

Engineering Justification Paper

Customer and Stakeholder

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2 Introduction

Customers are at the core of our long-standing mission to keep our customers safe and warm by leading the way in energy delivery. By anticipating and responding to all our customers' needs and expectations, we increase our effectiveness and create better outcomes for our business and for society. One of our corporate strategic priorities is to keep pace with the increasing expectations of all our stakeholders as technology, energy and society change.

This paper provides architectural justification to support SGN's proposal to spend £2.5 million over five years starting in April 2021. The scope of this investment covers project activity necessary to ensure that SGN can continue investing in Customer and Stakeholder Experience to further develop our online presence, deliver customer related learning management tools and to improve our service (with particular focus on Vulnerable Customers).

2.1 General Background

Throughout the second half of GD1, SGN were implementing new technologies as part of their award-winning Customer Experience programme. Improvements to Customer Experience were in part delivered by the implementation of new technology: Brochure Website Redesign (SGN), ReciteMe (translation and read aloud technology on the website), eCommerce Website Redesign (Connections), CiTNow (Connections work outcomes video technology), eGain (CRM, Livechat, Social Media Monitoring, 2-way SMS), Connections Plan Dates (Connection appointment booking) and Elgin Roadworks (online customer information portal). Based on the solution types (SAAS, website, video) it is expected that the same level of value can be delivered for broadly similar investment throughout GD2.

We know from our customers and stakeholders, that expectation on what constitutes "good" customer service continues to rise. E.g. In our SGN stakeholder research report, Impact Utilities August 2018, 78% of our Stakeholders expect SGN to utilise the latest technology, yet in the same research, only 38% of our stakeholders believe we are performing well or excelling in utilising the latest technology. The same report and research highlighted multiple areas where our customers identified areas they wanted to be kept informed about.

The three areas our customers tell us we still need to get better are Quality of Work, Timescales and Communication. Although we have performed well over GD1 we can still improve; we gather this insight from customer satisfaction surveys, contact reasons and focus sessions held with our customers every year. Our customers want to know what to expect, when to expect it and how and where to get information; they want this through channels of their choice and at times that suit them. Our customers expect us to keep pace with other companies and offer the service that they are frequently becoming more used to therefore reducing effort for them, investing in technology allows us to do this. We know from the deliberative workshops held in January 2018 with customers that they want us to keep pace with our current levels of customer service.

2.2 Site Specific Background

Customer Experience and Stakeholder solutions are used across all SGN locations.

3 Equipment Summary

To give a sense of scale, our customer service stats are below:

- 5.9 million meter points – 4.1 million south, 1.8m Scotland
- Serving 14 million people / 28% of UK gas users
- 1 million vulnerable customers
- 80% of population in Scotland and 90% of population in South & South-East England
- We visit around 500,000 customers in their homes every year.

In GD1 we implemented several customer and stakeholder specific solutions, to meet increasing demand for improved technology. We also upgraded and maintained our safety critical application estate, to ensure we could continue delivering the service our customers and stakeholders expect (all SGN systems support and underpin our ability to deliver customer service and stakeholder excellence).

The following list outlines customer specific systems we run and maintain:

- New Connections Modelling, CRM and Quotations Systems (SQS, Maximo, CRM)
- Plant Protection Mapping Self Service Portal (LSBUD – Line Search Before You Dig)
- Insight Street Works Management Application
- Elgin Roadworks Road Works Information Website
- SGN Brochure and eCommerce Websites
- ReciteMe Website Translation and Read Aloud
- 10/10 Customer Survey Application
- CitNow Customer Video Messaging for Connections and Alterations Customers
- Connections Plan Dates Customer Booking System
- Critical Emergency Response Systems (Maximo, Agentry, Click Schedule, ESRI)
- Priority Services Register

It is expected investment in GD2 will be used to enhance existing customer and stakeholder specific solutions and to implement new solutions in line with customer and stakeholder expectations.

4 Problem Statement

- As a regulated company SGN have Guaranteed Standards of Performance (GSOP) that we adhere to. To maintain these standards, it is critical that we continue to invest in the right levels of technology allowing us to meet and track our performance against these standards.
- To maintain our CCA Accreditation we will need to continue investing in customer and stakeholder solutions, both pre-existing and new.
- SGN customer satisfaction levels are measured and ranked against the other GDNs. If we are unable to maintain these standards by keeping pace with customer and stakeholder expectation, we can be penalised by the regulator.
- Failure to offer great service to our customers can result in complaints that may lead to Ofgem penalising us, if we fail to handle these correctly and effectively.
- We know from the deliberative workshops held in January 2018 with customers, that they want us to keep pace with our current levels of customer service – it is a medium priority for further investment. Meeting this expectation requires us to continue to invest at current levels throughout GD2.
- In our SGN stakeholder research report, Impact Utilities August 2018, 78% of our Stakeholders expect SGN to utilise the latest technology yet in the same research, only 38%

of our stakeholders believe we are performing well or excelling in utilising the latest technology. Improving perception of our performance in this area requires us to continue to invest at current levels throughout GD2.

Why are we doing this work and what happens if we do nothing?

- If we don't invest in appropriate Customer and Stakeholder technology we will fail to meet the expectations of our customers; this will be detrimental to our customer satisfaction scores, impact our ability to track and maintain our Guaranteed Standard of Performance (GSOP) and increase the volume of customer complaints.
- SGN currently have a customer satisfaction incentive that has a baseline score attached to it. A consequence of failure impacting our customer performance can lead to a loss of up to 0.5% of turnover per annum which equates to approximately £5 million per annum for SGN. We also have a complaints metric whereby if our complaints performance drops below a certain level we can also lose up to £5 million per annum.

What is the outcome that we want to achieve?

Continuing to invest at current levels throughout GD2 would enable SGN to:

- Keep pace with customer and stakeholder expectations.
- Accurately track and adapt to changes in Guaranteed Standard of Performance measures.
- Maintain current levels of customer satisfaction.
- Maintain or reduce current levels of complaints.

How will we understand if the spend has been successful?

Digital solutions can be used as required by our customers within a changing technology landscape and in line with ever increasing customer expectations for technology that matches the experience expected by our customers and stakeholders.

4.1 Narrative Real-Life Example of Problem

Our customer expectations are growing with the speed of advancements in technology. We are now being benchmarked against the experience our customers and stakeholders receive from other industries where they are offered choice in communication channels, offered a choice in when they want to receive a product or service and they also expect a high standard of service. Whilst we would expect our levels of service to be maintained throughout GD2, there are other opportunities to make improvements on how a customer will engage with our services.

Our strategy for GD2, supports managing expectations around Communication, Timescales and Quality. There is an expectation that customers can book their appointments online, that they can find the right information on our website, they can gain quotes by submitting videos and that we will tell them when an engineer is on their way. Whilst we have invested annually in this area, SGN still have a way to go in understanding our customers, why they are calling us, what they are telling us and overall what is important to them. This information will drive the initiatives we implement, so we can proactively target our customers keeping them up to date with important information about gas work in their area.

4.2 Spend Boundaries

This paper covers the implementation of new services and solutions and the enhancement of existing solutions as required, to keep pace with customer and stakeholder expectations throughout GD2.

5 Probability of Failure

SGN are committed to implementing low cost solutions to keep pace with customer and stakeholder expectation. Failure to invest in customer and stakeholder solutions would make failing to meet the needs and expectations of our customers and stakeholders throughout the GD2 period inevitable.

SGN are also committed to preventing failure of IT assets that underpin critical business services. Probability of failure is linked to technology roadmaps as defined by application and infrastructure providers. If we do not maintain our IT estate as contractually* required, applications become end of life, support becomes unavailable and SGN would be unable to meet its regulatory outputs due to critical process and system failures.

*Contracts expect applications to be upgraded prior to reaching the point where probability of failure indicates systems will fail in one of three ways (functional failure, technical failure or security failure).

5.1 Probability of Failure Data Assurance

N/A for IT Assets.

6 Consequence of Failure

The consequence of failure is that we are unable to meet customer and stakeholder expectations associated with implementing new technology solutions, which enable customer and stakeholder groups to be in control of their interactions with SGN in the most appropriate way for them. Failure to keep pace with customer expectations would lead to an increase in customer complaints, resulting in a downturn of our overall customer satisfaction scores.

SGN currently have a customer satisfaction incentive that has a baseline score attached to it. A consequence of failure impacting our customer performance can lead to a loss of up to 0.5% of turnover per annum which equates to approximately £5 million per annum for SGN. We also have a complaints metric whereby if our complaints performance drops below a certain level we can also lose up to £5 million per annum.

Loss of Supply to Customers

Failure to keep pace in our technology impacts our ability to keep customers updated via the channel of their choice. The growing expectation of customers being notified and updated on incidents or interruption to their supply, relies on us having joined up data and the ability to push notifications 24/7. The consequence of us not doing this is, SGN will continue to work in a reactive

way in response to customers contacting us rather than being proactive in our incident management communications.

Safety Impact of Failure

Failure to keep pace in our technology has a significant impact on us delivering a duty of care to our employees and customers ensuring they remain safe, particularly the one million vulnerable customers who rely on us understanding their needs. Continuing to invest in our technology will enhance the seamless link of data, which help to inform employees if they maybe put in a dangerous situation based on the knowledge we have of specific locations. It also informs us about priority customers for whom we need to adhere to Guaranteed Standards of Performance (GSOP) around supplying specific equipment in the event of interrupting their supply.

Environmental Impact

The environmental impact of what we do has an increasing level of attention and focus from our Customers, the General Public, Activist Groups and Governing Bodies. A lack of funding in this area would mean we are unable to amend our systems in response to customer and stakeholder expectations. The subsequent impact of this failure to invest would directly impact our ability to invest in system change, associated with reducing our environmental impact.

7 Options Considered

Baseline

The first option is to do nothing. This would mean not responding to the changing expectations of our Customers and Stakeholders. There would be no investment but SGN would be at risk of not managing customer expectations resulting in a drop in our customer satisfaction scores. We are at risk of a penalty up to approximately £5 million per annum for a drop in our customer service standards and a further £5 million per annum penalty if our complaints performance drops below expectations. This option is disregarded due to the impact on our customer satisfaction and risk of financial penalty.

Option 1

Similar Customer and Stakeholder Solution Investment to that delivered in GD1 i.e. Cloud first, buy not build solutions to keep pace with customer and stakeholder expectations. Based on the changing technology landscape and increased availability of SAAS solutions it is expected that investment in new solutions will be required to be able to keep pace with customer and stakeholder expectations throughout GD2.

Option 2

Increased technology investment to further improve customer satisfaction levels. Build, rather than buy solutions. This option has been disregarded as we know from customer feedback that this is a medium priority and would result in higher costs which our stakeholders do not want.

7.1 Baseline – Do Nothing

The first option is to do nothing. This would mean not responding to the changing expectations of our Customers and Stakeholders. There would be no investment but SGN would be at risk of not managing customer expectations resulting in a drop in our customer satisfaction scores. We are at risk of a penalty up to approximately £5 million per annum for a drop in our customer service standards and a further £5 million per annum penalty if our complaints performance drops below expectations. This option is disregarded due to the impact on our customer satisfaction and risk of financial penalty.

The technical detail of the option

No investment in our technology.

The basis for the cost estimate/unit cost

This is based on no financial investment in this area. However, SGN will be at risk of penalties associated with a reduction in customer satisfaction scores and an increase in customer complaints, due to failing to keep pace with their expectations

The perceived benefits of the option

There are no benefits to this option. Although at first glance there is no investment required, this will not be sustainable to be able to maintain our levels of customer standards over the GD2 period.

Delivery timescales

N/A

Key assumptions made

There will be no mandatory change associated to customers and stakeholders throughout GD2. This would include legislative and regulatory change such as changes to the Priority Services Register and GDPR.

Any other items that differentiate the option from the others considered

7.2 Option 1 – Meet Customer & Stakeholder Expectations

Similar Customer and Stakeholder Solution Investment to that delivered in GD1 i.e. Cloud first, buy not build solutions to keep pace with customer and stakeholder expectations. Based on the changing technology landscape and increased availability of SAAS solutions, it is expected that investment in new solutions will be required to keep pace with customer and stakeholder expectations throughout GD2.

The technical detail of the option

The following table outlines potential areas of investment based on feedback provided by customers and stakeholders throughout the GD1 period.

Investment Category	Description
Learning Management	We will investigate and potentially invest in solutions that further enhance our customer experience training. We will consider techniques, technology and skills that better equip our people and our contractors, to always offer excellent service, ensure our people understand our customers true journey and the key points where they can make the difference.
Online Services	We will investigate and target investment in online solutions that will improve customer and stakeholder experience. Current predictions indicate investment will be required to continually improve our website, ensuring customers can find the information they need easily, we will also look to offer better on-line application services which are easier and faster to use for domestic and non-domestic customers. We will investigate and where appropriate implement timed appointments for reconnection where we have had to switch off supply and customers are unavailable at the time of reconnection. We will also consider developing ways for non-domestic customers to access our maps to show them the distances from our mains to their properties, allowing them to self-serve and quote easier.
Alternative Channels	We will invest in alternative channels for customers and stakeholders to interact with SGN. Current predictions indicate investment will be required to: improve the content and the way in which we communicate to all our customers, outwards and inwards, using all appropriate channels and technologies. Provide better automated channels giving customers and stakeholders faster information and keeping them informed throughout all our works. Provide bespoke communications detailing our works and communicate by best localised method. Improve our digital capability to allow our customers to video stream their requirements to our offices meaning their questions are answered swiftly and effectively
Real Time Information	We will look at the use of real time technology e.g. better use of video to live stream our works allowing customers and our business to quickly see the quality of our finished works and have real-time two-way interactions, avoiding costly repeat visits and inconvenience to our customers. Alternatively, we may invest in enabling our connections customers to track their job status on line, so as they can plan their other works easily, and pick a date that is suitable for them. We will explore the use of IBeacons/push notifications to allow localised customers to know how long our works will take and receive regular updates.

Please note that the areas outlined above are subject to change (as are customer expectations) throughout GD2.

The basis for the cost estimate/unit cost

The basis for this cost estimate is to sustain the same investment that was made year on year in GD1 to keep pace with customer and stakeholder expectations.

The perceived benefits of the option

The benefit of this option is that we were able to maintain current levels of customer satisfaction and complaints throughout GD2. In line with feedback from our stakeholders we are not seeking to drive significant customer improvement through maintaining current levels of spend, but to give customers improved and enhanced ability to contact us and receive information about our services. Investing in the areas outlined above (if priorities don't change) would deliver enhanced customer experience training for all SGN employees, offer better online services, provide choice to our customers in how they access information and how they contact us, enable the ability for timed appointments, provide non-domestic customers with access to our maps enabling the ability for self-service on quotes, provide bespoke communications keeping our customers informed throughout our works and introduce real time information such as track the status of their job or location of their engineer.

Delivery timescales

Change will be delivered throughout GD2 working to a plan to deliver the customers the most benefit.

Please be aware that the investment forecast in this area has been estimated based on past data and experience. Within the GD2 period, each individual change found necessary as a result of customer and stakeholder feedback, will be subject to robust analysis, design and approval processes. Proposed options will be subject to the SGN investment approval process at the point of investment within GD2. This process requires review and approval, of detailed options and cost benefit analysis papers at an appropriate level, (dependent on value and risk) before funding is released. This process provides assurance that internal procedures have been followed and there is evidence to support the recommendation of a 'best value' option for progression.

Key assumptions made

This option assumes that the same level of spend in GD2 as GD1 will enable us to keep pace with our customer and stakeholder expectations.

Any other items that differentiate the option from the others considered

Recommended as the best option to keep pace with customer and stakeholder expectations.

7.3 Option 2 - Exceed Customer & Stakeholder Expectations

Increased technology investment to further improve customer satisfaction levels. Build, rather than buy solutions. This option has been disregarded as we know from customer feedback that this area is a medium priority for investment and this option would result in higher costs which our stakeholders do not want.

The basis for the cost estimate/unit cost

The basis for this cost estimate is to increase the investment that was made year on year in GD1 to keep pace with customer and stakeholder expectations.

The perceived benefits of the option

Although an increased investment would enable SGN to make significant changes to our technology, it was not seen as a benefit by our customers and stakeholders and therefore has been rejected.

Delivery timescales

The investment would be distributed evenly year on year throughout GD2.

Key assumptions made

This option assumes that an increased level of spend in GD2 as GD1 will enable us to keep pace with our customer and stakeholder expectations.

Any other items that differentiate the option from the others considered

This option would benefit SGN in developing our technology, however, would not be a benefit to our customers and stakeholders.

7.4 Options Technical Summary Table

The following table offers a high- level cost comparison for each option. Further detail can be found in the associated CBA template.

Table 1: Options Technical Summary

Option	First Year of Spend	Final Year of Spend	Volume of Interventions	Equipment / Investment Design Life	Total Cost
Baseline - Do nothing	2025	2025	0	0	0.00
Meet Customer & Stakeholder Expectations	2022	2026	20	5	2.50
Exceed Customer & Stakeholder Expectations	2022	2026	20	8	5.00

Please note the costs outlined in the Options Technical Summary Table are based on the following assumptions:

Baseline Assumptions:

- SGN have assumed that we will not be able to maintain current levels of satisfaction if we fail to invest in the solutions our customers and stakeholders expect in GD2. A consequence of failure impacting our customer performance can lead to a loss of up to 0.5% of turnover per annum which equates to approximately £5 million per annum for SGN.
- SGN have assumed that customer complaints and our ability to respond will be negatively affected if we fail to invest in the solutions our customers and stakeholders expect in GD2. A consequence of failure would be a drop in our complaint metric whereby if our complaints performance drops below a certain level we can lose up to £5 million per annum.

Meet Customer and Stakeholder Assumptions:

- The price of software services related to customers and stakeholders will remain broadly the same in GD2 as in GD1 meaning that keeping pace with Customer and Stakeholder expectations throughout GD2 will require broadly the same level of investment as in GD1.
- The effort / resource required to deliver customer and stakeholder solutions will remain broadly the same in GD2 as in GD1 meaning that keeping pace with Customer and Stakeholder expectations throughout GD2 will require broadly the same level of investment as in GD1.
- Customer expectations regarding digital solutions in GD2 will continue to align with current predictions (formed through robust industry and stakeholder analysis activity within the GD1 period)

Table 2: Option 1 (recommended) Cost Summary

Option	Template	Cost Breakdown	Total Cost (£m)
Meet Customer & Stakeholder Expectations	IT Capex	Resources	0.81
		Software	0.44
		Hardware	
		Contingency	
		Total	1.25
Meet Customer & Stakeholder Expectations	IT Opex	Resources	0.81
		Software	0.44
		Hardware	
		Contingency	
		Total	1.25

Table 3: Option 2 (rejected) Cost Summary

Option	Template	Cost Breakdown	Total Cost (£m)
Meet Customer & Stakeholder Expectations	IT Capex	Resources	1.63
		Software	0.88
		Hardware	
		Contingency	
		Total	2.50
Meet Customer & Stakeholder Expectations	IT Opex	Resources	1.63
		Software	0.88
		Hardware	
		Contingency	
		Total	2.50

8 Business Case Outline and Discussion

8.1 Key Business Case Drivers Description

Customers are at the core of our long-standing mission - to keep our customers safe and warm by leading the way in energy delivery. By anticipating and responding to all our customers' needs and expectations, we increase our effectiveness and create better outcomes for our business and for

society. In reflection of this one of our corporate strategic priorities is to keep pace with the increasing expectations of all our stakeholders as technology, energy and society change.

We also know from our customers and stakeholders, that expectation on what constitutes “good” customer service continues to rise. E.g. In our SGN stakeholder research report, Impact Utilities August 2018, 78% of our Stakeholders expect SGN to utilise the latest technology yet in the same research, only 38% of our stakeholders believe we are performing well or excelling in utilising the latest technology. The same report and research highlighted multiple areas where our customers identified areas they wanted to be kept informed about. The three areas our customers tell us we still need to get better are Quality of Work, Timescales and Communication. Although we have performed well over GD1 we can still improve; we gather this insight from customer satisfaction surveys, contact reasons and focus sessions held with our customers every year. Our customers want to know what to expect, when to expect it and how and where to get information; they want this through channels of their choice and at times that suit them. Our customers expect us to keep pace with other companies and offer the service that they are frequently becoming more used to therefore reducing effort for them, investing in technology allows us to do this. We know from the deliberative workshops held in January 2018 with customers that they want us to keep pace with our current levels of customer service.

Table 4: Summary of Key Value Drivers

Option No.	Desc. of Option	Key Value Driver
1	Baseline / Do nothing REJECTED	GSOP failure, customer satisfaction reduced, complaints increased.
2	Similar Customer and Stakeholder Solution Investment to that delivered in GD1 RECOMMENDED	GSOP achieved, customer satisfaction and complaints standards maintained
3	Increased technology investment to further improve customer satisfaction levels REJECTED	GSOP outperformance, customer satisfaction and complaints standards improved

Table 5: Summary of CBA Results

Option No.	Desc. of Option	Preferred Option (Y/N)	Total Forecast Expenditure (£m)	Total NPV	2030	2035	2040	2050
Baseline	Do Nothing / Do minimum	N	0.00	-10.00	-10.00	-10.00	-10.00	-10.00
1	Meet Customer & Stakeholder Expectations Absolute NPV	Y	-2.50	-11.69	-2.79	-4.31	-5.74	-8.19
2	Exceed Customer & Stakeholder Expectations Absolute NPV	N	-5.00	-23.37	-5.57	-8.62	-11.48	-16.38

1	Meet Customer & Stakeholder Expectations NPV Relative to Baseline	Y	-2.50	-11.69	7.21	5.69	4.26	1.81
2	Exceed Customer & Stakeholder Expectations NPV Relative to Baseline	N	-5.00	-23.37	4.43	1.38	-1.48	-6.38

*Please note, to minimise the cost and timeframes associated with maintaining or introducing IT assets related to customer and stakeholder services, our architectural principles and IT strategy advocate a cloud first, buy not build approach. This ensures that the total cost of ownership for any solution is best value for money when comparing options that are available at the point of investment. Our programme and project governance structure will ensure that appropriate business case development and options analysis will be done at the relevant time in GD2 to ensure best value for money when it comes to delivering against feedback that requires SGN to maintain current levels of customer and stakeholder service and that we leverage the availability of new technology to keep pace with customer and stakeholder expectations throughout the GD2 period.

** It is also of note that it is not possible to clearly define exactly how this investment would be utilised in GD2 based on the availability of solutions at the point of requirement. Technology is moving so fast that what may be available now is likely to be fundamentally different to what is available at the point of investment in GD2.

8.2 Business Case Summary

This paper recommends the expenditure of £2.5 million over five years starting in April 2021. The scope of this investment covers project activity necessary to ensure that SGN can continue investing in Customer and Stakeholder Experience as required to keep pace with customer and stakeholder expectations, meet our Guaranteed Standards of Performance and respond to key drivers outlined in section 8.1.

The recommended expenditure of £500,000 per year is consistent with the annual investment we have made each year over the second half of GD1 driving our position to 1st and 4th in the overall customer satisfaction survey results across all the GDNs. In our SGN stakeholder research report, Impact Utilities August 2018, 78% of our Stakeholders expect SGN to utilise the latest technology. Our customers want to know what to expect, when to expect it and how and where to get information; they want this through channels of their choice and at times that suit them. Our customers expect us to keep pace with other companies and offer the service that they are frequently becoming more used to therefore reducing effort for them.

Our areas of focus will be quality of service, communication and timelines. Proposed initiatives include 2-way interactions using the customer's preferred channel of communication, improved training techniques and tools to support quality of service, artificial intelligence increasing speed and accuracy for customers, improved online application service, giving customers the ability to track the arrival of an engineer and online booking for new connections.

The investment outlined in this paper is intended to keep pace with customer and stakeholder expectations throughout the GD2 period, the benefit is that current levels of satisfaction, complaints

and compliance are maintained as such it does not align with the business case areas outlined below other than NPV.

Table 6: Business Case Matrix

	Meet Customer & Stakeholder Expectations	Exceed Customer & Stakeholder Expectations
GD2 Capex (£m)	1.25	2.50
Number of Interventions	20.00	20.00
Carbon Savings ktCO2e (GD2)	0.00	0.00
Carbon Savings ktCO2e /yr	0.00	0.00
Carbon Emission Savings (35yr PV, £m)	0.00	0.00
Other Environmental Savings (35yr PV, £m)	0.00	0.00
Safety Benefits (35yr PV, £m)	0.00	0.00
Other Benefits (35yr PV, £m)	10.00	10.00
Direct Costs (35yr PV, £m)	-9.39	-18.79
NPV (35yr PV, £m)	0.61	-8.79
High Carbon Scenario		
Carbon Emission Savings (35yr PV, £m)	0.00	0.00
High Carbon NPV (35yr PV, £m)	0.61	-8.79

9 Preferred Option Scope and Project Plan

9.1 Preferred option

Similar Customer and Stakeholder Solution Investment to that delivered in GD1 i.e. Cloud first, buy not build solutions to keep pace with customer and stakeholder expectations. Based on the changing technology landscape and increased availability of SAAS solution it is expected that investment in new solutions will be required to keep pace with customer and stakeholder expectations throughout GD2.

9.2 Asset Health Spend Profile

Table 7: Asset Health Spend Profile

Asset Health Spend Profile (£m)						
	2021/22	2022/23	2023/24	2024/25	2025/26	Post GD2
Meet Customer & Stakeholder Expectations	0.50	0.50	0.50	0.50	0.50	Spend profile continues post GD2

9.3 Investment Risk Discussion

Phasing may change based on changes to customer requirements. This will be mitigated by working closely with the Customer and Stakeholder Experience team to manage roadmaps and appropriately plan for change.

There is a risk that the amount we have forecast is incorrect as we have a limited view of future change in this area. The forecast amount in this area has been based on historic data and we have no reason to believe that the volume of change will vary significantly from GD1.

The following table summarises potential impact on spend should customer demand be higher or lower than assumed or implementation complexity be higher or lower than assumed.

Table 8: Capitalisation Sensitivity

	Low	Mid	High
GD2 Capex (£m)	1.19	1.25	1.88
Number of Interventions	20	20	20
Carbon Savings ktCO2e (GD2)	-	-	-
Carbon Savings ktCO2e /yr	0	0	0
Carbon Emission Savings (35yr PV, £m)	0.0	0.0	0.0
Other Environmental Savings (35yr PV, £m)	0	0	0
Safety Benefits (35yr PV, £m)	0.0	0.0	0.0
Other Benefits (35yr PV, £m)	2.0	10.0	10.0
Direct Costs (35yr PV, £m)	-8.9	-9.4	-14.1
NPV (35yr PV, £m)	-6.9	0.6	-4.1

Low case: SGN have applied a reduction of 5% to the capex and costs which could be achieved by applying less rigour to development and testing of new services. Furthermore, an 80% reduction has been applied to the Societal Benefits on the basis that the financial impact of an increase in customer complaints or a reduction in customer satisfaction may be less than the maximum impact of 0.5% of turnover for each area.

Mid case: No changes have been applied.

High case: SGN have applied an increase of 50% to the costs as SGN cannot fix the price that suppliers charge us for devices.

Project payback has not been carried out as part of this analysis due to the effect of the Spackman approach. For a cash-flow traditional project payback period please see scenario 4 of our Capitalisation Sensitivity table.

Capitalisation Sensitivity

Consumers fund our Totex in two ways – opex is charged immediately through bills (fast money – no capitalisation) and capex / repex is funded by bills over 45 years (slow money – 100% capitalisation). The amount deferred over 45 years represents the capitalisation rate. Traditionally in 'project' CBA's the cashflows are shown as they are incurred (with the investment up front which essentially is a zero capitalisation rate). Therefore, we have developed scenarios that reflect both ways of looking at the investment – from a consumer and a 'project'.

The scenarios are summarised as follows:

- Scenario 1 - we have used the blended average of 65%, used in previous iterations of this analysis.
- Scenario 2 - we have represented the Capex and Opex blend for the two networks, as per guidance.
- Scenario 3 - addresses our concerns on capitalisation rates whereby Repex and Capex spend is deferred (100% capitalisation rate) and Opex is paid for upfront (0% capitalisation rate).
- Scenario 4 - this reflects the payback period in 'project' / cash-flow terms and provides a project payback.

We have taken a view of the NPV in each of the scenarios, except for scenario 4, at the 20, 35 and 45 Year points, to demonstrate the effect of Capitalisation Rate on this value.

Table 9: Capitalisation Rate Variation

Scenario	1	2 SGN	3	4
Capex (%)	65	41	100	0
Opex (%)	65	41	0	0
Repex (%)	100	100	100	0
Output				
NPV (20yr PV, £m)	4.78	3.99	5.93	
NPV (35yr PV, £m)	1.17	0.61	2.00	
NPV (45yr PV, £m)	-0.63	-1.03	-0.05	
Payback	12.00	15.00	9.00	15.00