



# Jemena Electricity Networks (Vic) Ltd

## Technology Plan

IT Investment Brief - Customer Experience

Non-Recurrent - New Capability



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## Glossary

CCM	Customer Communications Management
CRM	Customer Relationship Management
Current regulatory period	The regulatory control period covering 1 January 2016 to 31 December 2020.
CSAT	Customer Satisfaction Score
CYxx	The calendar year which covers the 12 months to 31 December of year 20xx. For the current regulatory period, this is equivalent to RYxx
ICT	Information and Communications Technology
Intervening period	The period covering 1 January 2021 to 30 June 2021 includes the time between the current regulatory period and the next regulatory period. The intervening period arises with the move from a calendar year regulatory year to financial.
JEN	Jemena Electricity Networks (Vic) Ltd
Jemena	Refers to the parent company of Jemena Electricity Network
JGN	Jemena Gas Networks
NPV	Net Present Value
Next regulatory period	The period covering 1 July 2021 to 30 June 2026
OMS	Outage Management System
RYxx	Regulatory year covering the 12 months to 30 June of year 20xx for years in the Next Regulatory Period and the 12 months to 31 December of year 20xx for years in the Current Regulatory Period. For example, RY20 covers 1 January 2019 to 31 December 2020 and RY22 covers 1 July 2021 to 30 June 2022.
STPIS	Service Target Performance Incentive Scheme
WCM	Web Content Management



## Customer Experience

Objective	The objective of this business case is to meet the need identified by Jemena Electricity Network (Vic) Ltd. ( <b>JEN</b> ) customers for improved digital customer experience through appropriate systems and tools for the management of interactions and accessibility of information and data.
Background	<p>The JEN People's Panel identified that good customer service is expected in the core service offering of delivering electricity to customers. While JEN currently provides a customer experience that meets its compliance requirements, research has identified that customer satisfaction with Jemena as a distributor lags behind its peers, particularly for those customers who interact with Jemena<sup>1</sup>. The People's Panel recommendations and customer satisfaction research<sup>2</sup> indicate that there are some shortcomings in the current customer experience which are attributable to JEN's customer ICT systems. JEN shares much of its customer experience ICT infrastructure with Jemena Gas Network (<b>JGN</b>). The most notable exception are the systems relating to outage management and providing outage information to customers, which are separate applications. The sharing of customer systems benefits customers of both networks through economies of scale as most of the expenditure is made up of fixed costs. By sharing costs (in accordance with Jemena's cost-sharing principles), JEN's customers enjoy the benefit of a lower cost than had the system been provided on a stand-alone basis.</p> <p>The ICT systems manage most touchpoints JEN has with its customers, including setting up connections, arranging disconnections, tracking household electricity usage and providing updates during unplanned outages. These systems are disparate and do not support JEN staff to deliver a customer experience in line with customer expectations. Amongst our customers that have interacted with JEN recently and are dissatisfied with their experience, they cite poor communication and time taken versus expectation as key reasons for their dissatisfaction<sup>3</sup>.</p> <p>There is also an awareness of the heightened risk of electricity network outages in Victoria due to increased media focus as a result of the recent extreme heatwaves and outage events in 2017 and 2018. This increased awareness has empowered customers to seek out more information to determine if and how they will be affected; however, JEN has a limited digital presence for customers to seek out answers from. Currently, JEN provides customers with information on planned outage events via physical card drops and has only recently established direct digital communications with customers during unplanned outage events. However these digital communications offer customers limited information. Customers are also able to visit the JEN website for some information on unplanned outage events.</p>

<sup>1</sup> Jemena, *2019 Jemena Annual CSAT – Summary*.

<sup>2</sup> JEN, *Customer Discovery, Research Summary & Digital Roadmap*, 2019.

<sup>3</sup> JEN, *Journey Customer Satisfaction (CSAT) Q3 2019 Report*.

<p>Customer Importance</p>	<p>Enhanced customer engagement and experience with distribution networks is supported by Energy Consumers Australia, the AER, Energy Networks Australia<sup>4</sup>, and the broader energy industry. Distribution networks are expected to provide good customer service and experience, and through JEN’s engagement with customers, it is clear that customer experience is vital to all of our customers, from the largest commercial and industrial customer to the residential householder connecting to the network.</p> <p>Furthermore, good customer service is expected in the core service offering of delivering electricity to customers. The People’s Panel rejected a proposed customer service incentive scheme in March 2019, stating that “good service is expected” and “progress and improvement should be guaranteed”.</p> <p>Good customer experience is the culmination of the customer’s interactions with a company. Research undertaken by KPMG in 2018 across a wide range of industries identified that personalisation of services is the most crucial attribute for Australian consumers when assessing customer experience<sup>5</sup>. JEN’s own research has shown that consumers are seeking personalisation in the form of the ability to manage their own electricity usage and receiving targeted communications that are relevant to them<sup>6</sup>.</p> <p>The importance of transforming Jemena’s digital customer experience was evident in the People’s Panel recommendations in 2018 with six of the 25 recommendations focused on digital (or digital-enabled) customer experience improvements<sup>7</sup>:</p> <ul style="list-style-type: none"> <li>• Jemena should improve the information available to customers and the ease of access to smart meter data</li> <li>• Jemena should improve their channels of customer service by increasing their services to include mobile apps and using simpler processes</li> <li>• Jemena should send SMS messages to all customers for unplanned outages</li> <li>• Jemena should provide email or letter notifications about all planned outages</li> <li>• Jemena should work with retailers to provide an opt-out process for notifications</li> <li>• Jemena should investigate how customers could be provided with personal usage and bill information for different pricing structures.</li> </ul> <p>JEN holds regular customer satisfaction (<b>CSAT</b>) surveys to better understand our customers’ needs and wants. These surveys provide valuable insights into customer expectations and help JEN to provide a better customer experience. JEN also surveys customers at crucial points of their journeys to better understand both what they would like to interact with JEN on and also how they would like to interact. This research has confirmed that Jemena lags behind other Victorian electricity distributors, particularly with regards to keeping customers informed and being able to be relied on in an emergency.<sup>8</sup></p> <p>Further, JEN’s CSAT surveys and human-centred design research on our customers’ digital needs<sup>9</sup> have confirmed the People’s Panel recommendations for the need for consistent, personalised and customer-focused digital experiences. JEN expects that as technology continues to evolve, and customer service is further digitised in other sectors, customer expectations of their energy providers will continue to increase and that undertaking the proposed changes is the minimum that must be delivered.</p>
<p>Energy Charter</p>	<p>JEN has committed to the Energy Charter, which is supported by the Australian Energy Regulator (<b>AER</b>) as playing a secondary role to the regulatory framework<sup>10</sup> and in ensuring that energy services are delivered in line with consumer expectations.<sup>11</sup></p>

<sup>4</sup> ENA Electricity Network Transformation Roadmap: Final Report, April 2017.

<sup>5</sup> KPMG, 2018 Customer Experience Excellence Report: Australian Summary, January 2019 <https://home.kpmg/content/dam/kpmg/au/pdf/2018/customer-experience-excellence-report-2018-au-summary.pdf>

<sup>6</sup> Jemena, *Exploring the future energy network*, 2018.

<sup>7</sup> JEN Att 02-04, *Community Consultation Report – 20200131 – Public*

<sup>8</sup> Jemena, *2019 Jemena Annual CSAT – Summary*.

<sup>9</sup> Jemena Electricity Networks Customer Discovery, Research Summary & Digital Roadmap, 2019

<sup>10</sup> <https://www.aer.gov.au/system/files/AER%20submission%20-%20The%20Energy%20Charter%20-%20consultation%20draft%20-%202018%20October%202018.pdf>

<sup>11</sup> <https://www.aer.gov.au/news/looking-back-and-looking-forward-an-aer-chair-perspective>

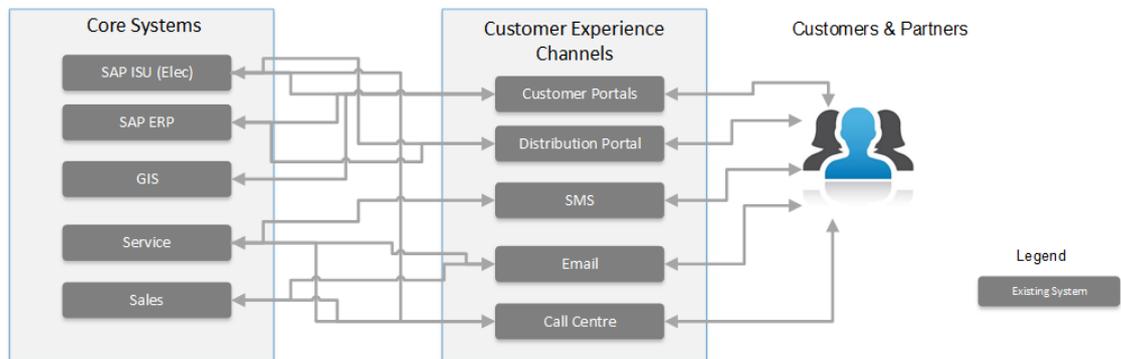
	<p>Jemena is a founding member of the Energy Charter and is committed to improving customer outcomes. JEN's commitment to the Energy Charter has helped JEN further understand what customer outcomes really matter and how best to serve them, and based on that JEN considers that its proposed customer experience focused projects to be best practice.</p> <p>The Energy Charter which has five main principles of improving culture, energy affordability, sustainability and the customer experience along with providing more support for vulnerable customers. JEN's proposed customer experience projects are consistent with improving the customer experience, particularly in assisting customers to make informed decisions about their energy use and services, and that all customers should benefit from the transformation of the energy system.</p> <p>Consistent with the Energy Charter's principle in actions for improving the customer experience, the proposed customer experience focused projects will:</p> <ol style="list-style-type: none"> <li>1. Enable customers to get fair outcomes regardless of their ability or desire to participate in the energy market.</li> <li>2. Empower customers by: <ol style="list-style-type: none"> <li>a) making sure all communication is clear, in plain terms, accessible and understandable</li> <li>b) providing insightful and useful information and accessible tools</li> <li>c) streamlining access to, and portability of, customer energy data.</li> </ol> </li> </ol>
Strategic Approach	<p>Our strategic objective is to strengthen our existing customer service ecosystem to meet customer needs and expectations, improve efficiency and maximise benefits provided to customers. This approach includes the following systems and capabilities:</p> <ul style="list-style-type: none"> <li>• Customer Relationship Management (<b>CRM</b>) to support customer-facing front office activities</li> <li>• SAP IS-U and ERP to process back-office transactions</li> <li>• Customer portal allowing customers to track their electricity usage</li> <li>• Distribution portal enabling customers to submit digital applications for connections and other distribution services</li> <li>• Outage Management System (<b>OMS</b>) to coordinate alerts related to planned and unplanned interruptions</li> <li>• Web Content Management (<b>WCM</b>) and Customer Communications Management (<b>CCM</b>) tools to deliver communications across multiple channels</li> <li>• Mobile and email messaging.</li> </ul> <p>To meet growing customer expectations, JEN's strategy aims to manage these systems to increase the personalisation of customer interactions with the distribution network. This strategy encompasses better utilisation of data and the communication of this data to customers as well as improved use of the business to business processes.</p> <p>JEN will integrate customer communication and data storage platforms so that each interaction with Jemena is personalised to the customer, based on their previous interactions with Jemena. The customer service ecosystem is integral to the delivery of this strategy. JEN intends to leverage household level smart meter data, digital analytics and digital communications platforms so that residential customers and small-to-medium sized businesses can access timely energy information to make informed energy decisions.</p>
Options	<p>JEN has considered two options for investment in customer experience; these are:</p> <ol style="list-style-type: none"> <li>1. a no change alternative to maintaining existing capabilities and ability to meet regulatory obligations, and</li> <li>2. investment in integrating existing customer systems and establishing a Customer Experience Hub.</li> </ol>

Option 1: Continue to use existing systems

**Description**

The following diagram provides a conceptual view of the changes involved in this option.

**Figure 1: Option 1 Conceptual System Design**



This option will involve continuing to maintain the current level of customer experience during the next regulatory period. This is the business-as-usual option and provides no benefits to JEN or its customers. Customers will continue to interact with multiple access points that are not aware of previous interactions with us. They will likely need numerous ways of identifying themselves to us to receive information or service. This will result in a deteriorating customer experience, given its inability to meet our customer’s current expectations, let alone address the changing needs and expectations of customers in the future.

JEN will continue to process network connection applications via the existing customer portal with integration points to the SAP ERP. Customer service activities such as inquiries, complaints and recoverable works will be captured and monitored in the current CRM managed and accessed through our call centre.

JEN will communicate general network outages via SMS to customers who have provided mobile phone contact details. JEN will also continue to operate and maintain our bespoke suite of customer portals (Outage, Electricity Outlook and New Connections) on-premise.

All processes will continue in their current form, as will all operational costs.

This option has the lowest cost and involves no non-recurrent ICT capex during the next regulatory period. However, it also does not deliver any new customer benefits.

**Costs**

There are no incremental costs associated with this option.

**Risks**

This option will expose JEN to a range of risks. The existing customer experience will continue to fall further behind customer expectations and the experiences provided by our peers that JEN may be assessed against.

Customers will continue to receive limited information during unplanned outages. This option will not enable JEN to meet customer expectations, and this will affect satisfaction outcomes for customers that interact with the call centre. There is a risk that customer complaints to the Energy and Water Ombudsman Victoria may increase.

**Benefits**

There are no material customer benefits associated with this option.

### Net Present Value (NPV) Analysis

There is no NPV analysis associated with this option, although, with growing customer expectations on customer interactions, doing nothing will result in adverse NPV outcomes, albeit, challenging to measure.

### Summary

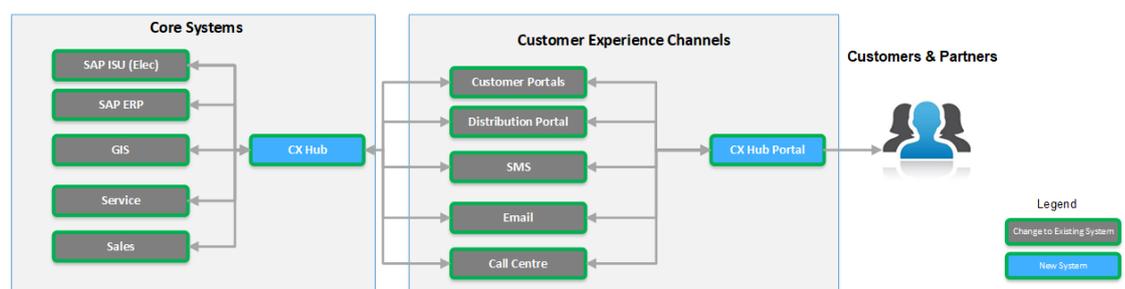
This option will maintain the existing systems at no incremental cost to customers. However, it will fall short of customer expectations and will not provide any benefits to customers.

### Option 2: Build a Customer Experience Hub and enhance existing platforms

### Description

The following diagram provides a conceptual view of the changes involved in this option.

**Figure 2: Option 2 Conceptual System Design**



This option will establish a Customer Experience Hub which will integrate, consolidate and simplify existing customer information from our core systems for simplified and unified use by our customer-facing applications. The existing components of the customer experience ecosystem will be maintained within supported versions through lifecycle activities in combination with new capabilities and integration between systems.

The customer experience investment is made up of several component projects. Broadly, these include a) the establishment of a Customer Experience Hub, b) integration of the Hub with the existing core customer data systems, the electricity distribution portal, Outlook portal, and outage management and c) the lifecycle management and enhancement of all of the current and new customer experience system components. As these projects apply to related systems, they are interdependent and not separable without significant changes to cost and risk.

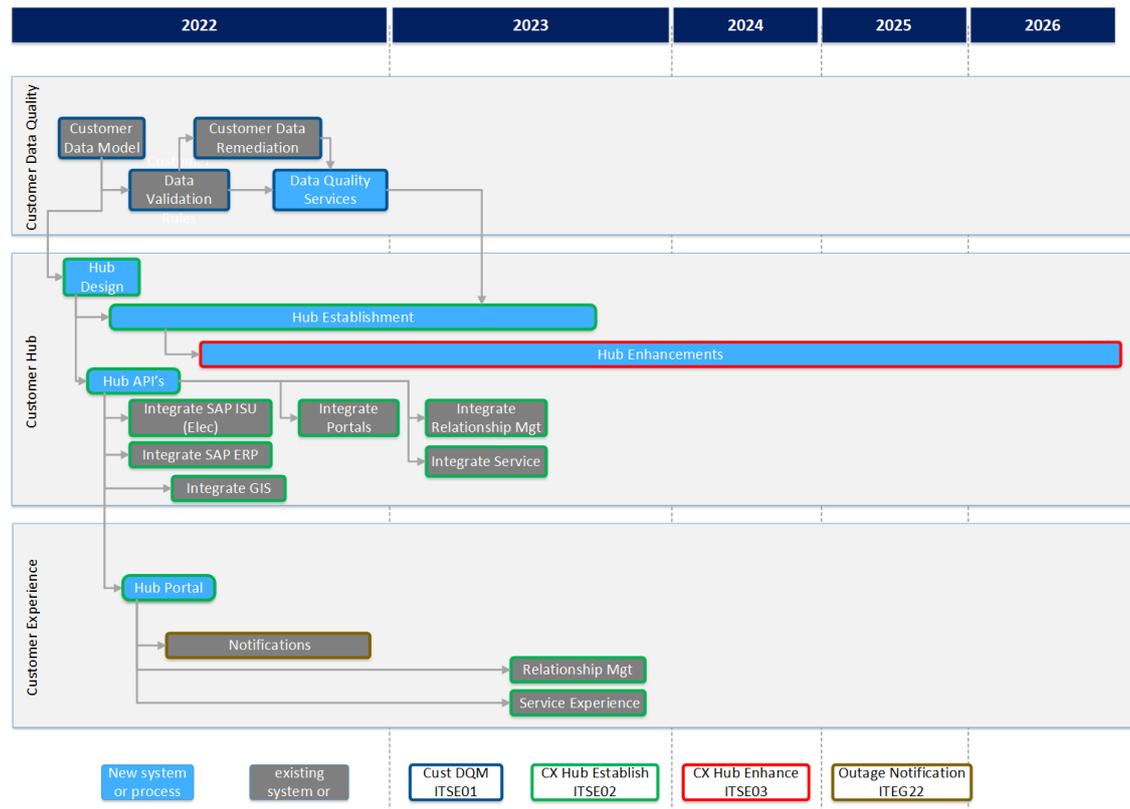
The Customer Experience Hub will enable JEN to have a single view of the customer and their interactions with us. The Hub will include a single, integrated portal so that customers only have one account with JEN rather than the current set-up where customers have separate accounts for outage information, consumption data and new connection applications or other construction works. The Hub will enable JEN to digitise and record the customer journey across all products and services, so that information can be easily recalled by JEN staff to aid customer queries and ensure timely responses are being provided. The Hub will also offer a view of the customer interactions with us across different channels so that we can use this information to simplify and enhance all communications a customer has by reducing the need to restart or repeat processes. This outcome will also improve JEN's understanding of the customer experience, which can be used to drive continuous improvement with parts of the business that interact with customers.

The platform will enable JEN to push information to customers based on their stated preferences, receive customer data updates and allow employees to engage with customers and other stakeholders, via mobile and social media platforms. The platform will also enhance JEN's ability to manage customer

data compliance, including opt-outs and data permissions. There will also be a specific focus on improving the overall quality and completeness of the customer data and putting in place mechanisms to keep the data current and accurate. This approach is a multi-year technology and process initiative. As part of the upgrade, JEN will migrate and re-architect existing systems to leverage more digital capabilities, support rapid deployments, and manage lifecycle costs for the new systems. These changes will provide JEN increased flexibility in the future to change platforms and will allow the business to manage costs in the long-term better.

The following roadmap diagram highlights the broad activities that will be undertaken as part of this option and the sequence in which they will be executed over the period.

Figure 3: Customer experience roadmap



**Costs**

The table below shows JEN’s bottom-up analysis of the work that will be required to unlock the forecast benefits.

\$2020	RY22	RY23	RY24	RY25	RY26	RY27	RY28	RY29	RY30	RY31
<b>Non-Recurrent</b>										
Customer Data Quality Management - PK3	374,035	-	-	-	-	-	-	-	-	-
Customer Experience Hub Establishment (CRM/IS-U Integration) - PK1	971,924	487,698	-	-	-	-	-	-	-	-
Customer Experience Hub Enhancement - PK2	93,509	93,843	94,193	94,548	94,905	-	-	-	-	-
Customer Notification Automation - PK2	506,269	-	-	-	-	-	-	-	-	-
<b>Non-recurrent Subtotal</b>	<b>1,945,736</b>	<b>581,541</b>	<b>94,193</b>	<b>94,548</b>	<b>94,905</b>	-	-	-	-	-
<b>Recurrent (following regulatory period)</b>										
Customer Experience Hub Lifecycle (estimate for RY27-31)	-	-	-	-	-	-	451,594	-	-	-
<b>Total</b>	<b>1,945,736</b>	<b>581,541</b>	<b>94,193</b>	<b>94,548</b>	<b>94,905</b>	-	<b>451,594</b>	-	-	-

This option will incur non-recurrent capital costs for the establishment of the Customer Experience Hub and integration of existing systems with the Hub. The Customer Experience Hub will require recurrent expenditure for lifecycle updates commencing during the following (2026-31) regulatory period.

Compared to Option 1, the non-recurrent expenditure to establish the Customer Experience Hub may also displace some recurrent expenditure for existing customer experience tools (not shown) as the integration of some systems will coincide with and include routine lifecycle updates.

Under this option, JEN will require \$2.8M of non-recurrent ICT capital expenditure during the next regulatory period. No additional recurrent expenditure will be required during the next regulatory period for these projects and some recurrent expenditure may be avoided.<sup>12</sup> The cost of the individual projects were estimated using JEN’s standardised estimator tool for IT projects as described in the Technology Plan under the section on Forecasting Method.

**Risks**

This option does not have any direct financial risks to JEN or its customers. Due to the complexity and the number of systems affected, there is a moderate delivery risk and difficulties encountered may jeopardise the project benefits being delivered on time.

**Benefits**

\$2020	RY22	RY23	RY24	RY25	RY26	RY27	RY28	RY29	RY30	RY31
<b>Benefits – Customer</b>										
Customer satisfaction - call centre queries		59,362	59,362	59,362	59,362	59,362	59,362	59,362	59,362	59,362
Customer satisfaction - outage notification		300,862	300,862	300,862	300,862	300,862	300,862	300,862	300,862	300,862
Wider customer benefits		137,462	137,462	137,462	137,462	137,462	137,462	137,462	137,462	137,462
<b>Total</b>		497,686	497,686	497,686	497,686	497,686	497,686	497,686	497,686	497,686

The primary benefit of this option is an improvement in customer satisfaction due to increased transparency, faster resolution of queries and empowerment of customers.

Some cost savings are possible within the call centre due to a reduced number of calls and being able to address complex customer queries faster due to better availability of information to call centre staff. The realisation of this saving, however, will be dependent on contractual requirements with the call centre operator, and the saving may be in the form of deferring the need for additional contracted call centre staff over time due to business growth. Therefore these cost savings have not been included in the above forecast benefits.

Customer satisfaction - call centre queries

By having information stored in one ecosystem the Customer Experience Hub will allow JEN call centre staff to be able to bring up more information about the customer and their previous inquiries with JEN, no matter what channel they have previously interacted with JEN on. This will result in a customer’s query being resolved faster and with less effort than currently required from the customer (particularly for complex enquiries). Further, the introduction of the Hub will support an increase in proactive digital communications to customers who have connection or other distribution services queries. Customer research has shown that proactive customer communications result in improved customer satisfaction as it will divert the need for customers to contact JEN.

As the dollar benefit of an improvement to the customer experience will be different for each customer a proxy customer benefit value has been developed. It is estimated that, on average, a customer values improvement in customer satisfaction for general enquiries at \$2 per customer satisfaction point (on a 10 point satisfaction scale). This proxy value has been estimated based on the Average Weekly Earnings for Persons in Victoria<sup>13</sup> and the average talk time per call centre inquiry.

The improvement to customer satisfaction from reduced phone calls and improved customer experience during phone calls has been estimated and applied to the total number of enquiries received<sup>14</sup>.

<sup>12</sup> Recurrent expenditure for the next regulatory period is forecast separately from non-recurrent expenditure and at an aggregate level for JEN. Projects representing recurrent lifecycle updates in the recurrent expenditure forecast exclude those that JEN expects will be avoided by the Customer Experience Hub investment.

<sup>13</sup> Australian Bureau of Statistics, *6302.0 Average Weekly Earnings Australia*, May 2019.

<sup>14</sup> Note: the telephone answering call parameter in the Service Target Performance Incentive Scheme (STPIS) measures to the fault call line. The measures in this business case relate to the ‘inquiry line’, given this, this initiative is not self-funding.

Customer satisfaction - outage notification

JEN's CSAT research has identified that when JEN is proactive with communications to customers (rather than reactive and waiting for customers to contact JEN) that customer satisfaction increases materially. Therefore, given that other customer research has determined that JEN's customers place greater importance on outages than general enquiries, it is estimated that JEN's customers value improvement in customer satisfaction for outage events at \$3 per interaction.

JEN anticipates that by increasing the information being made available directly to customers at relevant times will improve transparency and address customer dissatisfaction concerns, thus increasing customer satisfaction and reducing customer dissatisfaction.

The additional information that can be provided and the value receiving that information has to the customer differs whether the relevant outage is a planned outage or an unplanned outage.

*Planned Outages*

Customers will have improved satisfaction during planned outages as they will be able to receive regular digital updates confirming when power will be disconnected, how the works are progressing, and when power has been restored. Information will be provided about delays to restoring power so that customers can make alternative plans. This contrasts with the current arrangement where customers are notified about a planned outage only once, and no updates are made available to customers. This is done by physical card drop four business days before the works and JEN must identify a large window of time for the outage to ensure tasks can be completed. Information on planned outages is not currently available on the customer outage portal.

With the improved customer experience ecosystem that this option will deliver, customers will be able to be notified if JEN cancels a planned outage. Cancellations occur for a range of reasons including network emergencies which require the diversion of resources and non-controllable weather-related events such as storms, extreme heat and total fire ban days. Information on changes to planned outages is particularly valuable to small businesses and large commercial and industrial customers, who may need to shut down critical plant, send workers home or incur the costs of running a generator as a result of JEN's planned outage event. The investment by JEN in digital customer notification systems will enable these customers to be notified of the cancellation of the planned outage as early as possible so that the missed trading time or additional costs incurred by the customer are minimised.

*Unplanned Outages*

Customers will be notified when JEN detects that they have lost power. JEN will then be able to provide live updates so that customers know when the fault is found and when power will be restored. This will be an enhancement of the recently introduced digital communications, which only provides information for a broad geographic area and at a very high level; this refined approach will be targeted at a more customer-specific level.

The system integration will allow JEN to put additional information about the unplanned outages on the outages portal and social media platforms so that all customers can be reached. This information will enable customers to make alternative plans, and the transparency will improve their satisfaction that the outage is being managed and that JEN is aware and responding to the outage. Providing the information directly to customers will reduce the number of customers calling the call centre to seek updated information.

Wider Customer Benefits

The customer experience investments will also include other improvements to websites, better use of data, an increase in the amount of information provided through social media channels and other minor improvements to systems. These will benefit all customers, including those that do not sign up for notifications or create accounts for JEN's portals. JEN forecasts a small increase in satisfaction (0.2 points on a 10 point scale)<sup>15</sup> for all customers connected to the electricity network and calculated a wider customer benefit based on the estimated \$2 value to the customer.

**NPV Analysis**

The net present value of this option is +\$726k.

	Category	NPV \$2018
	<b>Non-recurrent</b>	
	Project costs	-2,515,383
	<b>Recurrent (following period cost)</b>	
	Life cycle	-352,784
	<b>Benefits</b>	
	Customer benefits	3,593,896
	<b>Total</b>	<b>725,718</b>

Assumptions: real vanilla WACC=2.50%, timeframe RY22 to RY31

**Summary**

This option will improve JEN's customer experience through the integration of existing platforms and establishment of a Customer Experience Hub that will simplify and streamline customer interactions. The improved customer experience is forecast to improve customer satisfaction, reduce the effort required by customers to interact with JEN and provide efficiencies for JEN's call centre. This option has a positive NPV and will deliver net benefits to JEN's customers compared to the business as usual option 1.

**Options Summary**

The table below summarises the quantitative and qualitative differences between the analysed options.

	NPV \$2018	Qualitative Risks	Qualitative Benefits
Option 1	0	Low	None
Option 2	725,718	Low	High

**What We Are Recommending**

JEN proposes to proceed with option 2. The customer benefits from the investment in improving customer experience support the cost of the investment. JEN's customers expect that customer experience is at the forefront of everything we do, and this investment will ensure that JEN meets these expectations. Feedback from customer groups has been supportive of investment to provide better customer service.

**Relationship to ICT Capital Forecast**

The proposed option for this business case is contained in the ICT investment plans ITSE01, ITSE02, ITSE03 and ITEG22.

<sup>15</sup> This is in addition to the increases in customer satisfaction attributable to the other benefits described above.