Digitalisation Action Plan

December 2022 Update

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FOREWORD

Digitalisation and data are at the heart of our plans to modernise the energy system and transition to Net Zero. Our role in meeting the UK's ambitious climate change targets is critical for a sustainable, Net Zero future and we must lead by example.

We must both decarbonise and increase energy production to meet the growing demand resulting from the electrification of heat and transport. To meet this demand, we must increase efficiencies through innovation and make informed decisions based on our data.

Since our June 2022 Digitalisation Strategy Action Plan (DSAP) update, we have continued to make great progress on our RIIO-T2 and proposed RIIO-ED2 plans. A deliverability assessment has been carried out to look at our extensive RIIO2 programme to understand the 'what', the 'who' and the 'how' to deliver such an ambitious programme. This exercise has been concluded and we have agreed our deliverability strategy moving into 2023 which covers our resourcing model, our priorities and our delivery methodologies.

Of the six key projects which were due to be delivered within the last 6 months, four have been delivered successfully, with the Open Data project becoming a rolling project facilitating data sharing as and when the need arises, and the Accelerated Loss of Mains Change Programme (ALoMCP) still being embedded into our BAU processes.

We have also accelerated progress in specific areas, flexing to meet the demands of our customers and stakeholders. Three key strategic areas of accelerated focus are:

- Customer Connections
- Data
- Customer Relationship Management

These are explored in more detail on the pages that follow.

Our ambitions continue to grow as we move into 2023, as we gain a greater understanding of the opportunities we have to bring efficiencies to our customers, and the role that digitalisation and data can play in transforming our business, ready to meet our Net Zero targets. We have already mobilised our programme of work, but we recognise that we have a long journey ahead, and we need to be flexible in our approach to respond to changes as they happen.

The bulk of this publication highlights the progress of our initiatives in alignment with our six digitalisation pillars, outlined on page 7.

Keeping our customers and stakeholders at the heart of everything we do is core to our RIIO-2 vision, and we would really value your feedback on our Digitalisation Action Plan and on our overall RIIO-2 Business Plan to allow us to shape our future plans in line with your expectations.

Lynda Ward,
Business Transformation Director
SP Energy Networks

CUSTOMER CONNECTIONS

We recognise that the electrification of heat and transport will bring a significant increase in new connection requests, and therefore we must use innovative ways to meet this demand.

The first half of the year saw us launch our Connections programme of work, enabling a Connections agile squad to progress the discovery phase on the end-to-end process. The following diagram highlights the themes we have targeted to deliver on our connections roadmap

Simplication

Transparency Upfront
Provide clear, revealing information tailored to individual needs, on-line.

Trackable Progress
Allow customers to track their connection online from enquiry through design, acceptance and delivery.

Process Rationalisation
Make our process(es) clear and easily understood. Including ICP & IDNO works.

Supporting Self Service
Offer additional support for customers during the roll-out of our new tools and information services.

Self Service

Intelligent Assessment
Provide tools to enable automated network assessment.

Immediate Assessment
Provide customers with an immediate assessment of their connection request.

Real-time Information
Make network information available, including capacity and constraint analysis.

Supporting Digitalised Self Service
Ongoing support for customers in using the digital suite of tools available.

Timely & Efficient Connections

Agile Delivery
Improve the speed of delivery through intelligent outsourcing and refined processes.

Timescales to Suit Customers
Work to customers timescales for the provision of an offer or connection complete.

Fast Flexibility
Provide technical and commercial alternatives to customers at HV & above in areas of known constraint.

Supporting an Evolving & Competitive Market.
Continuous, agile and iterative stakeholder engagement activities.

During the last six months we have refined these themes and have put forward an improvement plan, covering eight new programmes of work.

These programmes have initiated and are in varying stages of progression. The three programmes marked as system changes are detailed within the next section of the document.

1 Connection Offer Expenses Reduce speculative applications and focus on customers P	**2 Self Service** Investment in onlne solution to determine capacity available and an intemised budget estimate for all LV/HV connections works S	**3 Connections SAP Upgrades** Consolidating SAP upgrades into one program of work for time and cost effective system use for project delivery S	**4 Technical approval review** Ensuring technical and financial governance allows a timely service per RIIO-ED2 commitment P
5 Graphical Design Tool For formal quotations, an end to end design package for more accurate CU driven construction designs and plans S	**6 Operational Reporting** Consolidating individual and team related data (circa six sources) into a single dashboard of performance P	**7 Tactical Training Programme** A formalised training and onboarding scheme for design and delivery O	**8 Standardise Contacts** Standardising our customer journey throughout our customer facing teams O

P Process S System O Organisation — Reduce speculation and waste; Optimise process; Improve performance; New ways of working

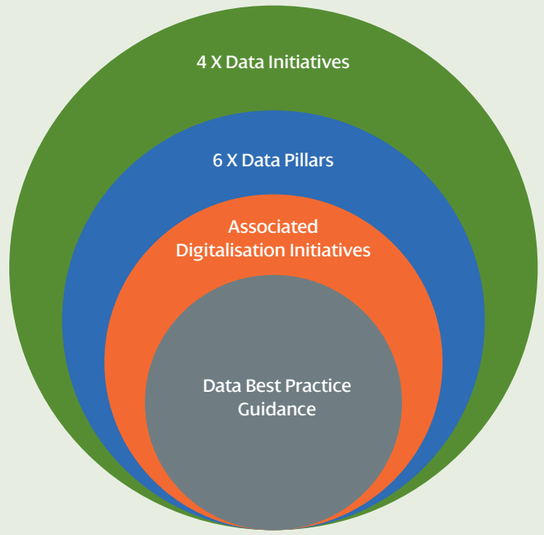
DATA

We are at a critical stage in the industry with regard to Data Best Practice. We strongly recognise that in order to enable the transition to Net Zero, and to realise our ambitions as a Distribution System Operator (DSO), we need to place data, and information, at the core of what we do, and to share this data and information in an efficient and effective manner with our customers and our stakeholders.

To facilitate sharing SP Energy Networks data with our customers and stakeholders, we are currently implementing an Open Data Portal - this is an online platform that will host our "open data" and allow users to view, share and export different datasets relevant to their area of interest. Our plans are for the new platform to "go-live" early January 2023; following this, additional datasets will be published based on customer and stakeholder feedback.

Data Strategy Structure

The six data pillars which form our Data Strategy, and the associated digitalisation and data initiatives all contribute towards meeting the eleven Principles set out in Ofgem's Data Best Practice Guidance. The following diagram illustrates how these are layered to form our Data Strategy Structure:



Big Data & Analytics

As a step toward towards improving our reporting and analytical capabilities, the data platform has been identified as a cloud-based solution to enable our data to be more accessible, remove siloed datasets (where they exist) and allow our analyst community to have greater capacity for deeper insight to our data.

One of the first use cases for the data platform is a solution to produce over 100 operational and regulatory reports in an efficient manner. The solution will enable data to be held in centralised repository with analytics to be performed on this data. Not only will this solution present the opportunity to ingest, store, transform, connect, and present data, it will allow our people to make connections between datasets not previously/ easily viewed together before. This project will be implemented in 2023.

CUSTOMER RELATIONSHIP MANAGEMENT

Since the last Digitalisation Action Plan update in June we have mobilised our Customer Relationship Management (CRM) team and launched our CRM programme of work.

This is a multi-year transformation that will **enable brilliant customer service**, **build a workforce of the future** and **future-proof our business.**

The programme is using **agile delivery** to help SPEN deliver value incrementally, with key deliveries spread across three main releases.

FEBRUARY 2023
- Unplanned Telephony
- Outages

JULY 2023
- Connections
- Complaints (Customer Complaints Tracker (CCT)
- Vulnerability Incentive Processes
- Engagement Management (NRSWA, Street Works, 3rd Party Damage, Knowledge Management)
- General Enquiries

OCTOBER 2023
- Stakeholder Management
- Planned Outages
- Customer Services Back Office (Debt, Insurance, PO's)
- Customer Services Operational Support
- SPT / Transmission

Enable Brilliant Customer Service	**Exceptional Service**	**Consistent Customer Experience** Customer journeys begin and end successfully with minimal or no drop-out. **Customer Satisfaction** Positive customer feedback, translating to strong regulatory performance metrics.	**Omnichannel/Topic Agnostic** Seamless customer experience regardless of content channel or query type. **New Service Offerings** Enablement of additional support services for other customer needs and use cases.
	Proactive and Tailored Approach	**Channel/Language of Choice** Customers are engaged in their channel and language of choice. **Customer Triage** Use AI and automation to add value and support managing through complexity.	**Anticipating Needs/Contact** Utilise predictive analytics/ capabilities to anticipate inbound contact and take action **Maximising human utilisation** Technology to enable repurposing of people to higher value customer interactions.
	Customer Centric Information	**Self Service** Provision of external portals to allow for digital resolution / containment of queries. **Timeliness of Information** Provide regular, relevant data and information (e.g. fault restoration updates).	**Quality of Information** Provide high quality, tailored, and relevant information to customers. **New Data Use Cases** Enable emerging data and use cases that enrich the customer experience.

Build a Workforce of the Future	**Staff with Skills for the Future** – Work blending – Cross-skilling – Engagement/ Retention.	**Future Ways of Working** – Flexibility – Technology adoption/ accelerators – Target Operating Model.	**Evolving Service Culture** – Future service skills, culture and mindset – Customer strategy and thought leadership.	**Release Operational Capacity** – Build business capacity for higher value customer interactions.
Future Proof our Business	**Respond to emerging and evolving regulatory and business landscapes**			

OUR SIX DIGITALISATION PILLARS

Following engagement with customers and stakeholders we have developed six pillars which will be our key areas of focus during the RIIO-ED2 regulatory cycle.

As part of RIIO-ED2 planning, around 300 development opportunities and ideas have been identified, and these have been developed into a series of initiatives under each strategic pillar. These initiatives consider both enhancements to current SPEN platforms as well as new technology and opportunities.

Over the pages that follow, we outline against each pillar and breakdown in detail what we have delivered in the last six months, measures of success, and activities planned for the next six months.

There are no initiatives or costs attributed solely to the "Investing in the Digital Skills of our People" pillar since our people are integral to every pillar.

Investing in our People

We believe that investing in our people will accelerate adoption of digital technology and enable them to identify new and innovative ways of performing their tasks. We will create highly skilled, digitally inclusive jobs in our local communities. We will recognise the value that these skills bring to our organisation and provide exciting opportunities for our people to play their part in a modern digitalised energy system.

We will deliver this through:

- Implementation of a cultural change programme so that our people recognise the importance of data and digital skills, and the value it can unlock for our customers, stakeholders, and our organisation.
- Supporting our people in this transition by equipping them with the right agile and digital skills.
- Increasing awareness for the need of specialist skills to support our transition to Net Zero. External and internal specialists will be engaged to form and deliver specialist training programmes.
- Expanding our graduate programme and recruitment policies to focus on digital talent.
- Use of digital technology such as gamification of training and knowledge-based AI assistants to enhance our learning and development programmes.

The following diagram highlights our six pillars which faciltate the delivery of our RIIO-2 programme.

Using Digital Technologies to Deliver Enhanced Customer Service Single view of the customer, digital channels, self-service solutions with intelligent support agents.	**Optimised Asset and Network Management** Autonomous operation, instrumentation, asset lifecycle management, digital twins, field-based solutions.	**Developing Options to Manage Peaks in Load** Active LV Network, influencing behaviour beyond the meter, DSO, Whole System.
Supporting the Development of New Business Models and Markets Flexibility markets, development of an energy technology sector, driving focus on environmental initiatives.	**Improving Mastery of our Data** Data strategy, open energy data, integrated reporting & analytics, AI/ML.	**Investing in the Digital Skills of our People** Embrace a digital culture, support workforce transition.

USING DIGITAL TECHNOLOGIES TO DELIVER ENHANCED CUSTOMER SERVICE

Digitalisation and the better use of data present a significant opportunity for us to drive the modernisation and decarbonisation of our energy system. We will use new technology to provide full visibility of our customers' decarbonisation journeys, help us to make our own operations more efficient, which in turn will save our customers money on their bills.

Digital technology can significantly improve customer service by providing more choice for our customers and by accelerating the delivery of our services. Moreover, integrated digital solutions are required to enable us to respond to the anticipated increase in customer contact as we support their decarbonisation journey. It also helps us to serve our most vulnerable customers, ensuring they are not left behind by the energy transition.

We will build a single view of our customers and our interactions with them across different services, open new digital channels and develop self-service options for key customer journeys to give our customers more choice. We will implement a customer data portal and build on our strong governance of our vulnerable customer data (Priority Service Register - PSR). Additionally, we are developing a suite of digital tools capable of supporting the anticipated significant increase in volume of connection enquiries. Our workforce will be supplemented with virtual support agents, taking care to ensure that all of our new services and channels are tailored for our vulnerable customer base.

Our digital customer service will be fully integrated with non-digital solutions, ensuring that the digitally disengaged are not left behind.

We will also use technology such as machine learning, artificial intelligence, virtual / augmented reality, robotic process automation, drones.

Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
LV Engine	LV Engine is a flagship innovation project funded via Ofgem's Network Innovation Competition (NIC) to carry out a globally innovative network trial of Smart Transformers to facilitate the connection of Low Carbon technologies (LCTs) whilst representing value for money for our customers. Since our last update in June, we have been progressing the factory tests of Smart Transformers under full power and, also carrying out short circuit tests.	– Successful demonstration of power electronic devices at secondary substations to improve network operation flexibilities. – Preparation for Business As Usual (BAU) integration of the LV Engine solution following the successful field demonstration. – Manufactured and commissioned smart transformers for demonstration of different AC and DC schemes. – Published key learnings captured from the works carried out on design, manufacturing, commissioning and system integration of the smart transformer.	The completion of the factory tests are slightly delayed due to some unexpected challenges, the revised completion date is Q1 2023 with the subsequent commissioning of the first LV Engine substation. Further details can be found on our website: www.spenergynetworks.co.uk/pages/lv_engine.aspx
Faster Switching	The Faster Switching programme completed in October of this year, delivering on its promise to improve consumers' experience of changing supplier by implementing a new switching process. Our metrics have shown of a reduction from over thirty days to averaging less than one week.	Percentage reduction in duration of switching process.	
Consolidated CRM	Build has commenced on our new consolidated CRM platform, covering key customer processes such as faults and emergency, new connections, general enquiries and complaints processes. The new platform will introduce new communication channels and also reduce technology obsolescence within our Customer Services IT estate.	– Delivering exceptional service by creating consistent customer experience across processes and channels. – Develop a proactive and tailored approach for our customers, using their channel and language of choice, and have their needs proactively identified and serviced. – Provide customer centric information, including ability to self serve, as well as timely and accurate information. – Ensuring we are able to respond to emerging and evolving regulatory and business landscapes.	Q1 2023 will see the launch of our new platform, with the Faults and Emergency processes being the first to be delivered, followed by iterative deliveries in Q3 and Q4.

Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
ESCOMS Replacement	Discovery work is now completed on our Land and Planning system (Escoms) which requires replacement in order to ready ourselves for the RIIO-ED2. This platform facilitates the tracking and management of land rights and consents.	– Centralise the storage of our land and planning data. – Improve the tracking of land rights and consents. – Improve planning workflows. – Facilitate enhanced reporting capabilities. – Provide greater visibility and clarity of agreements and assets, with Integration to our core systems. – Create quality controlled, easy to use workflows. – Automation of standard template letters / instructions.	Build of the new solution is due to commence in Q1 of 2023.
Customer Connections - Connections Transformation	Following the discovery phase completed last year, we have initiated two Digitalisation programmes of work targeting solutions within our connections process to improve customer service and the customer experience. This includes investment in self service, internal software tools and changes to our internal processes.	Online self service budget estimator – Internal system upgrades. – Process improvement. – Enhanced customer journey.	Key objectives for 2023 are as follows – Update Connections online application process on 'Getting Connected' pages of SPEN website. – Implementation of eleven SAP change requests and create plan for implementing further twenty in 2023. – Conclude series of workshops to define requirements for optimal connections reporting solution(s), determine solutions and request funding approval. – Collate/create connections knowledge bank and identify best IT solution for storage and easy access to connections knowledge. – Integral to this initiative is the use of an agile delivery methodology. There will be multiple releases over the next few years. Thus, there will always be making smaller incremental improvements rather than a defined end date for delivery of the full scope.
SPEN Website Refresh	Q4 saw the commencement of our SPEN Website Refresh project with an initial review of what's good and what can be improved in order to enhance the experience of SPEN customers and provide them with improved access to SPEN services and information.	– Improve the service by improving access ability to SPEN services via our website.	Q1 and Q2 in 2023 will focus on the following set of objectives; – Full review of SPEN website to review and identify owners for content. – Review of governance structure. – First improvements use case to be applied - updates to Connections Portal to make more customer friendly. – Set up a customer and stakeholder focus group to gain insight into the website changes required.
Connections Discovery - Graphical Design Tool	This project will deliver a tool to facilitate the drawing of designs direct onto our Geographical Information System (GIS) maps, utilising core asset data from our SAP system to automatically calculate the cost of the job. On completion, the design will be automatically uploaded into our core SAP system ready to release for progression of work. The requirements have been written and we are ready to move to the solution stage.	– Provision of graphical design tool for connection designers which integrates with SAP and GIS. – Provision of design data into a design layer in our GIS system. – Pull Compatible Unit (CU) information from SAP to create a full CU design. – Push design information back into SAP to create PM Order structure. – System to auto validate Earth Loop Impedance (ELI), Volt Drop (VD), Thermal Capacity, Fault Clearance, 1ph Step Voltage Change, instead of a having to build this in an external modelling tool.	Q1 and Q2 of 2023 will see the sourcing and the commencement of the build phase for this new solution.

Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
Prosper Discovery and Implementation	Prosper is a reporting solution providing off supply data to internal and external (regulatory) stakeholders. As we move towards a more data driven decision model we want to ensure the solutions we have are robust. A discovery exercise has been carried out resulting in the decision to replace this system. The requirements have been captured, and possible solutions have been identified. This project has been brought forward due to a recognition that this is a priority project.	– Deliver a centralised work management and reporting platform to facilitate the incident tracking of interruptions and faults impacting our customers. – Minimise manual input and duplication. – Provide simple and easy access, whilst also implementing role based access controls. – Perform data insight enabling data led decisioning. – Facilitate system access from all networks locations, both on and off site.	In 2023 the target is to identify the most effective solution(s) to replace Prosper, progress any procurement activities and then initiate build.
ConnectMore	The ConnectMore application was created as a PoC with further enhancements being made during the first half of 2022. ConnectMore delivered an Online EV Connection Cost Estimator enabling users to view where the SPEN electricity network could support EV charge points and provide them with a quotation for their connection. As a result of its success, we have made the decision to move to the next phase and productionise the application and extend its functionality.	– Increase in customers utilising online forms and Connections Customer Portal. – Increase in % of applications that result in acceptance of a quote. Q1 2023.	Q1 of 2023 will see us launch a fully productionised version of ConnectMore, covering all our licence areas and extending the current functionality to provide LV&HV Network optioneering capability for those interested in connecting to SPEN network. We will also work on the scoping of future releases in response to our customer and stakeholder feedback.

Initiatives	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22		Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
LV Engine													
Consolidated CRM													
ESCOMS Replacement													
Customer Connections - Connections Transformation													
SPEN Website Refresh													
Connections Discovery - Graphical Design Tool													
Prosper Discovery and Implementation													
ConnectMore													

OPTIMISED ASSET AND NETWORK MANAGEMENT

Digital technology will significantly increase the productivity of our field operations and support better decision making when planning the work needed on our network. It will play a key role in enabling us to deliver on our commitments to lower our carbon footprint while maintaining a safe and reliable network and reducing the cost of the energy transition to the customer.

We will focus on the development of digital twins to enable better decision making (a digital twin is a virtual representation of a physical object or process that simulates relevant aspects of behaviour to enable forecasting, scenario modelling and optimisation). We will deploy advanced field technology such as wearable technology (i.e., smart technology that can be worn similar to a Google Glass). We will build on automations, such as fault location technology and predictive analytics, to increase network resilience and accelerate our response to power outages. We aim to digitalise our inspection regime using aerial LIDAR and drone footage Image processing technology, using the lessons we learn during our RIIO-ED1 pilot project. And we will optimise and automate our processes for capital project delivery, enabling us to deliver a higher volume of work more efficiently.

Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
SAP Change Requests 2022 (Enhancements)	This initiative commenced in Q3 2022, and will seek to deliver enhancements to our SAP platform providing process efficiencies to our internal processes in readiness for the RIIO-ED2 period. enhancements will be delivered incrementally to release value early. This project has been subject to delays due to prioritisation conflicts, but is now making good progress.	– Enhanced reporting outputs. – Process efficiencies. – Improved end user experience.	The target for the end of Q2 2023 is for all SAP Enhancements to be completed, together with the associated integration requirements.
Mobile Device and Field Strategy	Mobility is an evolving area, with our field force playing a critical role within our business. Work has been kick-started to further develop our mobility strategy and roadmap this year with the primary focus on delivering our RIIO-T2 and RIIO-ED2 commitments. An in-depth analysis phase discovery piece is required assess our current mobility estate against our target position. The initial focus will be on work management, planning and scheduling.	– Definition of scope for Mobility – device and business process focused. – Prioritised roadmap which considers the global model. – Proposed high-level solution/technology architecture to support vendor procurement. – Proposed delivery plan for next phase.	The mobility strategy and roadmap will be created in Q1/Q2 2023. This will ensure a clear direction/alignment is paved around investment and together with delivery of our RIIO-T2 and RIIO-ED2 commitments, it will equip our operational resources with the technology they need to do their job safely, efficiently and effectively.
SPT Networks Asset Risk Matrix (NARM) Tool	This initiative is an improvement and enhancement of our existing CBRM process. The project is well under way with the majority of milestones having been completed. These include system build and set up, Asset Intervention Modelling, Model Versioning and Reporting, NARM RRP reporting and the development of Non-Lead Asset Models.	– Allow asset interventions to be modelled and to calculate the LTRB of the interventions allowing cost benefit analysis to be performed. – Allow SPT to track risk performance against a defined target and be capable of producing outputs to support decision making and regulatory reporting requirements. – Allow for the efficient development of an intervention portfolio which maximises the performance of the business against a set of given criteria. – Provide functionality to enable model versioning and data analytics to support the continuous improvement of SPT asset management functions. This includes the ability to track asset deterioration and review alignment of the modelling with actual asset behaviours.	Q1 2023 will see the implementation of this project. During this period we will review the project delivery, taking cognisance of any lessons learned, ready for the next rollout to our SPM licence area.

Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
Building Information Modelling (BIM)	The BIM programme continues to progress with the ongoing 3D tender design for two of our pilot projects, with a further design just commenced. We have initiated the collation and amendments of the supporting business documents, processes and templates. The review and scoping for 4D construction Scheduling is now underway, as is the Scoping for system interfaces, and the carbon measurement tool as part of the 5D sustainability implementation has been selected.	– Cost savings delivered through more efficient design. – Cost savings through reduction/elimination of variations during construction as design will be more accurate and clashes will have been detected earlier. – Increased accuracy in project costing due to data being available more readily during the project life cycle. – Efficiencies in data collection and management.	BIM is a rolling programme of work and 2023 will see further implementations, with the tooling being embedded within our BAU processes.
Utility Network - ArcGIS Pro upgrade	To meet our RIIO-ED2 commitments we have made the decision to upgrade our GIS systems, ArcGIS Desktop, Web Applications and associated infrastructure to operate with ESRI Utilities Network / ArcGIS Pro. This follows on from the ESRI upgrade project completed in Q2 2022. Work has commenced in Q3 2022 to define the roadmap and implementation route for this upgrade. This upgrade will be intrinsically linked to our mobile strategy, NARMS development, BIM implementation and graphical design tool, whilst also ingesting LiDAR data. This will be presented in a 3D representation of our data. In addition to storing asset data the initiative will focus on linking all of the information/data via a GIS view. In doing so this links closely with the Mastery of Data pillar and associated initiatives.	– Provide a roadmap and implementation route for future GIS development. – Creation of strategy for improved storage and management of SPEN asset data.	Roadmap and implementation route for ESRI Utilities Network/ ArcGIS to be finalised by end of Q2 2023 and implementation commenced.
Process Mining (Faults)	Process mining has been developed for an initial use case of 'Faults' enabling us to turn event data into insights and actions. This is linked into our portfolio of SAP modules with a primary focus on identifying poor execution, waste, and data issues across the Faults process.	– Link processes to performance indicators. – Explore and benchmark process variation. – Identify poor execution, waste, and data issues. – Prioritise actions based on impact to KPI. – Build solutions that resolve execution gaps. – Monitor executions and act in real time. – Align people and actions on common goals. – Send alerts, assign tasks, and automate tasks.	Through the analysis of the Faults process mining data we are identifying process improvements within our core SAP workflow system, and also looking to identify and implement the next use case.
Accelerated Loss of Mains Change Programme (ALoMCP)	The ALoMCP is a national programme, led by NGESO, in conjunction with the ENA to facilitate G59 connected Generation customers to upgrade their Protection equipment to become compliant with changes to the Distribution Code introduced in response to the 9th August 2019 outage event that affected over 1million customers predominantly in the South East of England. In SPEN geographies, the target was to facilitate ~3.4GW of compliance: – 3.58GW of Compliant capacity achieved. – Facilitated 1620 generators to compliance. – Ready to initiate enforcement process as defined by DCRP and Ofgem for sites greater than 1MW. – Changes to our systems are in progress to accept Generator and Protection data collected through the programme.	– SPEN Compliant Generation Capacity - expect to achieve close to 3.6GW of compliance at project close. – Financial Plan – Achievement of projected Costs, Income and Profit Margin. – Enforcement Process - Implementation of enforcement process as defined by DCRP & Ofgem and initiation of more than sites greater than 1MW through the process.	Embed Enforcement process into BAU and continue engagement with NGESO to manage overall system risk.

Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
Compliance Stores Equipment Register Automation	The initiative has been introduced to design, develop and implement a digital test equipment register, fully integrated into core asset systems. This replaces the current manual paper-based solution and enables greater control and management of test equipment by recording details of item quantity, status and location.	– Digitalisation of equipment register and decommissioning of current paper based solution. – Implementation of a fully supported application integrated to core asset management system. – Improved planning capabilities for the testing of quarantined equipment. – Improved control and management of test equipment stock levels, status and location.	The analysis and design phase of this project has commenced in Q4 2022 , with full implementation of a solution planned by the end of Q4 2023.
LV Model Readiness	Since the June update, this project has been split into two initiatives, with the implementation of the LV monitors underway. The details can be found within 'Developing Options to Manage peaks in Load' under LV Monitoring Rollout Programme. The second initiative is yet to start. This will facilitate the collection, analysis, and sharing of this data.	– Online data portal live for public and shared access. – Significant enhancements to network visibility of our LV connectivity model.	The target for 2023 is to review IoT solutions, how these could fit with our current Data platform and agree the platform and data collection strategy going into the RIIO-ED2 period.
SAP Readiness for RIIO-ED2	This initiative is to ensure our work management system, SAP, is set up and ready to capture changes for deliverability and regulatory reporting requirements in the shift from RIIO-ED1 to RIIO-ED2. The initiative is on target for the start of RIIO-ED2. The Master Data review has been completed, RIIO-ED2 requirements defined, system configuration has been completed and business process testing has commenced.	– Ensure SAP is set up ready to capture changes for RRP from RIIO-ED1 to RIIO-ED2. – Create new SAP environment for RIIO-ED2 and successfully transition.	The target for Q1 2023 is to implement all required SAP amendments to accommodate the transition from RIIO-ED1 into RIIO-ED2. For the remainder of 2023 the project will assess and implement any further changes required to comply with RIIO ED2 deliverability and reporting (RRP) requirements.
Condition Based Assessment	This project is now underway with scope and requirements now fully agreed. Overhead Line (OHL) Statutory Inspections and Condition Based Assessments(CBA) are currently completely independent of each other even though they are similar processes capturing OHL asset data. The development of a data loader solution will align the data captured and automatically update our core asset systems.	– Capture data and load into our key asset systems. – Facilitates alignment of CBA and statutory inspections. – Field inspection process efficiencies delivered.	This project is set to be completed by the end of Q1 2023, with further business readiness activities to be planned and implemented prior to go live.
Land Rights Digitisation POC	A Proof of Concept (POC) has been completed during this period to scan and digitise a sample of 500 land records contracts. This has informed our strategy for full rollout, and we will use the lessons learned to assist in delivering the full project.	– Assess and select system for full scale roll-out of land record digitisation. – Transition from paper based land records to fully digital storage system.	Progress tender specification in Q1 2023 and progress with the delivery of the full system during Q2-Q4 of 2023.

Initiatives
Jul-22
Aug-22
Sep-22
Oct-22
Nov-22
Dec-22
Jan-23
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Mar-23
Apr-23
May-23
Jun-23
Jul-23
Aug-23
Sep-23
Oct-23
Nov-23
Dec-23
SAP Change Requests 2022 (Enhancements)
Mobile Device and Field Strategy
SPT Networks Asset Risk Matrix (NARM) Tool
Building Information Modelling (BIM)
Utility Network - ArcGIS Pro upgrade
Process Mining (Faults)
Accelerated Lossof Mains Change Programme (ALoMCP)
Compliance Stores Equipment Register Automation
LV Model Readiness
SAP Cut-over
Condition Based Assessment
Land Rights Digitisation

DEVELOPING OPTIONS TO MANAGE PEAKS IN LOAD

Digital technology will significantly increase the productivity of our field operations and support better decision making when planning the work required on our network. It will play a key role in enabling us to deliver on our commitments to lower our carbon footprint while maintaining a safe and reliable network and reducing the cost of the energy transition to the customer. This will include the development of digital twins to enable better decision making.

We will deploy advanced field technology such as wearable technologies. (i.e. smart technology that can be worn similar to a Google Glass).

We will build on automations, fault location technology and predictive analytics to increase network resilience and accelerate our response to outages.

We aim to digitalise our inspection regime using aerial LIDAR and drone footage image processing technology, using the lessons we learned during our RIIO-ED1 pilot project.

And we will optimise and automate our processes for capital project delivery, enabling us to deliver a higher volume of work more efficiently.

Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
LV Monitoring Rollout Programme	There is a recognition that the rise of LV customers engaging with markets will see more dynamic power flow behaviour. LV Monitoring will be a critical enabler to provide data to use our assets safely and optimally, support flexibility solutions and respond to network faults more quickly. Procurement has just concluded on our selected solution vendors, with Terms and Conditions being finalised.	– Deploy monitoring devices at 7,749 SPD secondary substations and 6,353 SPM secondary substation in addition to monitors being rolled out through additional RIIO-ED2 initiatives. – Volume of installed monitors in line with ED-2 submission measured on an annual basis.	Project initiation and deployment of the system integration (data flows and user interface) during Q1 and Q2 2023.
NCP Rollout Programme	The deployment of Network Controllable Points (NCP) at scale offers an opportunity to improve the network reliability and customer experience, reducing the CI/CML across our customer base in both SPD and SPM. Process established for end to end programme (from a site design to adopted asset which is monitored).	– Roll-out 1,126 NCPs in SPD and 1,027 NCPs in SPM delivered via OHL modernisation and stand-alone installation.	Progress the trial, to assess and understand the most effective method to ramp-up to volumes for RIIO-ED2 delivery.

Initiatives	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23		Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
LV Monitoring Rollout Programme																			
NCP Rollout Programme																			

SUPPORTING THE DEVELOPMENT OF NEW BUSINESS MODELS AND MARKETS

Reaching Net Zero will require alternatives to traditional working practices such as network reinforcement. By adopting an open, collaborative approach across the energy ecosystem we will harness innovation to lower costs for customers, accelerate the low carbon transition and take steps on our journey towards becoming a DSO.

We will focus on the development of flexibility markets and solutions, and actively participate in cross industry initiatives to identify and develop whole system solutions. We will continue to build partnerships with other participants in the ecosystem such as academia, third party organisations and innovators.

Lastly, we will share operational and market data with our customers, stakeholders and market participants through an online data portal.

Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
Environmental & Sustainability - Biodiversity/Natural Capital Mapping	We have completed the trial of the AECOM tool, which facilitates the assessment and capture of biodiversity and natural capital metrics pre and post our site works. Further analysis is underway to import PDF drawings of our SPEN sites, into our GIS system and then AECOM to create habitat maps. We also have a further two programmes running where we are collaborating with SSE and Nature Scot on Biodiversity tools to facilitate habitat surveys before and after project implementations.	– Implement toolsets to carry out natural capital/biodiversity assessment on site works. – Creation of a central data store, and facilitation of data led decisioning based on the analysis of data captured to reduce our future environmental impacts.	Undertake procurement and productionising activities for the AECOM tool, and progress further collaborations on the biodiversity tools.

Initiatives	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23		Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23
Environmental & Sustainability - Biodiversity/Natural Capital Mapping																			

IMPROVING MASTERY OF OUR DATA

Digitalising the energy system and improving access to this growing, rich data landscape will unlock customer and stakeholder benefits and accelerate the transition to Net Zero. Our data is an organisational asset, capable of improving our decision making, operations and service to customers. Sharing our data with external parties will lead to better whole system solutions and new, innovative ways of working.

We recognise the pace of change needed to place data at the core of our operations and are flexible in our approach - working with, and collaborating with, other network operators and wider industry.

Data can improve our decision making, operations and customer services. Sharing data with others will lead to better whole system solutions and innovative ways of working.

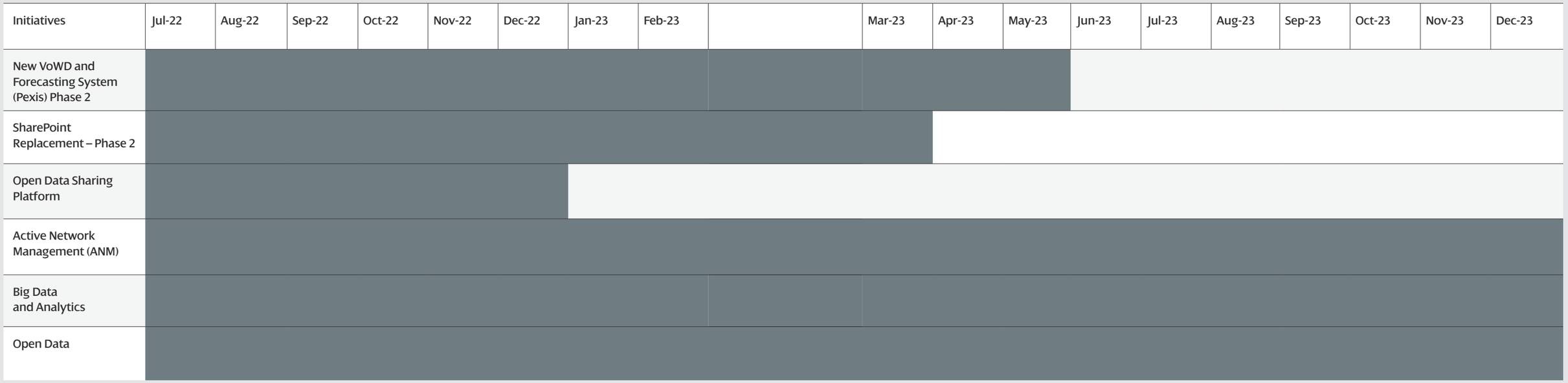
We will introduce enhanced data governance across each of our business areas.

We will deploy fully integrated reporting and analytics using a new big data platform.

And we will implement solutions to comply with the principles from the Data Best Practice Guidance, enabling open data sharing.

Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
New VoWD and Forecasting System (Pexis) Phase 2	This project is delivering a new Forecast and Value of Work Done (VoWD) system to help SPEN licence areas improve how they manage their Major Network Investment & New Connection projects. Phase 1 sprints delivered the 'Value of Work Done' (VoWD) element in the first half of the year. The next set of sprints for Phase 2 are now underway delivering the forecasting, integration and reporting elements.	– Provide greater accounting compliance & live information for more accurate VoWD reporting. – Full set of governance and internal controls integrated into the solution. – Ability to forecast directly into SAP from this system.	Build will continue into 2023, with an implementation date of Q2, 2023.
SharePoint Replacement – Phase 2	The objective of this project is to migrate the SPEN SharePoint 2010 estate onto supportable Document Management System platforms. This project is delivering incrementally, to realise value quicker. 18 sites were migrated during the first half of the year, with 62 having been completed in the second half.	– Successful migration of data from SharePoint 2010 site to SharePoint Online with end customers benefitting from similar functionality on the new platform.	This project is on target to complete all site migrations by the end of Q1 2023.
Open Data Portal	The SP Energy Networks Open Data Portal is an online platform that hosts SP Energy Networks' "open data". The platform will allow users to view, share and export different datasets relevant to their area of interest. The platform is due to be implemented shortly.	– Functional open data platform. – Ability to publish data for external consumption. – SP Energy Networks branded platform. – Allow users to combine datasets for analytics.	Throughout the first half of 2023, we will develop our strategy for what open data will be published on this platform, taking feedback from our customers and stakeholders and amending as required. This platform was selected as it facilitates easy updates, utilising the easy to configure open data interface and API capabilities.
Open Data	Our Open Data platform is the vehicle moving forward for us to facilitate the publishing of new datasets. During the second half of this year our programme has been working on a number of datasets which will be published early 2023.	– Published datasets. – Coordinated approach with other DNOs.	As new requests come to SPEN, or we have new data sets to share, we will continue to publish these on our Open Data portal. This platform was selected as it facilitates easy updates, utilising the easy to configure open data interface and API capabilities.

Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
Active Network Management (ANM)	Active Network Management is a method of managing connections onto the electricity network, which are responsible for connecting generation, like renewables, onto the grid. ANM dynamically monitors power flows and allocates power to the different generators. In the last six months we have facilitated the implementation of two Constraint Management Zones utilising ANM.	– Improve the service we provide to our customers by reducing constraints on connections. More renewable generation will be connected to the electricity network, bringing benefits of £40m to customers. – Facilitate the connection of more zero carbon generation which will contribute to a reduction in CO_2 emissions of 522k tonnes by 2031 - the same amount of carbon created by the consumption of 58m gallons of petrol - and advance the transition to a low carbon economy. – Ensure the Electricity Distribution Network is ready to respond with pace to new customer requirements as we move to a low carbon economy. – Utilise our existing network assets more efficiently, reducing costs for customers.	2023 will see four further Constraint Management zones implemented, with two confirmed for the first half of the year. Additionally the project will also look to develop a new customer portal to facilitate self service functions for the generators within the Constraint Management zones.
Big Data and Analytics	The Azure Synapse data platform and data warehouse has been built and now under full support, ready for our first use case. The Azure Machine Learning environment is nearing completion and will be ready for its first use case in early 2023. We are also assessing solutions for data governance tools for our data mapping and cataloguing activities and are targeting procurement and implementation in 2023.	– Initial elements of the big data / analytics platform technology blueprint deployed. – Initial priority use cases for big data/ analytics platform delivered. – Plan for further use cases developed.	We have three use cases agreed for the Azure Synapse data platform and warehouse which will be initiated early 2023 and we are targeting the procurement and implementation of a data governance tool in the first half of 2023.



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