✓

Outcome 10 - Website

Replacement of our unsupported customer systems

Benefits	Expected benefit	Realised benefit
Costs avoided in reduction in IT group services due to web team able to modify site forms/content themselves because of improved administration functionality	$8,769 p.a.	Partially Realised

4.3 Automated Fault Restoration

This investment project is to implement automated fault restoration capability on an estimated 9% of distribution feeders to significantly improve outage restoration times for customers and provides a direct STPIS benefit to TasNetworks of $1.1M per annum.

The project built a complete and accurate HV connectivity model, developed the authoring capability for proposed assets in the model, created the model import process from GIS to DMS and implemented the DMS software. In addition the project implemented a small number of advanced DMS applications as follows:

- Distribution Power Flow (DPF) – used to estimate accurate power flows through the distribution network
- Fault Location, Isolation and Supply Restoration (FLISR) – used to restore health sections of faulted feeders automatically using telemetered field switches
- Switch Order Management (SOM) – manages the writing of switching instructions to access the electricity network safely

Review

In general terms, the project was assessed by stakeholders as being very successful in delivering scope items and managing the change process. Most of the benefit was realised by the business with slight variations. The original budget was $6.81M which received a variation to $7.50M which a final cost to complete of $7.30M. This final variance in cost was due to the significant impact of COVID19 on the project delivery approach. There were significant delays due to ███

Outcome 4 was not realised with the PIR noting "The inability to link the DMS HV Connectivity Model to the ORM HV connectivity model due to incompatibility of devices and timing (proposed assets etc). ███

Outcome 1

Improved employee and public safety

Benefits	Expected benefit	Realised benefit
This benefit has not been quantified. The improved safety logic, check and balances and simulation capability will identify switching hazards in real time to alert control room operators and field staff	Intangible	✓

Outcome 2

Improved unplanned outage restoration times for customers

Benefits	Expected benefit	Realised benefit
A significant reduction in the duration of outages for customers on targeted feeders with corresponding Short Term Performance Incentive Scheme (STPIS) payments	$1.1M p.a.	$1.1M p.a.[2]

Outcome 3

Improved efficiency and effectiveness in managing the distribution networks

Benefits	Expected benefit	Realised benefit
Improved network control capability resulting in reduction in overtime, less errors, less compliance breaches and improved emergency response.	$147,000 p.a.	$127,000 p.a.

Outcome 4

Improved compliance reporting

Benefits	Expected benefit	Realised benefit
Reduction in manual outage compliance reporting costs resulting from real time switching being recorded and updated in the ORM	$150,000 p.a.	✗

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[2] Benefit projection verified as achievable and on track to be realised. Noting this is an economic benefit to customers based on customer reliability using STIPIS as a proxy.

Outcome 5

Uplift in Opex Support Cost

Benefits	Expected benefit	Realised benefit
Negates net benefit in additional opex support cost of 2 FTE's	$-320,000 p.a.	$-120,000 p.a.

4.4 Customer Connections Refresh Programme

The CCRP program was intended to remediate several key risks in the customer connection process and deliver trusted, faster, and simpler customer connections including:

- Develop and deliver a customer connections service model
- Define governance roles and remits across the customer service chain, building clear business rules and KPI's.
- Own the 3rd party management of stakeholders in the connection process
- Enhance the customer experience with self-service tools,
- Digital alignment to remove duplicate processes, reduce hand-offs and streamline the customer experience
- Digital enhancement of the process to provide transparency to our customers and our people
- Alignment of the customer engagement process
- Develop and implement the right reporting tools for our business
- Support our people and the industry to change to new ways of working

Review

The CCRP program was intended to remediate several key risks in the customer connection process and deliver trusted, faster, and simpler customer connections. Ultimately, the program was successfully completed under the agreed final budget and in line with the agreed final schedule. A significant number of the key business benefits of this program outlined in the business case were delivered.

Outcome 3 saw that 115 jobs were diverted from complex negotiated connection. ███████████
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Outcome 4 saw 115 jobs diverted and signs of decreased staff turnover & signs of uplift in team culture and engagement scores.

Outcome 1

Deliver a consistent customer connection experience that meets the contracted agreements while meeting TasNetworks NECF requirements within an agreeable timeframe.

- Utilising a flexible design delivery model
- Increase the transparency for customer on project milestones
- Manage customer expectations on their dependencies to TasNetworks

Benefits	Expected benefit	Realised benefit
Negotiated Customer Connections are completed => 75% on time	Intangible	Too early to assess
Basic Connections applications are processed 80% =< 5 days	Intangible	Too early to assess

Outcome 2

- Reduction in the number of customer enquiries on negotiated connections due to increased visibility of milestones in the customer tools
- Realign SAP with the customer self-service tools to provide milestone dates,

Benefits	Expected benefit	Realised benefit
Productivity increase on short cycle negotiated connection, reduction in application processing, design, reduction in site visits, improved planning and scheduling process	$224,000 p.a.	$128,800 p.a.
Productivity increase on complex negotiated connections, Productivity increase on short cycle negotiated connection, reduction in application processing, design, reduction in site visits, improved planning and scheduling process	$300,000 p.a.	Too early to assess

Outcome 3

- Cost Efficiency and Consistency
- Better upfront information to customer including service information and costs to enable more informed decision making
- We provide clarity and consistency in pricing for all negotiated connections

Benefits	Expected benefit	Realised benefit
Risk and cost reduction by improving customer experience and uplift in NPS, CSAT and EASE of doing business and improved TN brand experience.	Intangible	✓

Outcome 4

- Deliver effective organizational design including governance, role and remits

- Process and organizational design that supports teams to deliver a better connections process. Teams, roles and responsibilities align to support a faster connection experience

Benefits	Expected benefit	Realised benefit
Improved skills utilisation across teams to ensure skills are invested into value add activities. This supports improved uplift in team culture and engagement scores	Intangible	Too early to assess
More effective systems and simpler processes, avoided training and staff turnover costs by ensuring clarity of roles.	Intangible	Too early to assess

4.5 Data centre Network Refresh

The Data Centre Network Refresh project was initiated in 2015 to replace ageing network switch platforms in the Cambridge and Derwent Park data centres. These switches provide critical network switching services for both TasNetworks and 42-24 infrastructure services customers, and their continued reliable operation is essential to continued delivery of IT application and data services.

<u>Review</u>

The project delivered all of the benefits identified in the business case within 10% of the budget estimate and with relatively little impact to business operations. The project has provided TasNetworks with a stable, flexible and scalable data centre network that will underpin the delivery of critical application and data services for many years to come.

While the project was initially envisaged to require 18 months to complete, this estimate rapidly proved to be impractical. Design and implementation issues resulted in a number of schedule adjustments to ensure quality of delivery.

The budget variation occurred due to:

1. Increased scope arising from the impact of changes to the TasNetworks network architecture external to the project.
2. Changes to the resource model and costs.
3. Unanticipated requirements to execute a number of prerequisite activities to enable the project to proceed beyond design, including:
   a. Telco / Corporate controlled WAN relocation.
   b. Migration of Bridgewater WAN connections.
   c. Clean-up and upgrade of data centre interlinks.
4. Server switch upgrades at both data centres.
5. Identification of additional hardware to be decommissioned as a result of the project implementation

Outcome 1

Modernisation of core Data Centre Hardware

Benefits	Expected benefit	Realised benefit
Continuation of ability to deliver key services through the decommissioning of hardware reaching end of service life and provision of technology	Intangible	✓

Outcome 2

Performance Improvement

Benefits	Expected benefit	Realised benefit
Increased performance and reliability through the use of the fit for purpose technology which meets our changing business needs and increasing reliance on information technology solutions	Intangible	✓

Outcome 3		
Establishment of a premium network for a Multi-Tenanted operation		
Benefits	**Expected benefit**	**Realised benefit**
TasNetworks currently provides data centre infrastructure services to 'Customers' (both internal and external to the organisation), and it is expected that additional customer will be brought on-board over the next five years. Therefore, the new data centre network infrastructure is expected to fully support a multi-tenanted operation, including the ability to identify operational costs and accurately apportion them to tenants (more specifically, TasNetworks will be provided with the ability to identify the required level of measurable data that will accurately support the attribution of costs between TN/Aurora/Other)	Intangible	✓