



# **Jemena Gas Networks (NSW) Ltd**

## **Investment Brief Customer Experience Hub**

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## Glossary

2020-25 regulatory period	The period covering 1 Jul 2020 to 30 Jun 2025
AA	Access Arrangement
AER	Australian Energy Regulator
CSAT	Customer Satisfaction (Survey)
Current regulatory period	The period covering 1 Jul 2015 to 30 Jun 2020
ICT	Information and Communications Technology
JEN	Jemena Electricity Networks (Vic) Ltd
JGN	Jemena Gas Networks (NSW) Ltd
NECF	National Electricity Customer Framework
NERR	National Energy Retail Rules
NGR	National Gas Rules
OMS	Operating management system
RYxx	Regulatory year covering the 12 months to 30 June of year 20xx. For example, RY20 covers 1 July 2019 to 30 June 2020.

# 1. Customer Experience Hub

Issue	<p>Jemena Gas Networks (NSW) Ltd (<b>JGN</b>) currently has disparate Information and Communications Technology (<b>ICT</b>) systems for managing interactions with and providing information to customers and prospective customers, rather than a centralised interface. The multiple systems and touch points make the customer experience difficult to navigate and delay the provision of timely information. This is particularly problematic for managing new connections, metering enquiries and outage notifications.</p> <p>Customers and stakeholders have told JGN that the existing systems do not meet their expectations and that JGN should provide mobile applications, together with easy to use digital self-service channels. Further, the existing ICT systems do not enable JGN to comply as efficiently as it could in meeting its regulatory obligations and the principles in action set out in the Energy Charter.</p> <p>These projects are unrelated to any migration of the core SAP ERP and ISU modules to S4. Where data is sourced for the customer hub from such systems any potential migration project would be responsible for re-establishing the extraction processes for exposing the data to customers.</p>
Objective	<p>To ensure the customer experience is optimised to meet existing and potential customer needs in a largely digitalised operating environment and to more efficiently and effectively meet the NECF obligations and Energy Charter principles.</p>
Background	<p>JGN's systems for managing interactions with and providing information to customers and prospective customers include setting up connections, arranging disconnections and abolishments, notifying of planned outages and providing updates during unplanned outages.</p> <p>JGN shares most of its customer service infrastructure with Jemena Electricity Networks (Vic) Ltd (<b>JEN</b>). The main exception to this is 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 cost-sharing principles), JGN's customers enjoy the benefit of a lower cost than had the system been provided on a stand-alone basis.</p> <p>JGN has recently deferred investment on customer systems. This reason for deferral has been driven by the impact of other major and higher priority compliance ICT changes that tied up resources and locked up complex programming schedules. Major ICT changes in this period included:</p> <ul style="list-style-type: none"> <li>• the replacement of the legacy GASS+ system;</li> <li>• the implementation of a Geospatial Information System (GIS) and Distribution/Outage Management System (DMS/OMS) all of which contain source data for customer ;communication; and</li> <li>• high priority compliance projects including Gas Day Harmonisation effective from 1 October 2019.</li> </ul> <p>Feedback from customers and stakeholders has identified that as a result of the deferral, JGN's customer experience is now lagging many of its peers in the gas and utility (particularly electricity) industries, and is not meeting JGN's customer expectations.</p> <p>Customer feedback<sup>1</sup> indicates several shortcomings attributable to JGN's customer systems. Specifically:</p> <ul style="list-style-type: none"> <li>• Customer feedback includes that a gas connection in JGN's distribution area is one of the most complex and time-consuming processes amongst Australian utilities, and this is adversely affecting the uptake of gas connections by households. A large proportion of connections are raised by repeat customers (developers, builders, plumbers, etc.) that make future decisions on how they will fit-out their next development. In particular, one third of abolishment customers who have had an average or poor abolishment experience say they are less likely to reconnect to gas<sup>2</sup>. There is a risk that customers may choose not to use gas</li> </ul>

<sup>1</sup> JGN Benchmarking September 2017

<sup>2</sup> JGN Episode Customer Satisfaction Survey, Q3 2019 Report

if JGN's customer systems are not improved to reduce the complexity and delays caused by the current customer systems.

- Among existing customers, those that are dissatisfied cite poor communication and information as key reasons to be dissatisfied<sup>3</sup>. This lack of communication is due to the limitations of the existing customer systems and JGN's inability to proactively manage customers through their journeys with JGN, whether that be a connection journey or another type.
- JGN's current outage reporting capabilities are limited. Planned outage notifications (which are required under NECF) are provided by postal mail – which is slow and ineffective in an increasingly digital world – and there are limited communication channels for unplanned outages; customers who experience an unplanned outage must monitor the Jemena website or call JGN separately to access updated information on supply interruptions. Large outages can potentially overwhelm the capacity of the control room to answer calls, resulting in customers receiving delayed information (and potentially out of date information because of the delays) and, therefore, further entrenching customer dissatisfaction.

If JGN does not meet minimum customer expectations, the gas network will not remain competitive with alternative energy sources in the long term, and customers may choose not to connect to the JGN gas network. Other competitive industries such as electricity, airlines, banking and financial services, and telecommunications, have invested significantly in customer experience in order to remain competitive and meet customer expectations.

<sup>3</sup> JGN Episode Customer Satisfaction Q1 2019 Report

## Customer Importance

When electing to use gas, a fuel of choice for the majority of households, JGN's customers expect to receive a seamless and efficient customer service experience (see below). This is necessary to maintain customer satisfaction and ensure that existing customers continue to remain connected to the network and new customers are attracted to connect to the network. In addition, JGN's customers expect a similar level of service to those of JGN's competitors (i.e. electricity industry) as well as other service providers such as banks and telcos.

There are two core benefits that customers receive from investment by JGN in the Customer Experience Hub:

- Firstly, customers benefit from having a more enjoyable, streamlined experience when interacting with JGN. Utilities and regulators worldwide are increasingly incorporating customer's expectation of services into how businesses are regulated and operated; this is reflected in the AER's Better Regulation program of 2012 and the requirement for regulated business to consult with their customers to ensure customer preferences are central to business decisions. A customer centric focus seeks to encourage a greater range of investments by businesses to improve all aspects of the services provided and how they interact with their customers.
- Secondly, JGN's customers benefit from sharing the largely fixed costs across the whole of the enterprise and in spreading its portion of costs over a greater number of connections resulting in lower individual charges. Investment in the Customer Experience Hub is expected to maintain JGN's competitive position with alternative energy options and ensure that customers remain connected to JGN's network. In the long term, this will result in a net benefit to all customers.

### Customer Feedback

JGN conducted a range of customer engagement activities as a part of the Access Arrangement (AA) review process for the 2020-25 regulatory period<sup>4</sup>. JGN's customers were invited to outline their preferences for the types and levels of end-user experience through voice of the customer engagements. JGN also received feedback on our means of interaction with customers through contacts with our call centre and from complaints.

Customers expect mobile applications, together with digital self-service channels, as a key improvement in our services. Some examples of the digital solutions customers are seeking include:

- Finding out about progress on connections and build work;
- Learning about interruptions to supply;
- Gaining better access to meter data to understand energy usage patterns;
- Providing usage and billing information to identify better pricing structures; and
- The ability to opt-in and out of notifications easily through mobile apps.

JGN holds regular customer satisfaction (CSAT) surveys to better understand our customers' needs and wants. These surveys provide valuable insights into customer expectations and help JGN to provide a better customer experience and therefore increase the life and propensity of JGN customers. JGN also surveys customers at key points of their journeys to better understand both what they would like to interact with JGN on and also how they would like to interact.

JGN's customer surveys and interactions have confirmed the need for a seamless, personalised and customer-focused digital experiences. JGN 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.

<sup>4</sup> Jemena Gas Networks (NSW) - Access arrangement Proposal 2020-25 Attachments 2.2a, 2.2b, 2.2c and 2.2d

Regulatory obligations	<p>The National Electricity Customer Framework (<b>NECF</b>) includes regulatory obligations that require JGN to communicate certain activities / events to its customers. NECF is comprised of the National Energy Retail Law, the National Energy Retail Regulations and the National Energy Retail Rules (<b>NERR</b>) and the AER is responsible for monitoring and enforcement of NECF. Relevant NERR obligations which the Customer Experience Hub will facilitate include:</p> <ul style="list-style-type: none"> <li>• Clause 86B – on request by a customer or a customer's retailer, JGN must provide information about the customer's energy consumption or its network charges.</li> <li>• Clause 90 – JGN must notify customers of planned interruptions.</li> <li>• Clause 91 – JGN must provide customers information on unplanned interruptions.</li> <li>• Clause 99 – JGN must notify retailers of planned interruptions.</li> </ul>
Energy Charter	<p>JGN 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>5</sup> and in ensuring that energy services are delivered in line with consumer expectations<sup>6</sup>.</p> <p>Jemena is a founding member of the Energy Charter and is committed to improving customer outcomes. JGN's commitment to the Energy Charter has helped JGN better understand what customer outcomes really matter and how best to serve them, and based on that JGN considers that its proposed Customer Experience Hub project 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. JGN's proposed customer hub is 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 Customer Experience Hub 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; and</li> <li>c) streamlining access to, and portability of, customer energy data.</li> </ol> </li> </ol> <p>The Energy Charter encourages energy businesses across the supply chain to work collaboratively together for better customer outcomes. JGN is collaborating with energy retailers to ensure our customer experience improvements are as effective as possible, Initiatives underway include validation of customer details including mobile phone numbers. This will ensure that when we build the Customer Experience Hub we are prepared to send out targeted communications to our customers in line with their needs and preferences.</p> <p>On 4 Dec 19, the Accountability Panel published its report on the 2019 Energy Charter Disclosures. This included Recommendation 26: Provide evidence of empowerment of customers by streamlining access to, and portability of, customers' data. Implementation of a Customer Experience Hub will enable JGN to meet this recommendation.</p>

<sup>5</sup> <https://www.aer.gov.au/system/files/AER%20submission%20-%20The%20Energy%20Charter%20-%20consultation%20draft%20-%2018%20October%202018.pdf>

<sup>6</sup> <https://www.aer.gov.au/news/looking-back-and-looking-forward-an-aer-chair-perspective>

Strategic Approach	<p>JGN places high importance on customer preferences, and seeks to meet reasonable customer expectations.</p> <p>JGN is a regulated utility that operates in a competitive market for energy services. Its traditional competitors are substitutes such as distributed electricity and bottled gas. Newer energies such as solar PV pose a further competitive threat. The gas distribution network, like other utilities, has large fixed costs but can add additional customer connections at a relatively low incremental cost. Encouraging customers to continue to use gas will contribute to the fixed costs of the network, lowering that the distribution component of gas bills for our customers.</p> <p>It is a strategic imperative for JGN to maintain the relevance of natural gas in a modernising world. This includes by positioning itself as providing a similar customer experience to newer energies like solar. One of JGN's key strategic objectives is to improve customer experience through digitalisation to protect and grow our customer base. The Customer Experience Hub is an important contributor to this strategy.</p>																								
Options	<p>JGN has considered three options for investment in customer experience. This includes (i) a minimal option to maintain existing capabilities, (ii) investment in integrating existing customer systems and establishing a Customer Experience Hub, and (iii) a complete re-architecting and replacement of all customer systems.</p> <p><b>Option 1: Continue to use existing systems</b></p> <p><b>Description</b></p> <p>This option will involve continuing to maintain the existing level of customer experience during the 2020-25 regulatory period. This is the business as usual option and provides no additional benefits to JGN or its customers. It will result in a deteriorating customer experience given JGN's inability to provide seamless and timely communication channels and or keep pace with the evolving needs of current and future customers.</p> <p>JGN will continue to use its existing website and maintain separate portals for customer interactions and connection applications. All processes will continue in their current form, as will all operational costs.</p> <p>This option has the lowest cost and involves no non-recurrent ICT capex during the 2020-25 regulatory period. However, it also does not deliver any benefits including meeting customers' expectations.</p> <p><b>Direct Unescalated Costs (mid-year 2018)</b></p> <p>JGN's portion of costs for this option is outlined in the table below.</p> <table border="1" data-bbox="359 1366 1503 1590"> <thead> <tr> <th>\$2018</th> <th>RY21</th> <th>RY22</th> <th>RY23</th> <th>RY24</th> <th>RY25</th> </tr> </thead> <tbody> <tr> <td>Gas portal</td> <td></td> <td>75,642</td> <td></td> <td></td> <td>75,642</td> </tr> <tr> <td>Outage portal</td> <td></td> <td></td> <td>75,642</td> <td></td> <td></td> </tr> <tr> <td><b>Total Recurrent</b></td> <td></td> <td><b>75,642</b></td> <td><b>75,642</b></td> <td></td> <td><b>75,642</b></td> </tr> </tbody> </table> <p>This option will incur recurrent capital costs of \$227k over the 2020-25 regulatory period for the maintenance of existing customer experience platforms. This covers lifecycle updates for the JGN external portals.</p> <p>These costs were estimated using JGN's standardised IT Project Estimation Tool as described in the Technology Plan under the section on Forecasting Method, and are informed by level of costs incurred by JGN in the current period. JGN assesses that these are small projects that will take less than 3 months to implement and are of low complexity.</p> <p><b>Risks</b></p> <p>The existing customer experience will continue to fall further behind customer expectations and the experiences provided by our competitors and other peers that JGN may be assessed against. This may result in credibility risk, a lower uptake of gas network connections and increased disconnections compared to those already forecast.</p>	\$2018	RY21	RY22	RY23	RY24	RY25	Gas portal		75,642			75,642	Outage portal			75,642			<b>Total Recurrent</b>		<b>75,642</b>	<b>75,642</b>		<b>75,642</b>
\$2018	RY21	RY22	RY23	RY24	RY25																				
Gas portal		75,642			75,642																				
Outage portal			75,642																						
<b>Total Recurrent</b>		<b>75,642</b>	<b>75,642</b>		<b>75,642</b>																				



For example, customers that experience an outage will continue to call JGN for information. These calls go directly to the control room. Large outages can potentially overwhelm the capacity for the control room to answer all calls, resulting in customers receiving delayed information, and, therefore, further entrenching customer dissatisfaction. The calls also have the potential to distract operators from the important coordination tasks involved in resolving an outage.

### **Benefits**

There are no benefits associated with this option.

### **NPV Analysis**

This option has an NPV of \$-193,148.

See attachment “JGN-IR029 Attachment 4 (Q19)-ICT-NPV-CX” – NPV Calc|Option 1.

### **Summary**

Option 1 will maintain the existing systems at low cost. However, it will fall short of customer expectations and may result in JGN losing customers to alternative energy options.

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

### **Description**

This option is to invest in increasing the integration between JGN’s existing customer centric platforms and provide better functionality and an improved experience to customers.

The core improvement will be to establish a Customer Experience Hub to integrate, consolidate and simplify the existing customer-facing applications and data that supports them. The existing components of the customer experience ecosystem will be maintained within supported versions through lifecycle activities in combination with new capabilities and integrations between systems.

The customer experience investment is made up of several component projects. Broadly, these include the establishment of a Customer Experience Hub, integration of the Hub with the existing gas distribution portal, usage information, outage management system and the lifecycle and enhancement of all of the existing 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 JGN to have a single view of the customer and their interactions with it. The hub will include a single, integrated portal so that customers only have one account with JGN rather than the current set-up where customers have separate accounts for outage information, and new connections or other construction works. The hub will enable JGN to digitise and record the customer journey across existing and new products and services, so that information can be easily recalled to aid customer queries and ensure timely responses are being provided. This will also improve JGN’s understanding of the customer experience, which can be used to improve key performance indicators.

The platform will enable JGN 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 JGN’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 is a multi-year technology and process initiative.

As part of the upgrade, JGN 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 JGN increased flexibility in the future to change platforms and will allow the business to better manage costs in the long-term.

The following roadmap (in appendix) 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.

**Direct Unescalated Costs (mid-year 2018)**

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

\$2018	RY21	RY22	RY23	RY24	RY25
Outage Notification Automation - PK1	236,808	236,808			
Customer Experience Hub Establishment (CRM/IS-U Integration) - PK1	586,730	1,173,459	586,730		
Customer Experience Hub Enhancement - PK2	112,898	112,898	112,898	112,898	112,898
Gas Distribution Portal CX Hub Integration & Lifecycle - PK1		183,678			183,678
Customer Data Quality Management - PK3		451,594			
<b>Non-Recurrent Total</b>	<b>936,436</b>	<b>2,158,437</b>	<b>699,628</b>	<b>112,898</b>	<b>296,576</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 non-recurrent expenditure will displace some recurrent expenditure (compared to Option 1) as the integration of some systems will coincide with and subsume normal lifecycle updates.

Under this option, JGN will require \$4.2m of non-recurrent ICT capex during the 2020-25 regulatory period. The cost of the individual projects was estimated using JGN's the standardised IT Project Estimation Tool as described in the Technology Plan under the section on Forecasting Method.

The scope and the basis of the cost estimates for each project are:

1. Outage Notification Automation (ITGG21) – To integrate with JGN's upgraded core network management system (**OMS**) to capture gas outage details and provide real-time update/notification on outages and restoration time. Currently JGN provides this through manual processes which does not meet customer expectations.

The cost estimate has been based on experience with the level of complexity and interfacing required in JEN, where this is also performed, and from an understanding of the new DMS/OMS systems that have recently been implemented for JGN and which will be the source of much of the information. Based on this, JGN assesses that this is a small-medium project that will take up to 12 months to implement and is of medium complexity.

2. Customer Experience Hub Establishment (CRM/IS-U Integration) PK1 (ITSE02) – Establishment of platform / hub to enable single point of contact for the customer with the ability to integrate in other applications allowing JGN to leverage a single platform to allow interactions with customers through a range of channels.

The cost estimate is based on Jemena's understanding of the back-end systems that will be called upon to provide data into this new customer experience hub and the size and complexity of the interfacing requirements that this is likely to incur. Based on this, Jemena assesses that this is an enterprise level project that will take up to 2 years to implement and is of high complexity.

3. Customer Experience Hub Enhancement PK2 (ITSE03) – Ongoing enhancement and feature drops to enable better customer experiences and services, e.g. webchat, chat bots, better notifications etc.

The cost estimate is based on a regular program of small projects in each year of the period to leverage the design planned for the customer hub to integrate more customer relevant data and to turn on additional channels for customers to improve their experience and give them more choice in

how they interact with JGN on subjects that are important to them. Based on this, Jemena assesses that this is a small project each year that will take less than 6 months to implement and is of medium complexity.

4. Gas Distribution Portal CX Hub Integration & Lifecycle upgrade (ITGF02) – Integrate JGN's existing customer portals into the newly created customer interaction hub to provide a seamless interaction with our customers. The intent is to componentise JGN's existing services and functions so that JGN can reuse these through different customer experiences.

The cost estimate is based on JGN's understanding of the existing portals and the expected design of the new CX hub to supplant these with a single point of contact. The sources of data and the nature of the data extractions required are known. Based on this, JGN assesses that this is a small project, which is required twice in the period, that will take less than 6 months to implement and is of moderate complexity.

5. Customer Data Quality Management PK3 (ITSE01) – Create a data quality management platform for creating, maintaining and managing the customer data through the newly created customer hub. Customers expect to be able to see their information, update it as required and set their preferences for how this wish to communicate with JGN.

The cost estimate is based on Jemena's understanding of the complexity of the interfaces required for allowing customers to see their information, update it and set their preferences. Based on this, Jemena assesses that this is a medium project that will take less than 6 months to implement and is of medium complexity.

### Risks

This option does not have any direct financial risks to JGN or its customers. Due to the complexity involved and the number of source systems affected, there is a moderate delivery risk and difficulties encountered may affect the project benefits being delivered on time. The principle of establishing a single hub and incrementally building upon this platform is designed to minimise this risk though and to ensure that benefits are delivered as soon as they are built.

### Conforming capex

Rule 79(1)(a) of the National Gas Rules (**NGR**) states:

*The capital expenditure must be such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services.*

Undertaking these projects, the proposed capital expenditure is consistent with the NGR rule 79 as it is:

- Prudent - The expenditure is necessary to maintain the safety of JGN's services and maintain the integrity of services to customers and personnel and is of a nature that a prudent service provider would incur. It is the best practice approach to maintaining the ability to continue providing financial, management and regulatory reports.
- Efficient - The option selected is the most cost effective long term option that meets the necessary operational requirements in order to meet the compliance with legislative and regulatory obligations.
- Consistent with accepted and good industry practice. In addition, it is consistent with Jemena's Risk Management Manual and AS2885.

The project is also consistent with NGR rule 79(2)(c), because it is necessary to:

- Maintain and improve the safety of services (79(2)(c)(i)) – digitising and streamlining communications to customers using the Customer Hub will result in more accurate and timely updates to customers which is an important driver of safety.

- Maintain the integrity of service (79(2)(c)(ii)) – by implementing the Customer Experience Hub Jemena will be able to maintain services to customers and deliver greater functionality provided by newer technology.
- Comply with a regulatory obligation (79(2)(c)(iii)) - The integration of the customer experience hub with the existing gas distribution portal meets JGN's obligations under NERR and is consistent with the principles in action set out in the Energy Charter.

### Benefits

The primary benefit of this option is addressing the current issues customers have raised with JGN's customer experience, including difficulty to connect, lack of communication and information and lack of transparency. In particular, there are significant benefits in improving the experience of stakeholders who have repeated interactions (developers, builders, plumbers, etc.) and who will make future decisions on how they will fit-out their next development (or will provide advice to others).

JGN expects that Option 2 will contribute to JGN's 0.74% productivity growth factor proposed in its AA proposal and agreed by the AER in its draft decision<sup>7</sup>.

### NPV Analysis

This option has benefits which flow into the following regulatory period and has a 10-year NPV of \$-3,682,816.

See attachment "JGN-IR029 Attachment 4 (Q19)-ICT-NPV-cx" – NPV Calc|Option 2.

### Summary

Option 2 will improve JGN's customer experience through the integration of existing platforms and establishing a Customer Experience Hub that will simplify and streamline customer interactions and meet JGN's regulatory and safety obligations, as well as its customers' expectations on services provided by JGN.

### Option 3: Rearchitect and Replace Customer Systems

#### Description

This option involves JGN completely replacing all existing customer systems. JGN would likely select a vendor that can provide an end to end solution to meet all customer needs. The replacement system would be operated by the supplier and remove the need for JGN to manage this capability in-house.

JGN will review the market for viable replacement options that deliver additional value and/or cost benefits over the incumbent vendors. This option could include the migration of services to Cloud offerings or a similar solution but with a different vendor. This approach involves a major change in technology and therefore introduces significant risks associated with such changes.

#### Costs

The costs for this option are difficult to determine as JGN has not fully investigated the products that are available in the market. However, JGN has estimated from previous experience that the cost of replacing these systems would be considerably higher than retaining and upgrading the existing systems (as per Option 2) as all the same work needs to be performed and investments made to date in current systems would need to be repeated in alternative platforms.

#### Risks

A full rearchitect and replacement of customer systems is highly risky and may result in cost overruns, and not all features and benefits may be realised.

<sup>7</sup> AER Draft Decision, Jemena Gas Networks (NSW) Ltd, Access Arrangement 2020 to 2025, Attachment 6 Operating expenditure, November 2019 Table 6.6.

	<p><b>Conforming capex</b> As per Option 2 above.</p> <p><b>Benefits</b> JGN estimates that the benefits for this option are identical to the benefits of Option 2.</p> <p><b>NPV Analysis</b> The net present value of this option has not been calculated as an accurate estimate of project cost is not available.</p> <p><b>Summary</b> Option 3 will replace JGN's existing customer systems to simplify and streamline customer interactions and improve customer experience. This option is expected to deliver the benefits to JGN's customers as Option 2 but given that JGN cannot reliably forecast the cost of this option, which is expected to be more expensive than upgrading existing systems, this option is not considered viable.</p>																
Options Summary	<p>The table below summarises the quantitative and qualitative differences between the analysed options.</p> <table border="1" data-bbox="359 884 1476 1086"> <thead> <tr> <th></th> <th>NPV \$2018</th> <th>Qualitative Risks</th> <th>Qualitative Benefits</th> </tr> </thead> <tbody> <tr> <td>Option 1</td> <td>\$-193,148</td> <td>Medium</td> <td>None</td> </tr> <tr> <td>Option 2</td> <td>\$-3,682,816</td> <td>Low</td> <td>High</td> </tr> <tr> <td>Option 3</td> <td>N/A</td> <td>High</td> <td>High</td> </tr> </tbody> </table> <p>JGN selects its preferred option by considering the direct differences between the options as expressed in the NPV analysis and indirect or qualitative differences in risks and benefits.</p>		NPV \$2018	Qualitative Risks	Qualitative Benefits	Option 1	\$-193,148	Medium	None	Option 2	\$-3,682,816	Low	High	Option 3	N/A	High	High
	NPV \$2018	Qualitative Risks	Qualitative Benefits														
Option 1	\$-193,148	Medium	None														
Option 2	\$-3,682,816	Low	High														
Option 3	N/A	High	High														
What We Are Recommending	<p>JGN proposes to proceed with Option 2. This enables JGN to meet its regulatory obligations efficiently and maintain its services, and importantly meet its customers' expectations. In addition, Option 2 has the lowest risk of JGN being able to achieve these outcomes.</p> <p>Option 1 does not meet JGN's customers service expectations and is expected to result in a deterioration of services and a reduction in the customer base over time, and Option 3 is more expensive without any certainty of additional benefits.</p>																
Relationship to ICT Capital Forecast	<p>The proposed option for this business case is contained in the ICT Capital Forecast for the 2020-25 regulatory period as the set of projects with IDs ITGG21, ITSE02, ITSE03, ITGF02 &amp; ITSE01.</p>																

2021

2022

2023

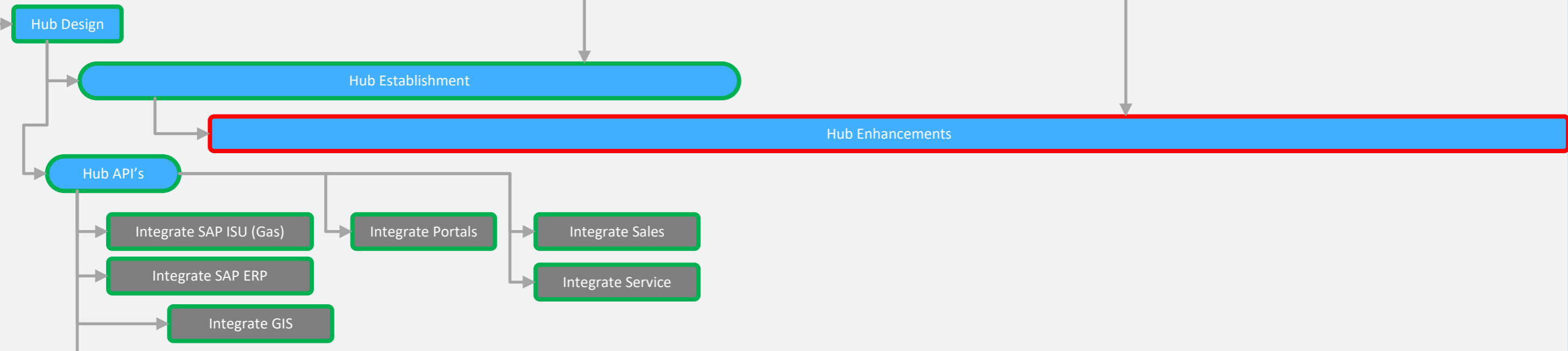
2024

2025

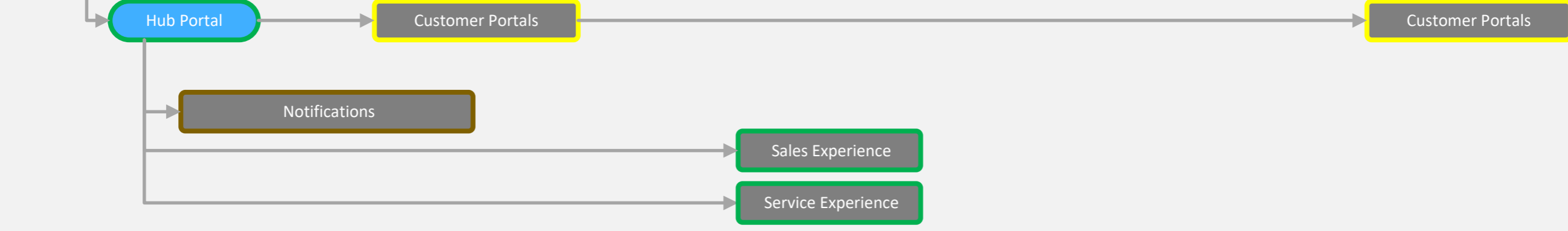
Customer Data Quality



Customer Hub



Customer Experience



New system or process

Changed existing system or process

Cust DQM ITSE01

CX Hub Establish ITSE02

CX Hub Enhance ITSE03

Portal Upgrade ITGF02

Outage Notification ITGG21