Update

# Digitalisation Action Plan June 2023





SP Energy Networks

Digitalisation Action Plan

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This Digitalisation Action Plan reflects on the progress we have made on our digitalisation and data initiatives through the first half of 2023 and shares our plans for the next six months. Within this period, the RIIO-ED2 price control commenced, and we have made further progress on the enabling projects which we described in our previous Action Plan update.

Our ambitious RIIO-ED2 program of work has commenced with pace, as we work to deliver our key projects and initiatives for our customers and stakeholders to ensure we contribute to delivering a modernised energy system for the transition to Net Zero.

Lynda Ward Business Transformation Director Now that we have a clearer vision for our Transmission strategy, we are planning to submit further initiatives through the RIIO-T2 re-opener process later this summer. These initiatives will enable the delivery of our commitments for data and digitalisation to align to the emergent opportunities that we see across the Transmission landscape.

Part of our commitment to investing in Digitalisation projects include ensuring all our projects are developed Secure by Design, aligning to our cyber governance and principles. This ensures that the security of our project solutions is protected from the offset. For security reasons these will not be included in the detail below.

In line with ongoing engagement with our customers and stakeholders all planned work is designed around meeting the needs of our communities, both now and in the future, and ensuring that all projects we undertake align to the strategy and benefits outlined in our RIIO-ED2 & T2 business plans. The key pillars of our business plan remain at the centre of our digitalisation strategy and action plan.

Our digitalisation strategy supports the transition of SP Energy Networks (SPEN) to a digital first, data driven organisation, integrating the RIIO-ED2 readiness tasks into business change across all production lines, and balancing ambition with deliverability to ensure we have the right capabilities in place to support the delivery of these initiatives.

We are continuing to invest in the digital skills of our people, and we are already making good progress in driving recruitment for the additional skills we require now, to ensure a continued ramp up in our competence and pace of delivery. We recognise that delivering a significant digital transformation will impact our workforce, business and supply chain and have developed robust plans to support the transition. To achieve this, we have recently aligned our Centre of Excellence, Business IT, and Business Change resources within a single team under one directorate – Business Transformation. We have established a number of Value Stream Teams to align this delivery model with our strategic pillars and ensure an efficient and agile programme delivery.

The last six months have seen a stepped increase in the volume of projects being mobilised and in progress, including the expansion of our Active Network Management (ANM) Portal network to help manage connections from our network to the national grid, dynamically monitoring and redistributing power generators. The deployment of our new Customer Relationship Management system is going well, with the first release now live and further releases continuing through the latter part of this year.

This year will also see further development of the SP Energy Networks Open Data Portal which was launched in early 2023. This is an online platform that hosts our open data and metadata, allowing public users to view, share, and export datasets relevant to their interest areas. The portal can be accessed at the following link: <a href="mailto:SPENOpenDataPortal">SPENOpenDataPortal</a>

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

All updates to our Digitalisation Strategy and our Digitalisation Action Plans are available to view online in a much more user-friendly, digital format and we will continue to evolve this website based on your feedback (spenergynetworks.co.uk/digitalisation). We value your input to ensure we are on the right track to deliver efficiencies for our customers and stakeholders. With this in mind, please contact us with your comments and ideas and we will continue to evolve our plans based on your feedback. You can contact us with your views on digitalisation and data at Digitalisation Strategy Project Information Request.

## **Customer Connections**

#### **Connections Self-Serve Tool**

In the last six months we have developed a new self-serve customer connection budget quotation platform which will commence rollout during summer 2023. This has been piloted with our internal staff over the past few weeks to accelerate the process to provide a budget quotation where a customer has chosen not to use the self-service tool themselves. The platform will be rolled out to external customers, in conjunction with our connections website refresh. This platform will allow customers to identify available capacity on our network and receive an estimated cost for a new single-plot connection, both Low Voltage (LV) & High Voltage (HV).

### **Customer Journey**

In the last six months we have carried out a full refresh of our connections web pages to improve the customers experience and streamline the application process. This project has been developed using agile software development and 11 agile sprints have been successfully delivered to date with the go-live projected in summer 2023 to complement the Connections self-serve rollout. The new website has been built and tested based on customer feedback via an external market research company.

### **Graphical Design Tool**

Over the past six months we have concluded a competitive tender process and are currently carrying out final technical evaluation before the selected product/vendor is appointed. This product will integrate with our GIS and SAP systems to allow our designers to provide quicker, more accurate and more consistent designs to our customers. The anticipated delivery date for the initial phases will be Q4 2023/Q1-Q2 2024.







We are at a critical stage in the industry with regard to Data Best Practice. We 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.

We recently implemented our Open Data Portal, which can be freely accessed by all customers and stakeholders from our website. The Open Data Portal is our centralised repository for data that we will share, allowing users to easily search our open data catalogue, along with providing detailed metadata and the ability to consume our data via an API.

Our initial focus on the implementation of our Open Data Portal has been to create a central repository which contains key data sets which are representative of the requests we have received during the last two years, as well as datasets published to meet our operational data sharing commitments made under the ENA's Open Networks Project. However, we recognise that this is only the start of the journey. We look forward to working with our customers and stakeholders throughout the RIIO-2 Price Control period and beyond to identify enhanced data sharing opportunities.

#### **Big Data and 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.

Data use cases are developed on this platform through the implementation of pipelines to extract data from source systems, the enrichment of data, ingestion into the data lake, development of analytical functions and presentation of information to data consumers. Use cases can be standalone or can combine data from multiple sources in order to provide deeper and richer analytics.

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 enables data to be held in centralised repository with analytics to be performed on this data. Not only does this solution present the opportunity to ingest, store, transform, connect, and present data, it also allows our people to make connections between datasets not previously easily viewed together.

#### **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:



# Customer Relationship Management

Since our last Digitalisation Action Plan update in December 2022, we have made significant progress in the launch of our new consolidated platform for the faults and emergencies processes which includes integration to PowerOn to support incident resolution.

This Salesforce platform also includes utilising leading edge Amazon call handling technology to replace our existing contact centre technology, giving us a fully integrated solution and acting as a key enabler for delivering on our RIIO-ED2 commitments.

The new platform also contains enhanced integration with our smart metering technology, including enabling automatic smart meter "pinging" from our Interactive Voice Response to determine property energisation status.

This first release gives us the core platform from which to build upon, ensuring we deliver our Customer Relationship Management (CRM) vision for our customers and stakeholders, and this is detailed below.

Enable Brilliant Customer Service	Exceptional Service	Cust	sistent Customer Experience omer journeys begin and end succe minimal or no drop-out.	essfully	Omnichannel/Topic Agnostic Seamless customer experience regardless of content channel or query type.				
Build a Workforce of the Future		Posi	tomer Satisfaction tive customer feedback, translating ng regulatory performance metrics.	to	New Service Offerings Enablement of additional support services for other customer needsand use cases.				
	Proactive and Tailored Approach	Cust and Cust Use	nnel/Language of Choice omers are engaged in their channel language of choice. comer Triage Al and automation to add value and	inbound contact and  Maximising human  Technology to enab	alytics/capabilities to anticipate d take action utilisation le repurposing of people				
	Customer Centric Information	Self Prov resol Time Prov	Service ision of external portals to allow for lution / containment of queries. cliness of Information ide regular, relevant data and information 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.				
	<ul> <li>Staff with Skills for the F</li> <li>Work blending</li> <li>Cross-skilling</li> <li>Engagement/ Retention</li> </ul>		<ul> <li>Future Ways of Working</li> <li>Flexibility</li> <li>Technology adoption/ accelerators</li> <li>Target Operating Model.</li> </ul>	– Future ser culture an	d mindset strategy and thought	- Build business capacity for higher value customer			
Future Proof our Business	Respond to emerging and	d evolvin	g regulatory and business landscap	es					

# Our Six Digitalisation Pillars

As detailed in the December 2022 update, our digitalisation strategy is supported by six key pillars that have been developed following customer and stakeholder engagement, to help us to measure and deliver success.

Over the following pages of this document we specify each project and its progress in alignment with its pillar, breaking down:

- 1. what we have delivered in the last six months,
- 2. measures of success, and
- 3. 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, given that these are integral across every pillar.

## Our Digitalisation Strategy Facilitates 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, helping 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 are creating a single view of our customers and our interactions with them across different services, we are opening new digital channels and developing selfservice options for key customer journeys to give our customers more choice. We are implementing a customer data portal and building 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 is being supplemented with virtual support agents, taking care to ensure that all our new services and channels are tailored for our vulnerable customer base.

Our digital customer service will be fully integrated with non-digital solutions, however 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, and drones.

Initiatives	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 Engine													
Consolidated CRM Release 2													
ESCOMS Replacement													
Customer Connections  – Connections Transformation													
SPEN Website Refresh													
Connections Discovery  – Graphical Design Tool													
Prosper Discovery & Implementation													
Faster Switching													
				<u> </u>									













Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
LV Engine	<ul> <li>The components of LV Engine solution have been manufactured and are undergoing integration testing, due for completion in Q2.</li> <li>Completed data integration to existing SPEN LV platform design, initiation of implementation and testing and testing phases.</li> </ul>	<ul> <li>Successful demonstration of power electronic devices at secondary substations to improve network operation flexibilities.</li> <li>Preparation for Business As Usual (BAU) integration of the LV Engine solution following the successful field demonstration.</li> <li>Manufactured and commissioned smart transformers for demonstration of different AC and DC schemes.</li> <li>Published key learnings captured from the works carried out on design, manufacturing, commissioning, and system integration of the smart transformer.</li> </ul>	<ul> <li>Installation and commissioning of LV Engine at our trial sites.</li> <li>IT data integration completion and performance monitoring, due for completion in Q4.</li> </ul>
Faster Switching	<ul> <li>All installations within the Faster Switching programme completed in Q1 2023.</li> <li>All relevant disaster recovery associated with this project scheduled to complete by end of Q2 2023.</li> </ul>	Percentage reduction in duration of switching process.	Rollout of Disaster Recovery Cycle 4 in Autumn 2023.
Consolidated	<ul> <li>New CRM and Telephony solution for Customer Service launched in Q1 2023.</li> <li>All calls and SMS messages are now delivered using the new telephony solution and customers requiring assistance with faults and emergency processes are being served using the newly implemented platform.</li> <li>Development work has commenced on the next set of customer processes to be delivered, while enhancing and improving the faults and emergency workflow based on agent and customer feedback.</li> </ul>	<ul> <li>Delivering exceptional service by creating consistent customer experience and seamless customer experiences across processes and channels.</li> <li>Develop a proactive and tailored approach for our customers, using their channel and language of choice, and have their needs proactively identified and serviced.</li> <li>Provide customer centric information, including ability to self-serve, as well as timely and accurate information.</li> <li>Ensuring we can respond to emerging and evolving regulatory and business landscapes.</li> </ul>	Delivery of remaining key Customer Service processes:  Q3: General Enquiries; Engagement Management; Stakeholder Management; Planned outages; and Customer Service back-office and operational support processes.  Q4: Connections and SP Transmission customer service processes; and decommissioning of legacy IT applications.
ESCOMS Replacement	<ul> <li>Designed a replacement for our Land and Planning system ESCOMS which facilitates the tracking and management of land rights and consents.</li> <li>Solution development will be undertaken in Q3 2023, with implementation scheduled for Q4 2023.</li> </ul>	<ul> <li>Centralise the storage of our land and planning data.</li> <li>Improve the tracking of land rights and consents.</li> <li>Improve planning workflows.</li> <li>Facilitate enhanced reporting capabilities.</li> <li>Provide greater visibility and clarity of agreements and assets, with Integration to our core systems.</li> <li>Create quality controlled, easy to use workflows.</li> <li>Automation of standard template letters / instructions.</li> </ul>	New solution to be built during Q3 with delivery to be completed Q4.











Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
Customer Connections	<ul> <li>Q1 and Q2 of 2023 saw the sourcing and the commencement of the build phase for this new solution.</li> </ul>	<ul> <li>Online self service budget estimator.</li> <li>Process improvements.</li> <li>Enhanced customer journey.</li> </ul>	<ul> <li>Customer Journey</li> <li>Implementation due Q3 2023, enhancement phase due to be delivered by the end of Q3 2023.</li> </ul>
<ul><li>Connections</li><li>Transformation</li></ul>		<ul> <li>Internal system upgrades.</li> <li>Increase of customers using online forms and Connections Customer Portal.</li> </ul>	<ul> <li>SAP Upgrades</li> <li>Incremental changes have been implemented and will be continued for the next 6 months, due to be delivered Q4 2023.</li> </ul>
			<ul> <li>Connections Self-Serve Tool</li> <li>Single plot connections will be part of the implementation of the new online customer journeys.</li> </ul>
			<ul><li>Variations &amp; Refunds</li><li>Phase 1 to be implemented by the end of Q4 2023.</li></ul>
Connections Discovery – Graphical Design Tool	<ul> <li>Full requirements collated across various internal stakeholders and signed off.</li> <li>Pre-tender process and Invitation to Tender issued to market.</li> <li>Technical review of bidder submissions completed.</li> </ul>	<ul> <li>Provision of graphical design tool for connection designers which integrates with SAP and our GIS.</li> <li>Provision of design data into a design layer in our GIS system.</li> <li>Pull job data information from SAP to create a full design.</li> </ul>	Kickoff of blueprint phase in Q3, running to Q4 to develop the overall implementation plan and delivery of a minimum viable product.
SPEN Website Refresh	<ul> <li>Progressing with defining content and structure of website refresh. Key areas progressed to date including updates to Connections Portal implemented with feed in from external customer focus groups and internal stakeholders.</li> </ul>	Improve the service by improving accessibility     to SPEN services via our website.	<ul> <li>Gain additional feedback from customer focus groups to drive changes to website.</li> <li>Plan to be fully defined and agreed for updates based on each section of website.</li> <li>Use cases to be created for each key section.</li> </ul>
Prosper Discovery & Implementation	<ul> <li>Prosper is our power outage reporting system and requires replacement. Following a discovery phase in Q4 2022, a replacement solution has been designed in Q1/Q2 2023.</li> </ul>	<ul> <li>Delivery of a centralised reporting platform to facilitate the incident tracking of interruptions and faults impacting our customers.</li> <li>Minimise manual input and duplication.</li> <li>Provide simple and easy access, whilst also implementing role-based access controls.</li> <li>Perform data insight enabling data led decisioning.</li> <li>Facilitate system access from all networks locations, both on and off site.</li> </ul>	<ul> <li>Undertake development and testing phases of the project.</li> <li>Implementation of the replacement solution scheduled for early Q1 2024.</li> </ul>











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 the Apple Vision Pro). 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 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.

#### Scheduling and Mobility

In the last 6 months we have concluded a competitive tender process for both a scheduling mobility solution and integration partner. This solution will be the primary platform for our connected worker strategy over the course of the RIIO 2 period. In the next six months, the project will focus on the blueprint for design and integration of the solution with our core systems and business process. A phased approach to development and implementation will be undertaken over 2024 and into 2025.

SAP Change Requests (Enhancements)  Mobile Device and Field Strategy  ScottishPower Transmission Network						
ScottishPower Transmission Network						
Asset Risk Metric (NARM) Tool						
Building Information Modelling (BIM)						
ESRI Utility Network  – ArcGIS Pro upgrade						
Accelerated Loss of Mains Change Programme (ALoMCP)						
Compliance Stores Equipment Register Automation						
LV Model Readiness						
Condition Based Assessment						
Land Rights Digitisation						

Optimised Asset and Network Management











Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
SAP Change Requests (Enhancements)	<ul> <li>Progression in the implementation of change requests, Q2 saw 59% of these completed, with the remaining majority in progress to be completed by Q3 2023.</li> </ul>	<ul> <li>Enhanced reporting outputs.</li> <li>Process efficiencies.</li> <li>Improved end user experience.</li> </ul>	<ul> <li>Delivery of the remaining change requests including testing, business change, and putting support model in place.</li> </ul>
Mobile Device and Field Strategy	Global solution for field resource scheduling and mobility selected following a full tender process. Project was initiated in Q1 2023 to implement the solution in SPEN.	<ul> <li>Full design, development, and implementation of scheduling and mobility solution in SPEN.</li> <li>Solution fully integrated with core SPEN platforms.</li> <li>Solution fully aligned and integrated with SPEN business processes.</li> <li>All associated business processes implemented to align with scheduling and mobility solution.</li> </ul>	<ul> <li>Blueprint phase scheduled to be undertaken in series of sprints throughout Q3/Q4 2023, to fully analyse and define the implementation of new solution, integration with core SPEN asset management and customer platforms, required business processes, and change management plan. The output of this phase will be several use cases that will be implemented iteratively over the course of 2024 across SPEN.</li> </ul>
ScottishPower Transmission NetworkAsset Risk Metric (NARM) Tool	Continued progress made on the NARM tool, with most milestones having been completed. These include system build & set up, Asset intervention modelling, model versioning and reporting, NARM RRP reporting and the development of non-lead asset models, and implementation of the project.	<ul> <li>Allow asset interventions to be modelled and to calculate the Long-Term Risk Benefit (LTRB) of the interventions allowing cost benefit analysis to be performed.</li> <li>Allow SPT to track risk performance against a defined target and be capable of producing outputs to support decision making and regulatory reporting requirements.</li> <li>Allow for the efficient development of an intervention portfolio which maximises the performance of the business against a set of given criteria.</li> <li>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.</li> </ul>	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)	<ul> <li>Phase 2 Complete, Phase 3 commenced.</li> <li>Delivered:</li> <li>BIM Interfaces/Integration with existing core systems: detailed engagement with stakeholders and the digitalisation strategy team ongoing.</li> <li>BIM 4 Dimension (4D) Construction Scheduling: Scoping of requirements underway.</li> <li>5D cost management: Cost management software installed and training complete.</li> <li>6 Dimension (6D) Sustainability: Carbon measurement tool selected, installed and training complete.</li> <li>Collaboration with National Grid &amp; SSE: Scope being progressed with all parties. SPEN leading.</li> <li>4 pilot projects in design with 1 at tender stage for civil works.</li> <li>Virtual reality environments and 3D 360-degree renders and flythroughs developed.</li> </ul>	<ul> <li>Cost savings delivered through more efficient design.</li> <li>Cost savings through reduction/elimination of variations during construction as design will be more accurate, and clashes will have been detected earlier.</li> <li>Increased accuracy in project costing due to data being available more readily during the project life cycle.</li> <li>Efficiencies in data collection and management</li> </ul>	<ul> <li>Ongoing engagement with suppliers and contractors.</li> <li>Rollout of training program underway to fully embed BIM 3D modelling process within SPEN, and further dimensions of BIM 7D model.</li> <li>BIM 4D Construction Scheduling: Select interface software and implement 4D scheduling</li> <li>5D cost management: Commence project cost management.</li> <li>Collaboration with National Grid &amp; SSE: Collaboration scope being progressed with all parties. SPEN leading.</li> <li>Further Virtual reality and augmented reality environments and 3D 360-degree renders with flythroughs enhancements to be developed.</li> </ul>
ESRI Utility Network – ArcGIS Pro upgrade	<ul> <li>Roadmap and implementation route approved at all levels.</li> <li>Requirements work has commenced for ArcGIS Utility Network - Minimum Viable Product (MVP), LocatorHub Replacement and Lidar phase 1.</li> </ul>	<ul> <li>Providing a roadmap and implementation route for future GIS development.</li> <li>Creation of strategy for improved storage and management of SPEN asset data</li> </ul>	<ul> <li>Development to be in final stages for the following:</li> <li>UN MVP</li> <li>LocatorHub Replacement.</li> <li>Lidar Integration (1).</li> <li>GeoLocation Tool Discovery.</li> </ul>











Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
Accelerated Loss of Mains Change Programme (ALoMCP)	The ALoMCP was a national programme, led by National Grid Electricity System Operator (NGESO), in conjunction with the Energy Networks Association (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 of August 2019 outage event that affected over Imillion customers predominantly in the Southeast of England. The programme closed in Q1 23.	<ul> <li>SPEN Compliant Generation Capacity – expect to achieve close to 3.6GW of compliance at project close.</li> <li>Financial Plan – Achievement of projected Costs, Income and Profit Margin.</li> <li>Enforcement Process – Implementation of enforcement process as defined by Distribution Code Review Panel (DCRP) &amp; Ofgem and initiation of more than sites greater than IMW through the process.</li> </ul>	<ul> <li>Transfer of enforcement to Business As Usual.</li> <li>Q3 will see the completion of confirmation of Generation &amp; Protection data collected uploaded to SPEN corporate systems.</li> </ul>
	In SPEN geographies, we had a target to facilitate ~3.4GW of compliant generation.		
	<ul> <li>Achieved 3.64GW of Compliant capacity.</li> <li>Facilitated 1637 generators to achieve compliance.</li> <li>Commenced enforcement process for 1MW+ sites.</li> <li>Progressed changes to our systems to imminently consume Generation &amp; Protection data collected through ALoMCP.</li> </ul>		
Compliance Stores Equipment Register Automation	Business Requirements have been completed and approved by stakeholders. Vendor selection has been initiated and scheduled to complete early Q3 2023.	<ul> <li>Digitalisation of equipment register and decommissioning of current paper-based solution.</li> <li>Implementation of a fully supported application integrated to core asset management system.</li> <li>Improved planning capabilities for the testing of quarantined equipment.</li> <li>Improved control and management of test equipment stock levels, status, and location.</li> </ul>	Development, testing, and launch of application by end of 2023.
LV Model Readiness	<ul> <li>Completed review of Internet of Things (IOT) solutions, assessed how these will fit with our current Data platform. Agreement of the platform and data collection strategy going forward.</li> </ul>	<ul> <li>Significant enhancements to network visibility of our LV connectivity model.</li> <li>LV model is ready for NCP rollout programme.</li> </ul>	<ul> <li>An inital IOT solution will be delivered in Q3 2023 to allow the installation of Eneida devices.</li> <li>Commence work on the delivery of full IOT solution, workflow, incident management and visualization toolset to help facilitate the rollout of third-party LV monitors.</li> </ul>











Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
Condition Based Assessment	<ul> <li>Project is underway and following review has seen some changes to scope.</li> </ul>	<ul> <li>Capture data and load into our key asset systems.</li> <li>Facilitates alignment of Condition Based Assessment (CBA) and statutory inspections.</li> <li>Field inspection process efficiencies delivered.</li> </ul>	<ul> <li>Project implementation to be completed by the end of 2023.</li> <li>Training and post-implementation support to commence end of 2023.</li> </ul>
Land Rights Digitisation	<ul> <li>POC stage completed in Q4 2022 with a third-party vendor selected following tender process, to provide scanning and digitalisation service for all Land and Planning paper-based records.</li> <li>This will provide data for core SPEN asset data management and analytic platforms.</li> </ul>	<ul> <li>Assess and select system for full scale roll-out of land record digitisation.</li> <li>Transition from paper-based land records to fully digital storage system.</li> </ul>	<ul> <li>Scanning and digitalisation of all Land and Planning paper records to take place in line with the third-party vendor, commencing Q3 2023.</li> <li>Ensure it is accessible from all mobile platforms.</li> <li>Expected completion Q4 2024.</li> </ul>















# 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, 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 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	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													













Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
LV Monitoring Rollout Programme	Data flows and user interface system integration completed.	<ul> <li>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.</li> <li>Volume of installed monitors in line with ED-2 submission measured on an annual basis.</li> </ul>	<ul> <li>Implement the ability to communicate with remote sensors using the IOT gateway to retrieve data from source devices.</li> <li>Creation of reports, visualisations, and dashboards form data and analytics using the data lake, monitoring devices out of range, and management of device vs network incidents response.</li> <li>Registration of assets in systems to help inspect, maintain, and respond to device incidents.</li> <li>Addition of the remote configurator to remotely manage alarms and upgrades, and to mitigate cyber risks.</li> <li>Deployment program for tracking architecture is being investigated with Accenture to finalise workflows and installations.</li> <li>Updates to IOT gateway for remote device communication from Iberdrola.</li> </ul>
Network Controllable Points (NCP) Rollout Programme	Continue to make progress in streamlining and finding efficiencies in the process.	<ul> <li>Roll-out 1,126 NCPs in SPD and 1,027 NCPs in SPM delivered via OHL modernisation and stand-alone installation.</li> </ul>	Continue ramping up the volume, closing the gaps in the processes and streamlining work as much as possible.









# 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	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													
Flexibility Platforms													













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	Completion of procurement and legal phase, digitisation of SPEN owned land boundaries in progress, including resource procurement to digitalise the primary distribution sites. Land boundaries finalised on GIS in Q2.	<ul> <li>Implement toolsets to carry out natural capital/biodiversity assessment on site works.</li> <li>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.</li> </ul>	<ul> <li>Aim is to have tool to use by Q4 2023, with further ongoing collaborations on the biodiversity tools.</li> </ul>
Flexibility Platforms	Our Flex Power and Piclo platforms are operational and supporting the delivery of flexibility services	<ul> <li>Flex providers fully supported.</li> <li>Flex products continue to evolve to support network requirements.</li> </ul>	Long term platform strategy to be evolved.









# 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 will implement solutions to comply with the principles from Ofgem's Data Best Practice Guidance, continuing to work with the wider industry to standardise our approach. This will include:

- Implementation of our Data Governance platform and establishment of a SPEN data catalogue, enhancing our data governance framework across our full organisation.
- Continuing to build on our Open Data Portal implementation to increase the datasets that we publish in response to stakeholder demand.
- Deploying fully integrated reporting and analytics using a new, big data platform.

Initiatives	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
New "Value of Work Done" (VoWD) and Forecasting System (CMS) Phase 2													
Sharepoint Replacement – Phase 2													
Open Data Sharing Platform													
Active Network Management (ANM)													
Big Data and Analytics													
Open Data													









Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
New "Value of Work Done" (VoWD) and Forecasting System Phase 2	Q1 and Q2 has seen the continuation of the building phase for the PowerApps new product.	<ul> <li>Provide greater accounting compliance &amp; live information for more accurate VoWD reporting.</li> <li>Full set of governance and internal controls integrated into the solution.</li> <li>Ability to forecast directly into SAP from this system.</li> </ul>	<ul> <li>Integration of the source data to the new PowerApps platform to allow the new app to provide accurate contract forecasting per project.</li> <li>This will also provide integrated project reporting for the project manager to help ensure efficient management for project finances.</li> </ul>
SharePoint Replacement – Phase 2	Q1 and Q2 saw the migrations of all SPEN SharePoint 2010 sites classified as "Non-Complex".	Successful migration of data from SharePoint 2010 site to SharePoint Online with end customers benefitting from similar functionality on the new platform.	<ul> <li>Q3 will see the migration of Customer Relationship Management / Connections Model Data, Data Management Returns, and Price Control Reviews.</li> </ul>
Open Data Portal	Our Open Data Portal was implemented in Q1 2023 and can be freely accessed by all customers and stakeholders from our website. The Portal is our centralised repository for data that we will be sharing openly, allowing users to easily search our open data catalogue, along with providing detailed metadata	<ul> <li>Functional open data platform.</li> <li>Ability to publish data for external consumption.</li> <li>SP Energy Networks branded platform.</li> <li>Allow users to combine datasets for analytics.</li> </ul>	<ul> <li>Open Data Portal Transition to Dublin Core Metadata Template</li> <li>We are in discussion with the software providers to provide a metadata template that is fully aligned with the Dublin Core Metadata standards, in line with Ofgem guidance set out in their recent consultation on the Data Best Practice Guidance.</li> </ul>
	and the ability to consume our data via an API.		<ul> <li>Process of ongoing publication of datasets on Open Data Portal</li> <li>Now our Open Data Portal is live we are documenting our Business-as-Usual processes for ongoing management, updates, and enhancement of the Portal. This includes the process for management of live datasets on our Open Data Portal, and the process for incrementally developing new datasets for inclusion within our Open Data Portal.</li> </ul>
			Development of Visualisation Capability
			<ul> <li>Now that we have completed our initial implementation, work is underway to develop the visualisation capability of the Portal.</li> </ul>

Improving Mastery of Our Data











Initiatives	What's been delivered in the last six months	Measures of success	Activities planned for the next six months
Open Data	<ul> <li>Our initial focus on the implementation of our Open Data Portal has been to create a central repository which contains key data sets which are representative of the trends requested during the last two years, as well as datasets published to meet our operational data sharing commitments made under the ENA's Open Networks Project.</li> </ul>	<ul> <li>Published datasets.</li> <li>Coordinated approach with other DNOs</li> </ul>	<ul> <li>We recognise that we are at the start of the journey for sharing data and look forward to working with our customers and stakeholders throughout the RIIO-2 Price Control period and beyond to identify enhanced data sharing opportunities which will be published on our Open Data Portal.</li> </ul>
Active Network Management (ANM)	<ul> <li>Two additional Constraint Management Zones are on track to being delivered during the first half of this year.</li> <li>Works have been continuing developing a new customer portal with discussions held with stakeholders on the system architecture requirements.</li> </ul>	<ul> <li>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.</li> <li>Facilitate the connection of more zero carbon generation which will contribute to a reduction in CO2 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.</li> <li>Ensure the Electricity Distribution Network is ready to respond with pace to new customer requirements as we move to a low carbon economy.</li> <li>Utilise our existing network assets more efficiently, reducing costs for customers.</li> </ul>	<ul> <li>Two further Constraint Management zones are due to be delivered in Q3 2023.</li> <li>Customer portal development works will continue, which includes the related tendering activities.</li> <li>Active Fault Level Management trial due to commence in Q3 2023.</li> </ul>
Big Data and Analytics	The data platform and data warehouse have been built and are now under full support. Work commenced on our first use case for this in Q2 2023.	<ul> <li>Initial elements of the big data / analytics platform technology blueprint deployed.</li> <li>Initial priority use cases for big data/ analytics platform delivered.</li> <li>Plan for further use cases developed.</li> </ul>	<ul> <li>Continuation of work on our first data warehouse use case, with the following two use cases due to be commenced in Q3 2023.</li> <li>Procurement and implementation of our data governance tool to commence at the start of Q3.</li> </ul>

SP Energy Networks

Digitalisation Action Plan

June 2023 Update

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