

RIIO-ED2 Investment Decision Pack

Work Management 2

Investment Reference No: 42/SSEPD/IT-NLR/WAM2



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Definitions and Abbreviations

BPDT	Business Plan Data Table
CAPEX	Capital Expenditure
CEG	Community Energy Group
DER	Distributed Energy Resources
DG	Distributed Generation
DSO	Distribution System Operator
EJP	Engineering Justification Paper
EV	Electric Vehicle
FTE	Full Time Equivalent
GIS	Geographical Information System
HR	Human Resources
IDP	Investment Decision Pack
LCT	Low Carbon Technology
NPV	Net Present Value
ODIF	Output Delivery Incentives - Financial
OPEX	Operational Expenditure
WAM	Work and Asset Management

1. Executive Summary

Building on our RIIO-ED1 investments in industry leading Work and Asset Management (WAM) and Geographical Information System (GIS) applications, in ED2 we will join these systems to our other core applications to have a single integrated platform for the management of all works. The platform will link to our Finance and HR systems, giving granular cost and volume details for all of our works. The package will also incorporate the latest Streetworks management tools and be linked to national systems.

2. Investment Summary Table

Summary Table			
Name of Scheme / Programme	Work Management 2		
Primary Investment Driver	Positive Impact on Society		
Scheme Reference / Mechanism or Category	42/SSEPD/IT-NLR/WAM2		
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-ED2 we intend to extend the on the base built in RIIO-ED1 to include all internal works and scheduling. This would include:

- Operational and Capital works undertaken by our own staff, including:
 - Maintenance and repairs
 - Surveys
 - Outage management
 - Connections
- The details of works optioneered by our teams
- Outline details of other capital works
- Information on DER's and other flexibility resources connected to the system
- Estimating and Contract Management facilities
- Schedules for all future works, including planned outages
- Access to asset, work and related information held in complementary systems, such as:
 - Outage Management.
 - Access to asset, including Wayleaves and related constraints (see Linear Assets project).
 - Environmental and similar information needed to ensure all works are compliant.



The tool(s) would be fully accessible in our offices, depots and in the field (see our Fieldwork project for more details of mobile working), with facilities to allow staff to work for limited periods off-line without any loss of core function. As such it will build on the systems, we implemented during the pandemic to limit the need for staff to travel to offices and depots, both increasing efficiency and reducing waste. It will be accessible to any authorised staff through our Business Automation tools. The information from this system would also be made available to our external stakeholders via the Open Door and related projects, subject to appropriate Data Triage.

The platform will include a works management system for Streetworks that will provide a central point for all data related to street work charges and scheduling for reinstatement, along with associated reporting for the annual OFGEM return. This facility will be linked to the national systems.

Integration to the GIS platform will allow users to view work on a geographical representation of the network, and a link to our HR system (■■■) will enable access to assess information for all staff allowing scheduling of work based on resource pool available.

This system will not only ensure that all of our works are coordinated across our business, with appropriate prioritisation of resources deployed, but will also help our supply chain to deliver offer value through better visibility of the forward work programme.

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

Building on our RIIO-ED1 investment on a completely new Work and Assessment Management system (WAM, which uses ■■■), this project will add a number of additional value-add functions. The system will be fully linked to our Human Resources systems so that staff details including skills, availability and, most importantly, authorisations are always correct. It will be the major access to assess information for all staff, with links to survey and asset health information. It will not hold granular details of work undertaken by our contractors, as it would be uneconomic to expect them to use our systems to manage their works, however it will hold the core details of works so that all works on our assets are coordinated. It will also hold details of all projects, and link to our corporate accounting system to be able to deliver full Enterprise Resource Planning (ERP), and hence enable Commercial Management of projects. This single 'tool' (i.e. the integration of WAM and ERP) will both enhance our ability to efficiently deliver our portfolio of works, and also enable our supply chain to offer better value through advanced knowledge of all of our works. The toolset will also incorporate estimating, and management of high volume, low value contracts, including frameworks.

The changes will also include the information management of projects. It will be linked and aligned with our core Advanced Distribution Management System (ADMS), so that details of any outages, planned or unplanned, are available to staff. It will also be linked to the Inventory Management System, which in turn will be linked to our Finance and Procurement systems (Human Resources and Enterprise Resource Planning), enabling automated ordering of 'low stock' items. It will be available to our field staff, and to our supply chain (through our Tailored Insights project).

Overall, the system will deliver:

- A clear future programme of work available to all our staff and supply chain,
- Greater efficiency, through coordination of all works in a single system,
- Effective Planning and Scheduling across all workstreams
- Near real time links with the national Streetworks facilities,
- Commercial Management of all projects and contracts (including high volume, low value),
- Estimating facilities, to ensure efficient and consistent costing of all works,
- Information on subsea assets to provide better insights into why subsea cables fault, enabling proactive strategies to be established (see our Linear Assets project)
- Information about any Distributed Energy Resources (DERs) connected to the system, and how these will be managed during works.
- Increased accuracy of time recording, plant and materials used, greatly aiding planning and estimating of future works, both operational and investment,
- Incorporation of our standards and processes into the system, so that these are easily available to all staff undertaking work,
- Greater transparency about our future work programme for Stakeholders (through the Open Door and Tailored Insights projects), subject to Data Triage.

We will deliver this work in conjunction with our supply chain. At present it has been assumed that the work will simply build on the RIIO-ED1 investments, however we are considering Software as a Service (SaaS) options and, given the pace of development in the area, will ensure that we continue to examine the marketplace to use 'best of breed' options that offer better value.

5.1.1 Alternative Options

The purpose of this project is to maximise some of our ED1 investments to deliver more efficient working. The alternative would be to continue with the systems that exist at the end of ED1 (i.e. 'do nothing'). However, that would negate the benefits set out in our Benefits section.

This project has been estimated based on maximising the return on our ED1 investments. However, given the pace of development in IT solutions, the market will be re-examined at the project commencement to ensure the best value solutions at that time are chosen for delivery.

6. Stakeholder Evidence

From our ED2 customer priority surveys ‘providing an electricity network that is efficient and responsive’ was ranked as the 2nd most important priority for consumers, only behind ‘delivering value for money services’. In general, stakeholders communicated that the reliability of the network is increasingly important due to the growing dependency of consumers and businesses to have a constant and consistent supply of energy. Restoring electricity supply as quickly as possible in the event of a power cut was ranked as the most important of the priorities tested in the ED2 consumer priorities survey related specifically to a ‘safe, resilient and reliable network’. Our Work Management 2 changes are fundamental to delivering these outcomes.

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 solutions. 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 projects 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 will be delivered as a series of iterations. The alternative to this project would be to do nothing, which would negate the benefits. The CBA therefore only has one option (the NPVs of ‘doing nothing’ would be zero): it is likely that the solution, and hence benefits, would last for longer than 5 years, so the NPV below is considered conservative. 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)	■					
NPV (45 Year)	■					

7.2 Benefits

7.2.1 Financial Benefits

The benefits will commence once the project goes live.

	Total	Year 1	Year 2	Year 3	Year 4	Year 5
A Fixed Penalty Notice is paid to discharge the risk of prosecution for offences under the New Roads and Streetworks Act 2004. The new system will reduce the occurrence or FPNs. The 2023/24 cost is ■ rising yearly at 10%.	■	■	■	■	■	■
Under Section 74 of the New Roads and Streetworks Act 2004 a fee is paid daily when works 'overrun', i.e. exceed the agreed duration. The new system will reduce the occurrence or FPNs. The 2023/24 cost is ■ rising yearly at 10%.	■	■	■	■	■	■
A fine is paid when a Local Authority identifies that our works are non-compliant with the New Roads and Streetworks Act 2004. The system will enable us to monitor works more efficiently (i.e. know which are still operating traffic management). The 2023/24 cost is ■ rising yearly at 10%.	■	■	■	■	■	■
No timesheet required - 10 min saving per day per employee (1200) and 15 min per supervisor per week. Allow 10 minutes/day for 1200 people @ SS04 rate, 50% confidence.	■	■	■	■	■	■
One workorder for job - No duplication (■) all job information stored on one system. Allow 5 minutes saved per job on setting up job in 1 system only, with 100,000 jobs per year @ SS04 rate, 50% confidence.	■	■	■	■	■	■
Avoiding duplication of works in two systems Dispatch - Coordination Centre - Field. Allow	■	■	■	■	■	■

	Total	Year 1	Year 2	Year 3	Year 4	Year 5
12 minutes saved per job on setting up job in 1 system only, with 50,000 jobs per year @ SS04 rate, 50% confidence.						
Avoiding duplication of works in two systems Maintenance Teams Dispatch - Field. Allow Assume 12 minutes saved per job on setting up job in 1 system only, with 15,000 jobs per year @ SS04 rate, 50% confidence.	■	■	■	■	■	■
One system holds all work order information. All information stored within the integrated solution work order. ■ and Electronic Work Pack would not be required. Allow 4 minutes saved per job managing job in the field job in 1 system only, with 50,000 jobs per year @ SS04 rate, 50% confidence. Also allow 15 minutes saved per job on setting up WOs, with 50,000 jobs per year @ SS05 rate, 50% confidence.	■	■	■	■	■	■

There are additional financial benefits that will become evident throughout the project lifecycle:

- Reduction in lead times, travel times. Work Management system enables resources to be used in better geographic and technical terms. Sending the right people to the right place
- Improves management of our workforce, better visibility and deployment of skills to jobs
- Aid to regulatory reporting (speed, accuracy)
- Better data / knowledge / intelligence on our assets > better decision making > reduced cost
- Enhances our ability to employ a more diverse range of employees and better allocate work to them with good understanding of their skills and capabilities (links to Pay and Skills Project and Working Patterns project)
- Reduction of planned outages to customers due to visibility of planned outages by all workstreams
- Efficient and accurate collation of data at the point of work
- The quoting will be more accurate due to visibility of the total Network
- Build on the right skills for the job with in-date authorisations
- Assist in making the right intervention decisions on all of our assets which will ensure we have the best life and value from our current assets, reducing cost whilst building a safe and resilient Network
- Improved planning and scheduling and reduction in travel time will help our drive towards Net Zero whilst the transition to an Electric Fleet is in progress

7.2.2 Non-Financial Benefits

- Improved health and safety due to more information about assets for field staff, in particular asset health and information about connected DERs.

- Improved communication with Stakeholders about the details of future work plans through our Open Door and related projects.

7.2.2.1 Foundation to other Projects/Initiatives

This project can be linked to Data Triage (Open Door), Linear Assets [REDACTED] in ED2.

7.3 Key Assumptions

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

Continual development of the Asset Management system ([REDACTED]) during the remainder of the RIIO-ED1 period, covering all elements up to R3.

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 BPDs. 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

A fully integrated WAM system within SSEN will allow us to schedule and deploy changes in a timely manner along with greater visibility of works and the health of assets within the network. The links to national Streetworks systems will enable better coordination with other organisations. This project will ensure that our ED1 investment in a new WAM is maximised and provides a solid base for our business to support the Flexibility Market whilst continuing to provide a safe and resilient network.