RIIO-ED2 Investment Decision Pack

Customer Omnichannel Platform

Investment Reference No: 37/SSEPD/IT-CUST/IVR

CONTENTS

Definitions and Abbreviations

ADMS	Advanced Distribution Management System
AR	Automated Reality
DNO	Distribution Network Operator
EJP	Engineering Justification Paper
IoT	Internet of Things
IP	Internet Protocol
IVR	Interactive Voice Response
OMS	Outage Management System
PSR	Priority Services Register
PSTN	Public Switched Telephone Network
WFM	Work Force Management

1.   Executive Summary

In RIIO-ED2 we will develop and deploy an ambitious omni-channel strategy across our emergency contact centres; delivering a digitally enabled and connected centre of excellence where customers are able to be served, with the same high standards, regardless of method of contact. This includes a complete upgrade to telephony systems, improvements to digital channels such as webchat, and increased proactive capabilities.

Our omni-channel Strategy will also reach across our Connections, General Enquiries and Complaints business areas, so that our customers across the board will all benefit from an enhanced, tailored, personalised service offering. Where we have new and enhanced LCT and PSR offerings and reporting requirements, this new omni-channel solution will support all new service types.

Part of our plans are to introduce Internet Protocol (IP) based phones. as the national Public Switched Telephone Network (PSTN) system will be phased out (currently scheduled for the end of 2025). It is key that we invest in this IT space early in ED2 to remove any risk to customers when the national Public Switched Telephone Network (PSTN) system will be phased out; otherwise we will be putting customers at greater risk and will not be able to serve or prioritise our most vulnerable customers.   We also want to ensure that we gain efficiency's and act as a responsible lean company to ensure we serve our customers to the highest of standards, including the time in which it takes us to respond, and therefore propose to introduce a new Workforce Management System that will allow us to manage customer Inbound and Outbound traffic in real time and allow us too collate data and analytics to provide continuous improvement for the future.

It's important to note that this will also bring us in line with all other DNOs who currently an omni-channel solution and on-going telephony strategy, which supports the high customer services levels and outputs that we see. SSEN are currently behind in terms of Customer Telephony or Communication channel offerings. Therefore, we will struggle to increase customer satisfaction beyond where it is now, if we are not able to enhance our systems into modern day technology, and currently are restricted in terms of increasing customer satisfaction levels.

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2.   Investment Summary Table

Summary Table			
Name of Scheme / Programme	Customer Omnichannel Platform		
Primary Investment Driver	Trusted and Valued Service		
Scheme Reference / Mechanism or Category	37/SSEPD/IT-CUST/IVR		
Output References / Type			
Cost (CAPEX)	■		
Delivery Year	RIIO ED2		
Reporting Table	C4		
Outputs Included in RIIO ED1 Business Plan			
Spend Apportionment	**ED1**	**ED2** ■	**ED3**

3.   Introduction and Background Information

In RIIO-ED1 we are currently making major changes to our Outage Management System (OMS), replacing a legacy application with an industry standard package that fully integrates with our Distribution Management System. We also introduced many other improvements to our customer contact systems, as well of course full integration with the national 105 system. With PST being phased out by the end of 2025, there is a need to transfer to IP based phones.

IP phones however will offer a number of other benefits, enabling us to further modernise our telephony systems with

our customer contact system, in particular OMS. This will enable several additional features that will enhance customer experience, and speed the resolution of faults, in particular making full use of our Interactive Voice Response (IVR) system. Linked to the facilities being offered in other projects, in particular Tailored Insights, will help with prioritisation of assistance with vulnerable customers. It will also enable us to make best use of any future changes to the national 105 system.

4. Business Plan Fit

This project can be mapped to following strategic themes:

Progress to Net Zero	Safe, resilient and responsive networks	A trusted and valued service to customers and communities	Positive Impact on Society
✓	✓	✓	

5. Optioneering

Our current proposals are best on maximising our RIIO-ED1 investment in both the new OMS system, and the various upgrades to our Telephony systems. However, given the level of industry changes on-going in this area, we will work with our supply chain to ensure that we continue to offer the best value, particularly in regard to customer experience and the protection of vulnerable customers. The modernisation of our telephony system will enable us to deliver an integrated customer experience, to treat customers as an individual, and achieve the personalised service customers and stakeholders have voiced throughout all 4 phases of ED2 stakeholder engagement. We will be able to improve the ease of contact by removing silo's and system inefficiencies. We will also be able to integrate Virtual Assistants for those customers who want to be able to self-serve for a quicker and easier solution.

We also understand that Climate change impacts on storms and weather intensity or frequency is inconclusive and therefore we know we that our customers will be impacted by this. In ED1 due to system limitations we have had to support network storms by applying large amounts of resources to our telephony lines, and sometimes at very short notice. This over the years has become unsustainable from a headcount perspective and the continued pressure on our employees to work long, intense hours, above and beyond their contracted hours, as well as the continuation of this does not support our new fatigue management guidelines, changes to the working time directive, work life balance and the mental health of our employees. The modernisation of our telephony system will also enable us to support customers much more quickly and efficiency throughout adverse weather periods due to the enhancements to self-service and connectivity to other systems such as Power Track, Digital Platforms and Tailored Insights. Creating flexibility and self-serve options through system, will allow us to re-deploy employees into our communities during peak storm periods to help the most vulnerable in their homes, but also balance fatigue management, working time directive rules, work life balance and mental health. It will also reduce the overall cost to serve.

The telephony modernisation strategy is built over 4 years between 2021 and 2025.

While a primary benefit of Telephony Modernisation is to lower our OPEX cost-to-serve customer contact solution, it will also enable improved customer service through provision of faster notifications to more customers affected by network issues, particularly in periods of exceptional events. Currently our Contact Centres receive, on average, circa ▮▮ calls each day. Of these, circa ▮▮ result in human interaction with Call Agents, the remaining circa ▮▮ being dealt with via IVR. Similar IVR capability has already been deployed to the majority of UK DNOs. Comparisons with Northern PowerGrid's Customer Contact Centre have shown that of the circa ▮▮ daily calls received only circa ▮▮ would need to be dealt with by human interaction. Note that these figures only cover connectivity issue calls, and there are others for Connections, General Enquiries and Complaints

Inbound call numbers to our Contact Centres are expected to continue to rise, despite the introduction of additional social media channels since the introduction of the 105-emergency number now allows customers to readily contact us. On an average day, 50% of inbound calls are received through the 105 number, but on a high-volume day that figure can be up to 70%. Consequently, the benefits which can be achieved through improved usage of effective IVR capability become increasingly important:

- Reduced OPEX/cost-to-serve

- Improved customer service experience for SSEN customers
- Call handling process efficiencies
- Broad Measure improvements (currently South only as the North is already at maximum, although the measures may change in RIIO-ED2).
- Bring us in line with all other DNOs who already benefit from Omni Channel Platforms introduced in ED1
- Will allow us to manage much closer LCT volumes and outputs, to ensure we are maximising efficiencies but also identifying and applying improvements where needed
- Will allow us to prioritise PSR and our most vulnerable customers at any time of day

Our current plan is:

- In RIIO-ED1 – Deploy all currently available IVR licensed capabilities

- RIIO-ED2 Phase 1 – Re-platform telephony infrastructure from PSTN to cloud-based service to allow further benefits to be delivered and integrate IVR with ADMS OMS Call Taker.

- RIIO-ED2 Phase 2 - – Deploy IVR Brain/AI/Chatbots capabilities, including:

  - The **automation and robotics**, we are looking at delivering in ED2 will allow customers via telephony, website or social media channels to have a choice around the way in which information is presented back to them via sophisticated algorithms. These initiatives meet the requirements of customers who wish to self-serve or require instant information and updates on interruptions or complaints. This will also create availability within our call centres for our advisors to spend more time with customers who have much more support requirements or complex needs

  - Introduction of a **Workforce Management System** will allow us to manage our employee scheduling, forecast call volumes and actively manage larger volumes of calls during adverse weather conditions "storms"

  - **Divert Priority Service Register** – Ability to identify a (PSR) phone number and divert to a 'specialist team' (using a whisper message to the call taker), so that their specific needs can be quickly addressed.

  - **Introduction of Virtual Agents**

  - **Facilitate new operating models**, as determined from the recent pandemic emergency (i.e. working from home, bringing in emergency call handlers, etc).

  - **Increased IVR capabilities and local management** - that can be managed at a WFM level to facilitate and support an anticipated 70% of customer call contacts, including for Flexibility market queries. This will allow our call advisors to only speak with customer who have a more complex query or our most vulnerable.

  - **Screen Pops and System Linkage**– Link the caller details to customer records, where these are known, and ensure these are available to the customer via their 'Tailored Insight' portal. The effectiveness of linking to customer records will be constrained by the information we hold about customers and we will therefore seek to work with the industry to try and improve customer records and management overall.

- RIIO-ED2 Phase3 – Prepare and plan for AR & IoT

  - **Augmented Reality:** Preparations and plans to deliver augmented reality so that an enhanced version of the "real physical world" is achieved through the use of digital visual elements, sound, or other sensory stimuli delivered via technology to create inclusive options for our customers.

  - **Internet of things:** Preparation and plans to introduce additional accessible options for customers to access "Internet of Things" which will be enabling customers to use physical objects, that are embedded with sensors, processing ability, software, and other technologies, and that connect and exchange data such as, Connected appliances, Smart home security systems, Wearable health monitors and Biometric cybersecurity scanners.

The project will not however be able to address the risk of customers having no reliable method of contacting us during a power outage after PSTN switch off if there are inadequate back-up facilities for the phone networks (either IP or mobile). We have continued to raise this as a matter of concern and hope that a suitable national solution will be implemented.

5.1.1 Alternative Options

Stage 1 of this project is partially to replace the PSTN that will be decommissioned nationally in 2025. Doing nothing is therefore not an option. The only viable alternative (IP phones) has been set out to deliver this necessary work. We believe that it's important to be ahead so that if a suitable national solution is agreed, we have the tools and technology ahead of time to support this change. If we do not obtain the financial sign off to achieve this, when a national solution is agreed, we will not have the investment to be able to support his mid-price control, and this will cause a significant risk.

Stage 2 of this project also takes advantage of the new IP phones to add in many of the requirements our customers have been requesting in our engagements. The Omni-channel communications gives customers the choice as to how they communicate with us. The automation tools also allow us to work more efficiently, and these efficiencies are set out in the Benefits section. The only alternative would be manual management of the communication streams, which would require more staff, and mean that we were unable to meet our customers' expectations in terms of flexibility and convenience of communication. Given the pace of development in this area, however, the market will be re-examined throughout the project lifecycle to ensure the best value solutions at that time are chosen for delivery.

6. Stakeholder Evidence

We have conducted 4 phases of Engagement throughout the ED2 business planning stage and have captured Customer and Stakeholder feedback and desire to have unified communications, using many channels (voice, social, text, etc.) to contact us. Many customers have questioned why we do not have these capabilities already and why they are left behind.

Whilst many customers prefer using social media as a method of communication, a significant number still prefer, and in some cases rely on, voice. They also wish those communications to be an efficient as possible. This would include immediate status updates when calling us about an outage in their location or being routed to the correct team when calling about other matters. Having effective voice communications that are integrated with other systems will be vital. The need to replace the legacy PSTN system is therefore a good opportunity to make these improvements our customers wish to see.

More details of overall stakeholder engagement are set out in the ***Digital Investment Plan (Annex 5.2).***

7. Analysis and Cost

Costs have been built up using a bottom up approach and have been based on the best currently available solution. However, IT is a rapidly changing area, so the market will be re-examined prior to delivery, and the best value option to meet the requirements set out above will be chosen. The project has been assessed over a 5-year lifecycle, with both Opex and Benefits equated for that operational period, as IT solutions often need updating after 5 years. NPVs of both 5 and 45 years have therefore been quoted below.

7.1 Cost Profile

This project has the following cost profile, and as this is a major upgrade will be delivered as a waterfall project for Phase 1 and iterations in Phase 2. The 'alternative' option only covers the additional contact work that will occur in ED2

(due to more connections, queries about EV, etc.): it does not cover the replacement of the PSTN system (which is well over 50% of the cost of this project). Because the core IP system that replaces the PSTN system includes many of the facilities being used to deliver the efficiencies, it is impossible at this stage to separate out the PSTN replacement and enhancement costs in a meaningful way. The replacement system will be the subject of a tender, and the additional efficiency elements will be checked at this stage to ensure they still offer value. The full build-up of costs is contained in the ED2 IT Investment Plan (Non-Op Capex) Cost Estimate spreadsheet.

	Total £'M	2023/24 £'M	2024/25 £'M	2025/26 £'M	2026/27 £'M	2027/28 £'M
CAPEX	■	■	■		■	■
ED2 OPEX	■			■	■	■
ED2 Benefits	■			■	■	■
5 Year OPEX	■					
5 Year Benefits	■					
NPV – 5 Year (Recommended Option)	■					
NPV – 5 Year (Recommended Option)	■					
NPV – 5 Year (Partial Alternative Option)	■					
NPV – 45 Year (Partial Alternative Option)	■					

7.2   Benefits

7.2.1   Financial Benefits

Benefits are shown for the first 5 years after the project is implemented.

	Total	Year 1	Year 2	Year 3	Year 4	Year 5
Move to Robotic Process Automation will mean a yearly reduction of 2 FTE (SS03 rate) from current scheduling team	■	■	■	■	■	■
Move to Robotic Process Automation will mean a one-off reduction of 5% of workforce (6.5 FTE, SS03 rate)	■		■			

	Total	Year 1	Year 2	Year 3	Year 4	Year 5
Natural Language Processing will enable 100% of 'out of remit' calls to be handed off. This is based on ▇ for each call and ▇ calls handed off a year. (5 FTE, SS03 rate)	▇	▇	▇	▇	▇	▇
Storm overtime cost saving (storm calculations made up of four parts based on actual costs over the past 3 years)	▇	▇	▇	▇	▇	▇

There may be other efficiencies gained in the call taking function that will mitigate some of the need to employ additional resources to cater for the increased enquires that will arise as we move into Flexibility markets. These will become evident during the project lifecycle.

7.2.2   Non-Financial Benefits

The prime non-financial benefit is the ability to service our customers after PSTN switch off.

We also expect these changes will make some improvements to both Customer Minutes Lost and to Customer Experience. However, as any improvements would be difficult to quantify at this stage, especially as we are still making improvements in RIIO-ED1, we have not monetised these in this project.

7.2.2.1   Foundation to other Projects/Initiatives

The Digital Comms initiative will deliver the Full IP phone systems for all our currently PSTN served offices and depots where necessary.

7.3   Key Assumptions

We are assuming that there will be suitable back-up facilities in the national communications systems to enable our customers to contact us in the case of an outage once the PSTN system is switched off. At present some of our customers report that they only have a mobile signal for a matter of minutes after an outage, and this is a major concern, particularly regarding vulnerable customers.

The current programme and costings assume that all planned RIIO-ED1 system changes will be complete before the start of RIIO-ED2. If some of the current planned application changes are not completed, this will increase the complexity, and hence cost and timescale, of this project.

7.4   High Level Dependencies

In order for us to provide the full value to customer, such as ensuring any contact made with them is available through their personal portal, there will need to be national agreements as to how customer details are recorded and transferred between market participants. At present it is generally not possible to track customers through industry facilities such as dataflows.

7.5   Deliverability & Risk

Our *Ensuring Deliverability and a Resilient Workforce (Chapter 16)* describes our approach to evidencing the deliverability of our overall plan as a package, and its individual components. Testing of our EJPs has prioritised assessment of efficiency and capacity, and this has ensured that we can demonstrate a credible plan to move from SSEN's ED1 performance to our target ED2 efficiency. We have also demonstrated that SSEN's in house and contractor options can, or will through investment or managed change, provide the capacity and skills at the right time, in the right locations. This assessment has been part of the regular assessment of our EJPs, IDPs and BPDTs. Our *Deliverability Strategy (Annex 16.1)* and *Supply Chain Strategy (Annex 16.2)* are included in the Business plan Submission.

Our deliverability testing has identified a major strategic opportunity which is relevant to all EJPs.

*   In ED2 SSEN will change the way Capital Expenditure is delivered, maximising synergies within the network to minimise disruptions for our customers. This is particularly relevant for a Price Control period where volumes of work are increasing across all work types.

*   The principle is to develop and deliver Programmes of work, manage risk and complexity at Programme level and to develop strategic relationships with our Suppliers and Partners to enable efficiency realisation.

8.   Conclusion

This project delivers on completing a mandatory transition from PSTN to IP Telephony, currently scheduled for 2025. The change to IP phones will enable SSEN to deploy enhanced technology that will allow for a Customer and Stakeholder driven omnichannel experience. For our customers that will bring them to the same service level experience as all other DNOs, given that SSEN are a price control behind other DNOs in terms of customer communication and multi-platform user experience, both in reactive and proactive communication.