SP Energy Networks

RIIO-ED2 Digitalisation Strategy

March 2025

Contents

Introduction

This document shares the progress we have made towards the delivery of our RIIO-ED2 digitalisation strategy over the past 2 years. Our strategy focuses on providing the data & digital solutions required to modernise the energy system, enabling the efficient management and operation of the distribution network whilst providing our customers and stakeholders with improved digital experiences.

Our role in meeting the UK's ambitious climate change targets is critical for a sustainable, Net Zero future. 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 digital innovation and make informed decisions based on our data.

Our RIIO-ED2 digitalisation strategy is significant in terms of both scale and technical complexity, representing a truly transformational shift from the digital foundations laid in RIIO-ED1.

By putting data and digitalisation at the heart of our plans, we aim to deliver a modern digitalised energy system capable of improving the services we provide to our customers and stakeholders whilst supporting a Just Transition. We will invest in solutions that enable us to achieve efficiencies and represent value for money for our customers.

Our digitalisation plans will enable us to:

- Use digital technology to deliver enhanced customer service
- Optimise our asset and network management
- Develop options to manage peaks in load
- Support the development of new business markets and models
- Improve the digital skills of our people
- Improve mastery of our data and turn this into insight.

These objectives drive our vision for data and digitalisation and underpin our digital pillars outlined in this document. Complementary to our digitalisation strategy, we have also developed and published our Data Strategy for the RIIO-ED2 period. Combined, these strategies set out our vision of how SP Energy Networks will leverage data & digital technologies, defines our digital roadmap and helps introduce new ways of working.

Progress in RIIO-ED2

Reflecting on the progress made throughout the RIIO-ED2 period so far, we have invested wisely in our data & digital tooling across our six digitalisation pillars, delivering benefits across multiple parts of our business to support the critical business processes being carried out.

As we move into year 3 of our digital plan, our ambitions continue to grow as we gain a greater understanding of the opportunities to bring efficiencies to our customers and stakeholders. Several core platforms have now been delivered, for example our new Customer Relationship Management (CRM) platform, with the focus now on a continuous improvement programme to ensure we leverage the technology to its full potential over time.

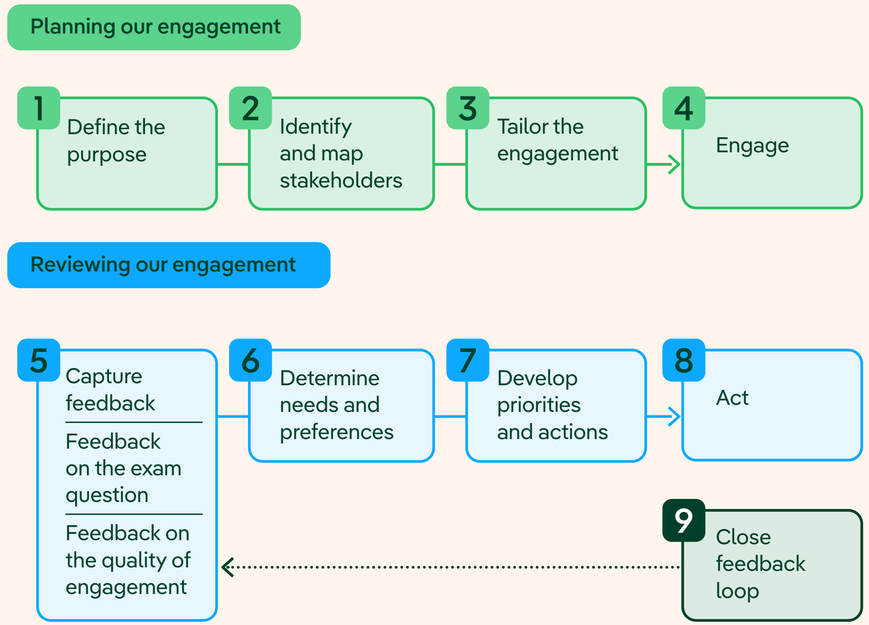
Our entire plan is built on compliance with Ofgem's Data Best Practice, recognising the benefits that it brings to consumers, stakeholders, and the public interest. We continue to make significant progress in enhancing our maturity against all 11 principles of the guidance.

Stakeholder Engagement

Our RIIO-ED2 stakeholder engagement activities for data & digitalisation have followed the core principles and methodology as defined in SPEN's published Stakeholder Engagement Strategy. Using this engagement strategy, we have a strong record of delivering high quality engagement across our Distribution business.

Stakeholder Engagement Methodology

These steps provide a roadmap of how we plan, review and close engagement activities. Engagement with our customers and stakeholders is an ongoing, iterative process. All of our engagement centres around implementing insight in to our decision making, at all levels of the business.



Step 1: Define the purpose

Engagement planning starts with a clear purpose. It's important all of our engagement aligns with the areas our customers and stakeholders have told us to focus on.

Step 2: Identify and map stakeholders

With a clear purpose defined, we then identify key stakeholders who are best placed to provide informed feedback that can help us achieve our objective.

Step 3: Tailor the engagement

Based on the purpose of the engagement, and stakeholders involved, we develop a clear profile of the level of knowledge on the topic at hand.

Step 4: Engage

The result of our planning phase is an inclusive, tailored and value for money engagement event, ready to be delivered.

Step 5: Capture feedback

Our engagement process, and subsequent business decision making, continues to be driven by the feedback we receive. This feedback remains crucial in designing and delivering services that are right for those affected by any area of our business.

Step 6: Determine needs and preferences

Once feedback has been recorded against an event, we review the output, updating our understanding of the needs and preferences of the individuals affected by our business.

Step 7: Develop priorities and actions

We aim to provide value for money through all our services – a principle that lies at the heart of everything we do. Demonstrating this value rests on our ability to measure the value of our outputs and prioritise accordingly.

Step 8: Act

While feedback is the output of the Planning phase, Actions are the output of the Reviewing phase. Each step, from capturing feedback, determining needs and preferences, to developing and prioritising actions leads to a list of actions for the business to complete that will make the services we offer better.

Step 9: Closing the feedback loop

With our engagement complete, our feedback collected, and our actions taken, the final step of approach is to close the feedback loop. This step consists of measuring the success of the actions taken and identifying how and where we can improve our engagement approach.

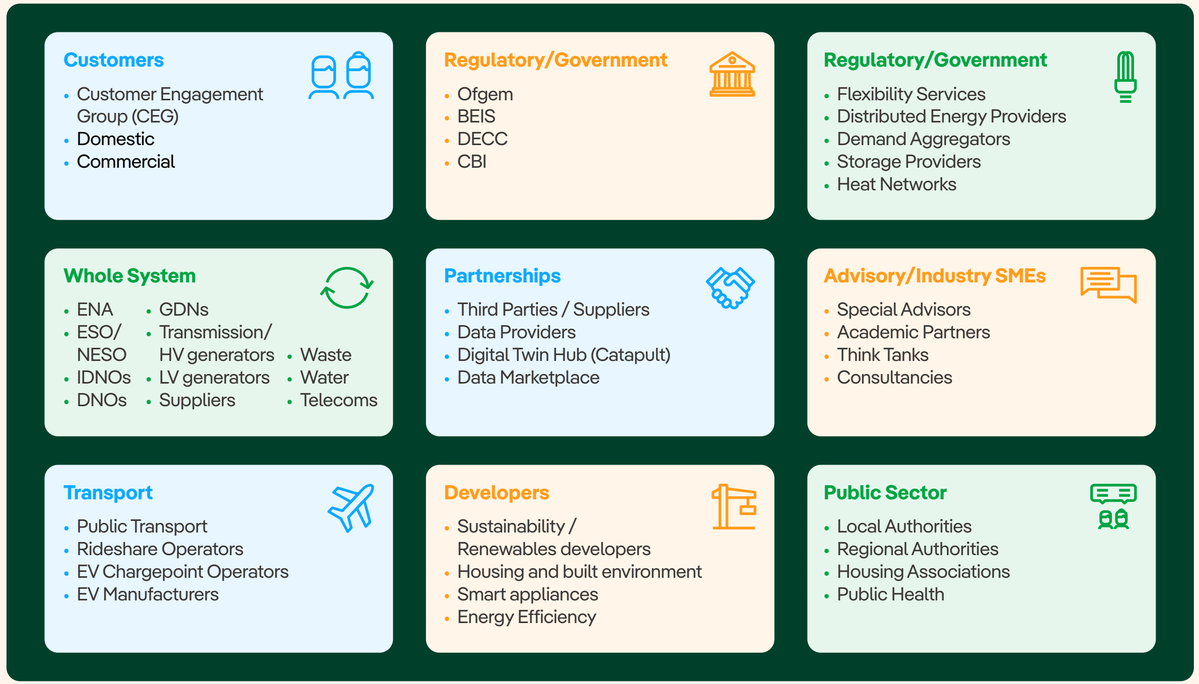
Full details of the stakeholder engagement methodology we have followed can be found in our SPEN Stakeholder Engagement Strategy

Stakeholder Engagement

Stakeholder Map

A critical part of the process to ensure we get our engagement right for our data & digitalisation plans is to identify key stakeholders who are best placed to provide informed feedback that can help us achieve our objective and shape our plans. To do this, we have conducted a robust stakeholder mapping exercise which ensures breadth and inclusivity, highlighting any gaps in our engagement.

We use Tractivity, an industry leading system, which has over 6,500 stakeholders registered. Tractivity helped us identify stakeholders with specialist expertise and knowledge levels in relation to data & digitalisation. Feedback received via our stakeholder engagement process has shaped the goals and objectives of our digitalisation strategy and the proposed initiatives within it. The diagram below shows the wide range of external stakeholders we have engaged with to shape our plan, over and above our extensive internal stakeholder engagement.



**Please note the stakeholder groups above are who we engaged with to build our ED2 plan. Some of these stakeholders may no longer go by this name or be in existence.*

Data & Digital Personas

To support our stakeholders in understanding how our plans support them, we have developed a suite of personas.

Personas are representations of key stakeholders, created to understand their needs, behaviours, and goals. These personas help us tailor our initiatives to meet the specific requirements of different user groups. By using personas, we can ensure that our digital solutions are user-centric, addressing the unique challenges and expectations of our customers and stakeholders.

Examples of our data & digital personas are shown below and throughout this document:

Domestic Customer

Challenges in my day-to-day role:
I'm a homeowner trying to arrange the alteration of my electricity connection, and it's been frustrating repeating my details on phone calls because I often speak to different people or they can't recall our previous conversations. It feels like I sometimes I wait a long time before getting any meaningful updates.

In the future:
With the new CRM platform, all my details will be stored in one place, and I'll get consistent updates via their channel of choice. When I call, staff will already know my situation and can respond quickly with accurate information. The whole connection process will feel quicker and more transparent, giving me peace of mind.

Customer Service Representative

Challenges in my day-to-day role:
I spend a lot of time manually looking up customer faults and connections history across multiple systems, which slows me down and leads to longer wait times for customers. It's frustrating when I don't have all of the data at my fingertips to help someone quickly.

In the future:
A unified Customer Relationship Management (CRM) system will give me a single view of the customer. I'll be able to access customer history, track interactions, and resolve issues faster, improving the experience for both customers and staff.

Stakeholder Engagement Strategy

The methodology described in this document was the primary source of defining the scope of our ED2 plan based on stakeholder feedback and priorities. Now that our digital programme is well underway, we must now ensure it continually reflects customer needs over time and as priorities change.

We will do this by ensuring digitalisation is include in the agenda as part of SPEN's existing customer and stakeholder forums, for example our annual connections summit, on an ongoing basis to speak directly to customers, updating them on the progress of our plan and capturing feedback to be incorporated going forward.

The development and ongoing evolution of our ED2 strategy incorporates the core principles outlined in Ofgem's Digitalisation Strategy and Action Plan (DSAP) guidance.

Our 6 Digitalisation Pillars

Our strategy was set at the beginning of ED2 and is aligned to six pillars, each representing a suite of initiatives which work together to create the digital platforms, facilitate the transformation of our data, and support the creation of new ways of working to deliver data & digital excellence.

Pillar 1: Using Digital Technologies to Deliver Enhanced Customer Service
We will develop digital solutions to provide tailored, efficient, and proactive communication channels, ensuring that our customers receive the best possible experience.

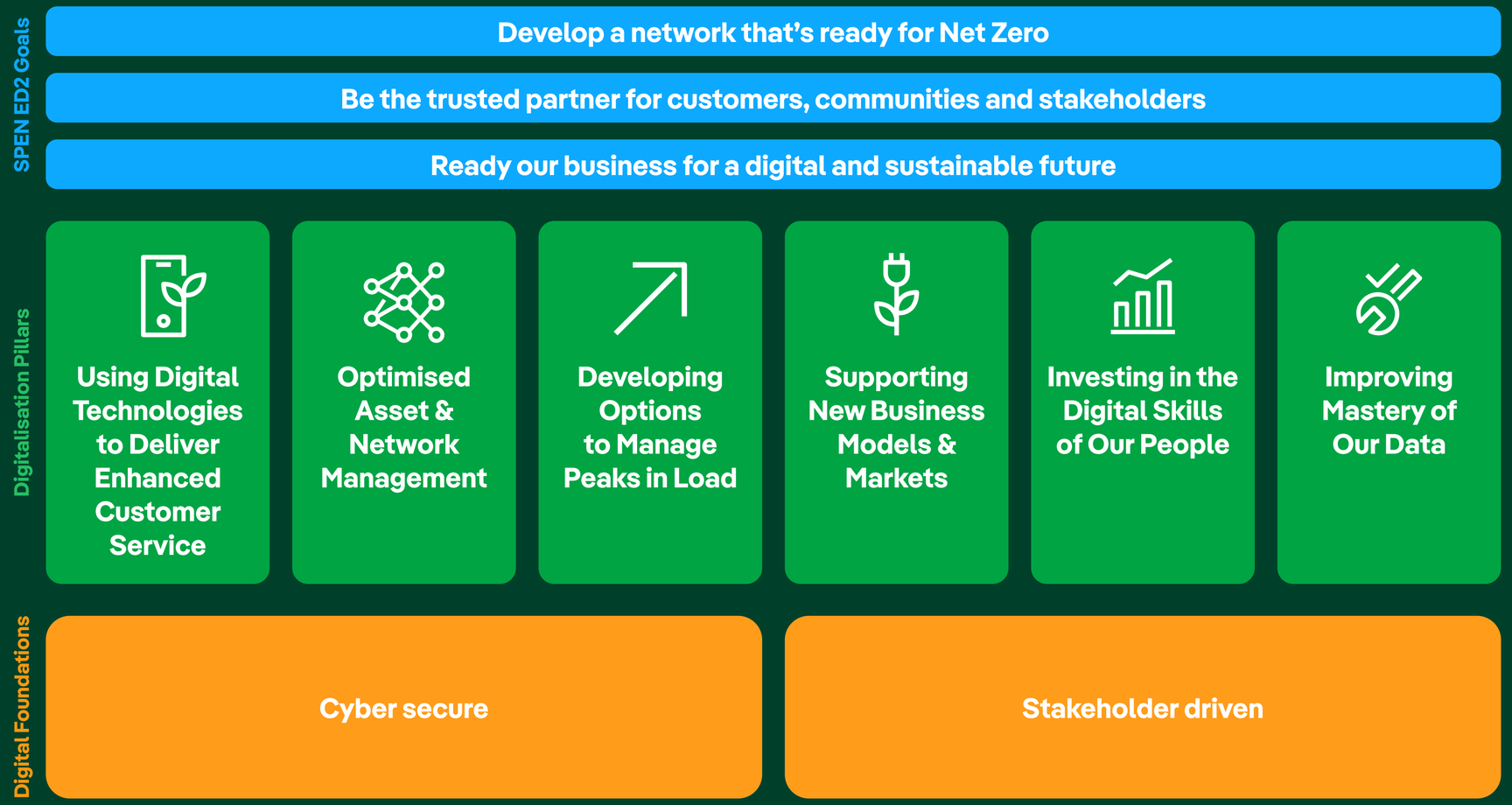
Pillar 2: Optimised Asset & Network Management
By leveraging advanced data analytics and digital technologies, we will enhance the efficiency, reliability, and sustainability of our energy system.

Pillar 3: Developing Options to Manage Peaks in Load
We will utilise advanced data analytics and innovative technologies to optimise load management, ensuring a reliable and efficient energy system.

Pillar 4: Supporting New Business Models & Markets
We will facilitate the development of an energy technology sector and flexibility markets while driving focus on environmental initiatives and compliance

Pillar 5: Investing in the Digital Skills of Our People
We will support our people by equipping them with the right agile and digital skills through use of digital learning & development programmes

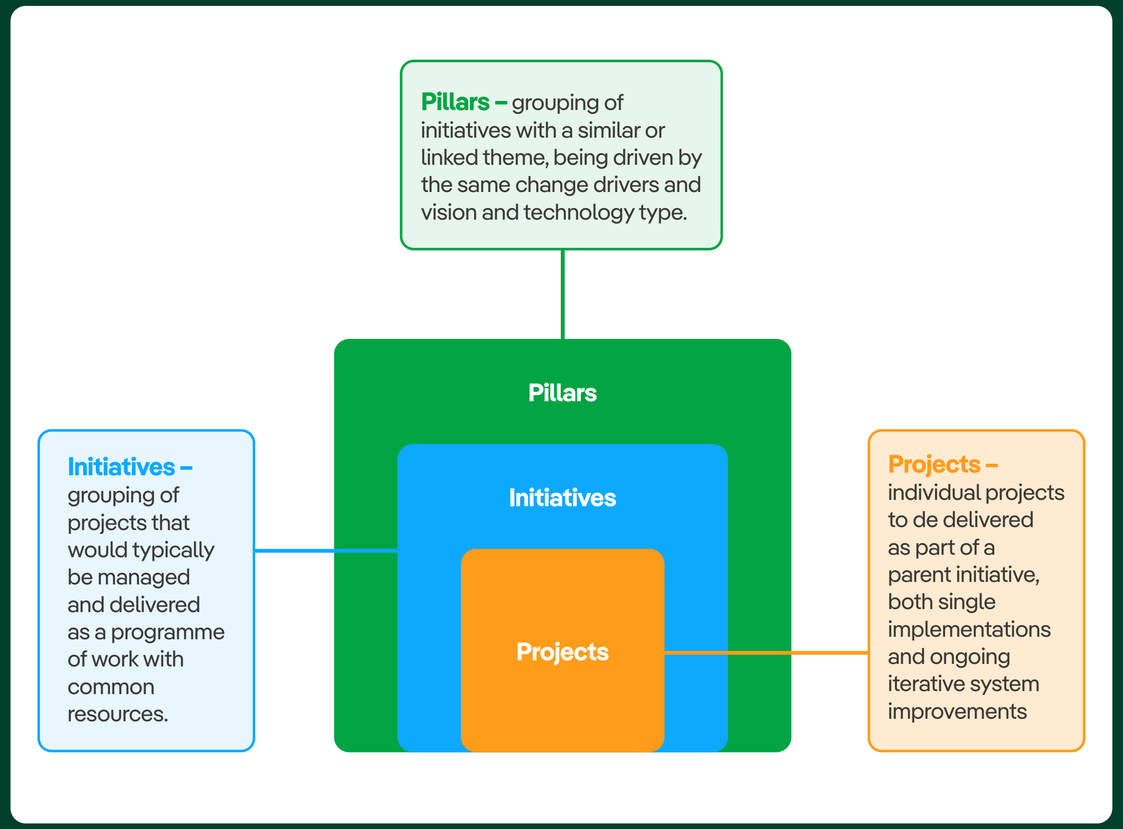
Pillar 6: Improving Mastery of Our Data
We will build on our established foundations of data governance, sharing and security, engaging on an ongoing basis with our stakeholders to ensure we provide secure and high-quality data which surpasses the need of Data Best Practice.



Digital Strategy Structure

Pillars, Initiatives & Projects

Our plan is divided into strategic pillars, each containing high-level initiatives followed by lower-level projects, to deliver digital solutions to meet our customer and stakeholder needs.



Progress in delivering our strategy is published every 6 months in our Digital Action Plan updates. You can view the latest Digital Action Plan here.

How digitalisation enables wider ED2 plan and stakeholder commitments

Data & Digitalisation (D&D) is critical to the success of SPEN's overall RIIO-ED2 plan. We will deliver the digital tools and data insights required to enable the delivery of the capital delivery programme and achieve the defined stakeholder commitments. The table below shows the overall business plan stakeholder commitments with indication of how D&D enables and aligns to the achievement of our overall ED2 commitments.

Develop a Network that's ready for Net Zero

Develop the network of the future	Ensuring a safe and reliable electricity supply	Provide timely and efficient connections
5	5	6
D&D Involvement	D&D Involvement	D&D Involvement

Be the Trusted Partner for Customers, Communities and Stakeholders

We will deliver excellent satisfaction and enhanced services for all customers	We will support vulnerable customers and communities to ensure no-one is left behind	We will work with communities to facilitate the energy system transition
6	5	5
D&D Involvement	D&D Involvement	D&D Involvement

Ready our Business for a Digital and Sustainable Future

We will support an environmentally sustainable network	We will promote an inclusive, skilled, and community-based workforce	We will embed digitalisation and utilise data to unlock benefits for customers and stakeholders
5	6	5
D&D Involvement	D&D Involvement	D&D Involvement

Pillar 1 - Using Digital Technologies to Deliver Enhanced Customer Service

Our customers' expectations have evolved with the increasing use of digital services in daily life and work. Consequently, our customers now expect digitally enabled channels and self-service options when interacting with us.

The initiatives in this pillar will enable us to scale our activities in response to the significant increase in the demand for our service. We are delivering our plan to create a suite of integrated platforms designed to deliver enhanced customer experience.

We are committed to a tailored and locally focused approach that prioritise the needs of our customers and stakeholders while continuing to deliver a safe, reliable, and sustainable network. Digitalisation presents us with an opportunity to be ambitious in improving customer experience and overall efficiency. This allows us to deliver more value to our stakeholders.

All our contact methods will be customer-led, utilising new technologies to automate communication and keep customers informed in ways that work best for them. We will segment our customer base to tailor communications and effectively encourage the uptake of low carbon technologies.

We recognise the need to go much further to ensure the service we deliver continues to meet customers' needs and leaves no one behind in a fair and just energy transition. To achieve this, we have designed an ambitious portfolio of solutions to offer services that efficiently satisfy our customers' diverse needs and meets our commitments.

The initiatives in this pillar, which are described in detail in the following pages, are:

Customer Relationship Management Platform (CRM) – The CRM initiative aims to replace the current CRM system with a new digital platform that integrates existing processes, introduces new functionalities, and provides a seamless omnichannel experience for customers and stakeholders.

Self-Service Functions – The Self-Service Functions initiative aims to extend current self-service capabilities by providing a wider range of options for customers and stakeholders, integrating fully with the CRM system to offer a seamless solution

Network Analysis & View (NAVI) – The NAVI initiative aims to evolve the application into a scalable, integrated network model that facilitates detailed scenario analysis and modelling, leading to improved network reliability for customers.

Digitisation of Land & Planning – The Digitisation of Land & Planning initiative aims to enhance the ESRI GIS Land and Planning layer by fully digitising remaining paper records, improving stakeholder engagement with land owners and facilitate quicker contact during faults & emergencies.

Pillar 1 - Using Digital Technologies to Delivery Enhanced Customer Service

Vision

Deliver a seamless omnichannel experience with self-service options to all customers and stakeholders interacting with SPEN services

Change Drivers

- 500% increase in connections volume
- Up to 100% rise in customer contact volume
- Limited visibility of customer across contact channels
- Enhancing vulnerable customer services
- Systems reaching end-of-life in ED2

ED2 End State

- Single view of the customer
- Customer and stakeholder self-service portals
- Quick & automated connections design
- Seamless omnichannel contact
- Enhanced & tailored vulnerable customer support

How this pillar has evolved over ED2

The delivery of initiatives within this pillar is in line with our original ED2 plan. We have successfully delivered our new CRM platform, undertaking a large-scale implementation across multiple business areas and processes. With the core Salesforce platform now in place, focus will now turn to a programme of continuous improvement over the remainder of the ED2 period, delivering incremental value to our customers and stakeholders as we adopt new features on the product roadmap.

We have refreshed the design and navigation of our online our online customer connection journeys, improving the online experience for customers with tailored options depending on the type of customers and their needs. Focus over the remainder of ED2 will be to develop connection self serve functionality on our website. We've already started with the recent addition of fixed price quotes for a subset of Alteration of Point of Supply (APOS) jobs, and continued integration with our CRM platform giving greater visibility of customer interactions online. We have completed an additional project to improve accessibility for customers using our website with the implementation of the ReciteMe tool in November 2024.

Our land & planning initiative is progressing well with the replacement of our ESCOMS system now complete and the digitising of paper records is on track for completion this year. We continue to progress the expansion of NAVI across our business processes and have identified further use cases from the initial ED2 plan which we aim to deliver greater benefits.

Deliverables

Deliverables	Status
Replace our current CRM system with a digital platform to incorporate existing processes, new processes, integration with our self-serve functions and integration to our asset, regulatory and control systems.	Complete
Extend and develop our self-serve capabilities to offer more services, multiple channels and cater for new customer types.	In Progress
Evolve our Network Analyse & View (NAVI) model to become scalable and be supported as part of our core systems.	In Progress
Enhance our new ESRI GIS Land and Planning layer by fully digitising our remaining paper records.	In Progress

Pillar 1

Customer Relationship Management Platform

Overview

This initiative aims to enhance the experience of SPEN customers, staff and stakeholders by providing a robust and integrated digital platform.

The new CRM system will streamline existing processes, introduce new functionalities, and ensure seamless integration with our self-service capabilities and other core systems.

The primary objectives of the CRM initiative are to:

- Provide a consistently high level of service to our customers and stakeholders, facilitating an omnichannel experience with communication methods of their choice at times most convenient to them.
- Create a single view of the customer, incorporating and streamlining existing processes while removing obsolete systems that do not add value.
- Support new customer types and markets by developing processes that cater to their specific needs.
- Enable full integration with our self-service functions, asset management, regulatory, and control systems.
- Utilise customer data for reporting and analytics to inform improved customer service and ensure all information is available to serve customers, consumers, and staff.

By implementing this initiative, we aim to deliver a modern, efficient, and customer-centric CRM platform that supports our commitment to providing excellent service and meeting the evolving needs of our customers and stakeholders.

Change Drivers

Our stakeholders expect us to continuously meet customer service targets, enhance our online capabilities, and introduce new services.

The drive towards digitalisation necessitates robust support for online services, ensuring data sharing within appropriate security measures. Furthermore, the emergence of new customer types and markets throughout RIIO-ED2 presents an opportunity to include additional services that cater to the evolving needs of our customers.

Status Update

We have now successfully implemented our new best in class Salesforce CRM platform and incorporated multiple critical internal processes into the system. We now operate our connections, general enquiries, and real time faults & emergencies processes in our CRM with integration to our faults management platform and core SAP system. This now provides an improved overall customer experience with our contact centre agents having a single view of all interactions across these processes to have a more informed conversation with customers.

Over the remainder of ED2 we will continue to maximise the value of the CRM through a programme of continuous improvement and enhancements to optimise the value for both our internal staff and customers, implementing new product features and functionality when they become available.

Benefits

Streamlined Customer Interactions

- Single view of each customer's history and data in one dashboard
- Reduced need to repeat information, cutting down on call times
- Faster resolution of queries with real-time access to all relevant details

Integrated Processes

- Centralises multiple systems (e.g., complaints, connections) into one platform
- Automates workflows for approvals, updates, and escalations
- Simplifies tracking of cases from first contact to resolution

Improved Staff Efficiency

- Agents can handle more queries per day due to better data access
- Reduced administrative work via automated forms and guided wizards
- Greater collaboration between departments using shared digital tools

Personas

Domestic Customer

Challenges in my day-to-day role:
I'm a homeowner trying to arrange the alteration of my electricity connection, and it's been frustrating repeating my details on phone calls because I often speak to different people or they can't recall our previous conversations. It feels like I sometimes I wait a long time before getting any meaningful updates.

In the future:
With the new CRM platform, all my details will be stored in one place, and I'll get consistent updates by text or email. When I call, staff will already know my situation and can respond quickly with accurate information. The whole connection process will feel simpler and more transparent, giving me peace of mind.

Customer Service Representative

Challenges in my day-to-day role:
I spend a lot of time manually looking up customer faults and connections history across multiple systems, which slows me down and leads to longer wait times for customers. It's frustrating when I don't have all of the data at my fingertips to help someone quickly.

In the future:
A unified Customer Relationship Management (CRM) system will give me a single view of the customer. I'll be able to access customer history, track interactions, and resolve issues faster, improving the experience for both customers and staff.

Self Service Functions

Overview

This initiative will extend our current self-serve capabilities to provide a wider range of self-service options for our customers and stakeholders. Improvements will be made across our different customer journeys and integrate fully with our CRM system providing one single seamless solution.

We will focus on providing a high level of service to our customers by introducing greater service offerings, a wider range of channels and capture customers' preferred contact methods and language. This will assist those customers with sight and hearing loss or impairment, and those whose first language isn't English.

We will then look to use these preferences during every interaction we have with our customers. Our online portal recognises the customer's preferred language and channel of their choosing, service performance history and any outstanding service issues.

Whilst customers have told us they want a wide range of channel offerings and expect a consistent service no matter the channel, they also have a strong desire for proactive communication, especially during an unplanned loss of supply which this initiative seeks to address.

We will also extend our self-service offerings to allow our internal staff, landowners, land agents, planning authorities and other stakeholders to share data relevant to the planning application and consenting processes related with our activities.

Change Drivers

Customer expectations are increasing, especially relating to how interactions with organisations are changing in the digital era.

The self-service functions we provide need to evolve during RIIO-ED2 in response to the feedback and requests from our customers and Stakeholders.

We also expect to see a significant increase in work volumes and customer interactions as we scale our network and associated process so we need to give customers as much access to our products and services online to reduce the need to contact us via traditional channels.

Status Update

The first two years of ED2 has been focussed on implementing the Salesforce CRM platform, which future customer self service functions will integrate to, extending the overall end to end digital customer processes. Now that the CRM is in place we will be expanding our offerings to customers to allow them to interact with us via their channel of choice, send us images and videos and expand the functionality and data available within our online portal over the remainder of ED2.

We have recently implemented the ability for customers to obtain a fixed price quote for a subset of Alteration to Point of Supply (APOS) jobs without the need to engage internal staff and we will be introducing further self serve automated solutions over time. We will also be expanding our connections self-service functions to allow customer to obtain cost estimates for up to 4 new connections in a single application.

Benefits

24/7 Customer Access

- Online portals or apps allow customers to log queries any time
- Real-time updates on outages, service requests, or connections
- Convenient self-service tools reduce inbound calls and wait times

Faster Issue Resolution

- Immediate submission of problems or requests without phone queues
- Automated initial troubleshooting can quickly guide customers
- Reduced backlog of simple queries handled by digital self-help

Personalised User Experience

- Tailored notifications based on location or account preferences
- Access to relevant FAQs, documents, or forms specific to each user
- Greater transparency with live status updates for ongoing requests

Personas

Vulnerable Customer

Challenges in my day-to-day role:
Whenever there's a power cut, I get anxious about how long it will last or if I'll be able to manage on my own. Right now, I have to rely on calling someone and waiting on hold for updates, which can be overwhelming and doesn't always give me the reassurance I need.

In the future:
As well as being proactively contacted to alert me of an outage, with enhanced self-service options, I'll be able to use the website to see an estimated restoration time and even request extra support if necessary. It'll feel like I have more control over the situation, knowing I can check on progress and ask for help in real time without feeling lost or forgotten.

Small Business Owner

Challenges in my day-to-day role:
Running my local café depends on a consistent power supply, and if there's a disruption, I scramble to figure out the cause and how long it will last. Calling the helpline isn't always practical when I'm busy, and I sometimes can't get answers fast enough.

In the future:
With self-service tools, I'll log in online to see exactly what's happening with the network in my area, any scheduled maintenance, and a real-time restoration estimate. I'll save valuable time, make informed plans for my café, and keep my customers happy even if the power does go down for a while.

Pillar 1

Network Analysis and View (NAVI)

Overview

During the ED1 period, we developed an early version of the Network Analyse & View (NAVI) platform to create a connected network view from our GIS data without disrupting daily GIS operations. This platform supports a range of customer centric processes such as connections planning, network maintenance and forecasting. It will also help optimise fault tracing, constraint prediction analysis and poor performing circuit identification.

Our initial step to facilitate this is the NAVI platform focusing on LV and smart meter network model management. The NAVI platform will continue to build on maximising the use of our network records for detailed analysis functions including but not limited to:

- Data source for modelling platforms e.g., Energy Net Zero (ENZ) platform
- Fault tracing
- Constraints prediction analysis at all voltages, including LV with use of smart meters
- Poor performing circuit identification
- Low Carbon Technology (LCT) impact evaluation
- LV Phase identification
- Provide data for digital scenario analysis e.g. roll back of network state to re-evaluate fault scenarios

NAVI's evolution is an essential step in our transition to a long-term strategy for a broader Integrated Network Model. It leverages GIS data and maps it to the control and asset management system network models, creating a single, unified reference for all network data.

Change Drivers

SPEN's DSO & Digitalisation Strategy and Distribution Future Energy Scenarios (DFES) predict significant changes to the network over the coming years which will result in a massive increase in the amount of data and a more complex network to manage. There is a need to introduce more analytics to make network planning, connections, maintenance and control more dynamic.

To maximise the use of data in both managing and planning for impacts on the distribution network as we progress towards Net Zero, we require that network data can be flexibly analysed to assess future and near-real time network scenarios.

Status Update

The Network Analyse and View (NAVI) Platform has continued to develop as a potential long term connectivity model for SPEN. Its reach has been extended to run power analysis algorithms, developed in-house, that feed into the LANIT platform used by local authorities to assess connection costs for LCT devices, as well as powering internal connection analysis by Connection Engineers. The platform has been refactored to allow nightly data processing runs, ensuring connections are reflected the following day when new assessments are being performed. The connectivity model also drives the ENZ platform and the real-time operations platform, LView, processing enriched smart meter and fault management system alerts that can be linked to the connectivity model, as well as traces to show feeding substations, phase, etc.

Benefits

Comprehensive Network Visibility

- Real-time overview of network assets and their performance
- Simplified data layers (e.g., load flow, capacity) in a single interface
- Enhanced ability to spot and address weak points before failures

Quicker, Data-Driven Decisions

- Rapid scenario modelling for new connections or network upgrades
- Immediate alerts and visual cues for emerging constraints
- Improved forecasting accuracy to optimise resource allocation

Reduced Service Interruptions

- Identifies potential faults earlier via integrated monitoring
- Faster dispatch of field teams with precise location data
- Decreased outage durations and frequency for customers

Personas

Network Planning Engineer

Challenges in my day-to-day role:
When I analyse our network capacity or try to pinpoint potential fault risks, I have to toggle between different outdated applications and spreadsheets. It's easy to make mistakes, and it's tough to get a current, accurate overview of asset conditions and system loading.

In the future:
With NAVI, I'll have a single, integrated view of our network, pulling in real-time data and historical information so I can make informed decisions quickly. Rather than wrestling with messy data, I'll be able to simulate scenarios, identify issues early, and prioritise interventions that keep the network resilient and efficient.

Local Authority Representative

Challenges in my day-to-day role:
My team and I want to install more electric vehicle charging points, but we struggle to figure out how and where to connect them without risking overloads on the local grid. Getting this information from the network operator often involves back-and-forth phone calls and site visits.

In the future:
With NAVI integration, we'll have direct insight into areas of the network that have sufficient capacity for new chargers. We'll coordinate seamlessly with the utility, speeding up the process and ensuring our community can expand its EV infrastructure confidently while minimising costs and delays.

Pillar 1

Digitisation of Land & Planning

Overview

The Digitisation of Land and Planning initiative is a crucial step in modernising our land management processes and ensuring efficient and accurate record-keeping.

This initiative aims to fully digitise all remaining paper land rights documents held by SP Energy Networks, creating a seamless and integrated digital system that links our corporate Real Estate system with our ESRI GIS system.

The primary objectives of this initiative are to:

- **Enhance Efficiency:** By electronically scanning and indexing all paper land rights documents, we will eliminate the reliance on physical records, reducing the time and effort required to information, allowing users to view digital land information to assist their decision making.
- **Improve Accuracy:** Digitising land records will ensure that all information is accurately indexed and easily retrievable, minimising the risk of errors and discrepancies.
- **Streamline Processes:** The integration of digital land records with our GIS system will enable more efficient land management processes, allowing for better planning and decision-making.
- **Support Sustainability:** Moving to a fully digital system aligns with our commitment to sustainability by reducing paper usage and promoting environmentally friendly practices.

Change Drivers

Moving to a fully digital system aligns with our commitment to sustainability by reducing paper usage and promoting environmentally friendly practices.

Digitising land parcel information enhances regulatory compliance, operational efficiency, and risk management by providing accurate, accessible records of land ownership and easements. It streamlines network expansion, asset management, and stakeholder engagement while reducing costs and legal disputes. Integration with GIS and asset management systems supports sustainability initiatives, climate resilience, and smarter decision-making. This transformation aligns with broader digital strategies, enabling seamless data integration, improved planning, and a more agile, cost-effective approach.

Status Update

The Land Rights Digitisation project commenced in July 2023 and we have since collected over 330,000 land rights rights contracts from 9 different locations around SPD & SPM and delivered to our scanning partners to scan each document.

Over 265,000 documents have been scanned and delivered by secure file transfer to a shared area in SPEN's network. Over 250,000 of these scanned documents have then been digitised with the contract information being updated in SAP and polygons plotted in our GIS system to show where the contract relates to on the map. This will allow easy access to information online compared to the previous method of having to locate the document in the store. The project is approximately 70% complete and scheduled to complete in Q3 2025.

Benefits

Faster Stakeholder Communication

- Digital maps and planning data easily shared with landowners
- Online collaboration tools for quicker consent and dispute resolution
- Clear, transparent records build trust with property stakeholders

Centralised Land Records

- All wayleave, easement, and boundary documents stored digitally
- Quick access to up-to-date agreements, reducing paperwork delays
- Fewer errors from lost or outdated hard-copy files

Enhanced Project Efficiency

- Rapid checks on land rights and planning constraints
- Streamlined integration with construction or maintenance schedules
- Reduced project downtime caused by missing or unclear permissions

Personas

Land Officer

Challenges in my day-to-day role:
Tracking wayleaves, easements, and property boundaries often means rummaging through physical archives, which is incredibly time-consuming. Paper files can be misplaced or outdated, making it difficult to give quick answers to landowners or our internal teams.

In the future:
Having fully digitised land and planning records will give me instant access to all relevant documents and digital maps in one place. It'll be straightforward to check permissions, handle disputes, and help both our customers and our project teams stay on top of any land-related constraints with clarity and speed.

Rural Landowner

Challenges in my day-to-day role:
I get nervous whenever new power lines are proposed near my property because I don't always understand the exact boundaries or the legal agreements involved. It feels like I'm in the dark about what the work will entail.

In the future:
With digital land records, I'll be able to view clear, up-to-date maps showing how the lines will cross my land and what my rights are. I'll feel more comfortable signing agreements and planning around the work because I have transparent information at my fingertips.

Pillar 2 – Optimised Asset & Network Management

Our network will see an unprecedented volume of change as our customers shift towards electrification of their transport, heating, and industrial demand. Coupled with the rise in the connection of Distributed Energy Resources (DER), the demand on our assets and processes will see a transformational shift.

To facilitate this demand, it is crucial that we invest in more efficient approaches to manage our assets; planning, scheduling, delivering field work and, managing our supply chain and logistics.

Digital technology will play a key role in enabling us to navigate this transition and deliver on our commitments to enable Net Zero while maintaining a safe and reliable network. Digital technology will also play a key part in significantly increasing the productivity of our field operations and support better decision making when planning the work needed on our network, reducing costs for customers, and lowering our carbon footprint.

The initiatives in this pillar, which are described in detail in the following pages are:

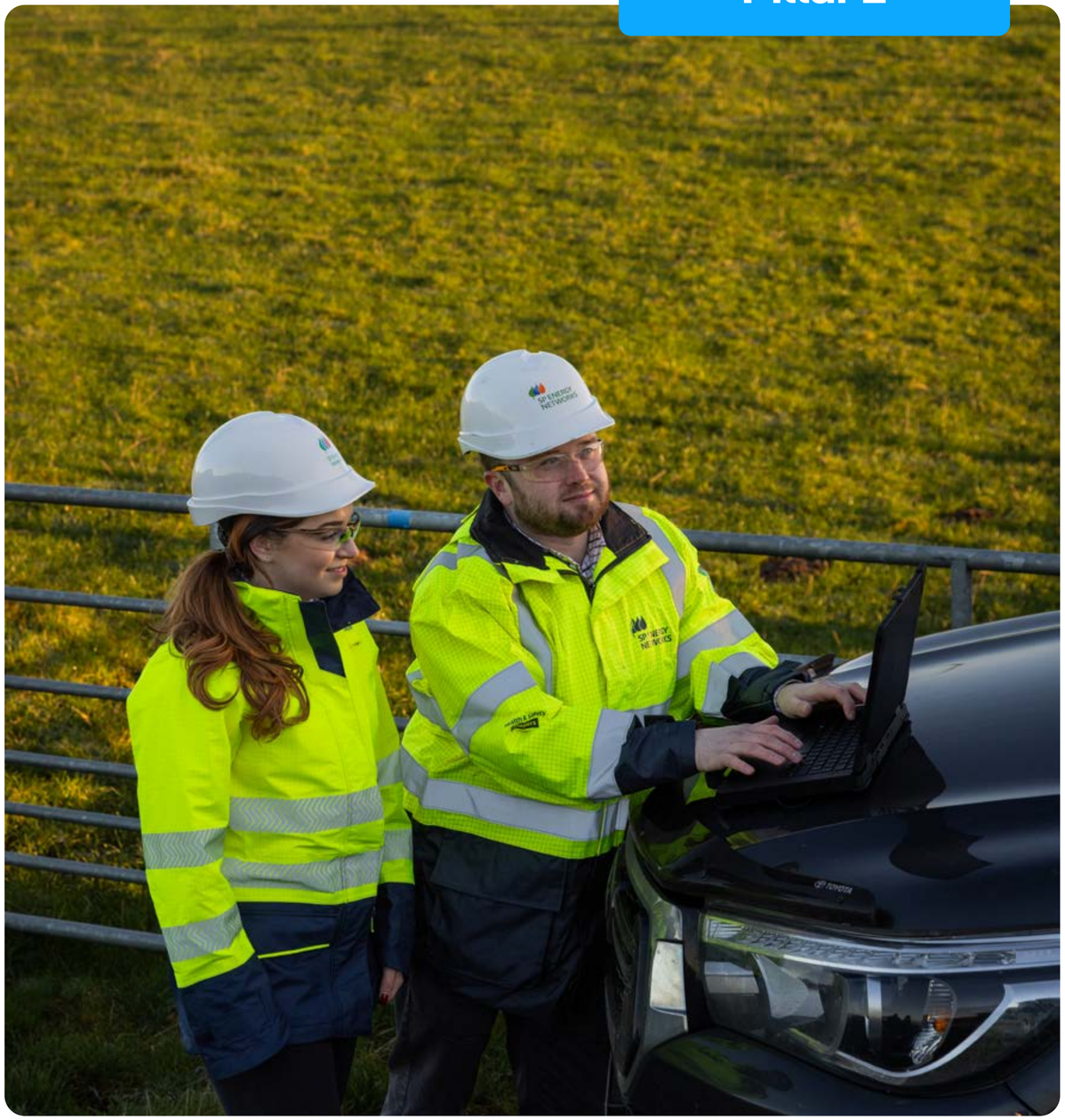
Asset Management Solutions – The Asset Management Solutions initiative aims to enhance the Network Asset Management System (NAMS) by integrating advanced digital tools and data analytics to optimise asset performance, improve maintenance strategies, and support SPEN's transition to a digital-first, data-driven organisation.

Connected Assets – The Connected Assets initiative focuses on integrating advanced sensors and connectivity into the energy network to enhance real-time monitoring, data-driven decision-making, and overall operational efficiency.

Connected Worker – The Connected Worker initiative aims to enhance workforce productivity and safety by equipping employees with advanced digital tools, real-time data access, and connectivity solutions.

Supply Chain, Procurement & Logistics – The Supply Chain, Procurement & Logistics initiative aims to optimise the supply chain and procurement processes through advanced digital tools and data analytics, ensuring efficient logistics and resource management.

Internet of Things (IOT) Smart Initiatives – The IoT initiative focuses on deploying interconnected devices and sensors across the energy network to enhance real-time data collection, monitoring, and operational efficiency.



Pillar 2 – Optimised Asset & Network Management

Vision

Improve the quality and efficiency of our operations & maintenance, field work delivery, and supply chain management to maintain a safe and reliable network with rising electrification of transport, heat and industry.

Change Drivers

- 141% increase in annual load spend from ED1
- 28% increase in internal workforce
- 15% increase in peak demand
- 500% increase in connections volume
- 70% increase in network reinforcement costs

ED2 End State

- Full visibility of in-flight and planned projects
- 4D geospatial model of network with visualisation & analytics
- Automated asset health monitoring
- Automated scheduling & despatch of field work
- Streamlined and efficient procurement & logistics

How this pillar has evolved over ED2

The scope of deliverables within this pillar has changed significantly since our original ED2 plan. Rather than a programme of individual SAP improvements, we are currently planning a significant upgrade from our current heavily customised ECC platform to the latest SAP S/4HANA platform which will enable increased efficiency across our process and a vastly improved user interface.

In 2025, we will transition to the latest ESRI UN platform, a move that required a broader scope, increased complexity, and enhanced data quality improvements beyond initial expectations. With these challenges now successfully addressed, we are well-positioned to deliver the remaining GIS scope throughout the rest of ED2.

Excellent progress has been made on our Connected Worker programme with a much greater scope of use cases and benefits identified since our original plan. We have recently commenced rollout of our mobility & scheduling field service solution and have a detailed plan for expanding across an increasing number of processes over ED2.

Due to the increased focus on our SAP, GIS, and Connected Worker areas we deferred the start of our logistics initiative, however we remain on track for these to be delivered by the end of ED2. Our IOT initiative is progressing to plan and we have delivered the first of a number of phases already scoped and underway.

Deliverables

Deliverables	Status
Deliver upgrade to our core GIS platform	In Progress
Introduce enhanced GIS capabilities and functionality	In Progress
Additional layers added to the GIS platform to be delivered incrementally as required by stakeholders	In Progress
New integrated BIM platform for 132kV Manweb projects	Planned
Graphical Design Tool for distribution projects integrated with core asset management systems	In Progress
Delivery of core asset risk modelling integrated platform	Complete
Enhancement to risk platform for migration to condition based risk assessments	In Progress
Enhancements to current SAP platform delivered incrementally	In Progress
Deliver core connected assets analytics platform	Complete
Extensions to asset analytics platform to capture additional datasets delivered incrementally	Ongoing
Existing system enhancements for integration with LiDAR data	In Progress
Field resource optimisation solution delivered	Complete
Contractor field application delivered	Planned
Field image capture solutions – new platforms to be developed	In Progress
THOR hammer solution enhancement to existing systems	De-Prioritised
Integrated smart forms to be delivered via extensions to existing solutions	In Progress
Underground asset management solution	Planned
Warehouse optimisation solution	Planned
Enhancement to existing vehicle management solution	Planned
Stock supply and framework visibility solutions	Planned
Enhancements and extension to existing SDIF solution	Complete
New IoT system to be delivered	Complete

Pillar 2

Asset Management Solutions

Overview

As we progress toward ED3, efficiently managing our assets is becoming increasingly complex due to increasing load and evolving utilisation patterns. Additionally, the rising volume of connection requests to support the decarbonisation of transport and heat presents a significant challenge, requiring a more adaptive and strategic approach.

The Asset Management Solutions initiative is a key component of our digital transformation strategy, aimed at optimising the management and maintenance of our assets to ensure a reliable and efficient energy network. This initiative focuses on leveraging digital technologies and data analytics to enhance our asset management processes, improve decision-making, and extend the lifespan of our assets.

Knowledge is crucial to the effective and efficient operation of our network is knowledge of our assets:

- Location
- Connectivity
- Capacity
- Utilisation
- Condition
- Inspection and maintenance windows
- Predicted loading
- Planned investment

This will provide the basis to support the UK's transition to a Net Zero future. Our GIS system will be the master for all our geospatial data, creating a geospatial data hub that enables us to undertake geospatial reporting and analytics.

Change Drivers

We are managing an increased volume of data on our assets and network, and this will help us make informed decisions about our operation. Locational information will become increasingly important to our workforce, customers, and wider stakeholders.

To accurately assess the network impact of new Distributed Energy Resources (DER) connections, planned reinforcement activities, and the integration of flexibility-related products, a fully connected network representation is essential. Our master connectivity model for the LV network is currently housed in ESRI and must be upgraded to leverage the modern Utility Network implementation for enhanced accuracy and efficiency and enable future advanced use cases.

Status Update

We are currently making good progress in transforming our digital GIS data. This has been achieved by identifying all the GIS asset data and undertaking extensive cleansing to improve its quality, accuracy, completeness, consistency and validity. We are striving to ensure our data quality is the best it can be to ensure maximum value for use within GIS and other systems which consume the GIS assets. Our project to migrate to the latest version of ESRI UN is underway and will be delivered by the end of 2025, which will be a key enabler to further asset management improvements going forward.

Currently we are undertaking an impact assessment to understand the impact and opportunities of moving to the latest S/4HANA SAP product. This will be a complex multi-year transformation and migration project that will commence delivery in 2026.

Benefits

Central Asset Repository

- All asset data (condition, maintenance history) in a single source of truth
- Reduced duplication across disparate systems
- Immediate insight into each asset's lifecycle stage

Predictive Maintenance

- Data analytics detect early signs of equipment failure
- Maintenance prioritised by risk and impact, improving reliability
- Fewer unplanned outages and optimised repair schedules

Strategic Investment Decisions

- Comprehensive reporting on asset health and performance trends
- Clear justification for upgrade or replacement projects
- Better cost-efficiency and alignment with long-term network goals

Personas

Asset Strategy Engineer

Challenges in my day-to-day role:
Compiling maintenance plans can be a real headache because our asset data is scattered across multiple systems. I spend too long cross-referencing systems and spreadsheets, and feel like I can't always trust the information about each asset's current state.

In the future:
With best-in-class integrated Asset Management Solutions, I'll pull up any piece of equipment's real-time performance data and its entire history in seconds, allowing me to schedule maintenance precisely where it's needed. This will mean fewer failures, more efficient upgrades, and a more dependable service for customers.

Village Domestic Customer

Challenges in my day-to-day role:
Frequent outages used to be common in my rural village, and it felt like nobody was monitoring our ageing lines and transformers. We'd lose power unexpectedly, and it took ages to get things fixed.

In the future:
As SPEN upgrades its asset management systems, issues can be spotted and dealt with before they turn into power cuts. Even if there is a fault, the teams already know the history of our local assets and can respond more quickly, so I won't have to worry about long, unexpected blackouts anymore.

Pillar 2

Connected Assets

Overview

The Connected Assets initiative is a key component of our digitalisation strategy, aimed at enhancing the connectivity and management of our network assets. This initiative focuses on integrating advanced digital technologies to create a more responsive and efficient network. This will enable more informed decision-making, allowing us to optimise our work programs, maximise resource efficiency, and minimise disruption.

By leveraging real-time data and analytics, we aim to improve asset performance, reduce operational costs, and enhance service reliability for our customers. The initiative includes the deployment of smart sensors, IoT devices, and advanced communication networks to monitor and control assets remotely. This will enable proactive maintenance, quicker fault detection, and more accurate forecasting of network demands. This enhanced visibility will empower field workers with deeper insights into network assets, enabling more efficient workflows and improved condition analysis. Additionally, it will provide a clearer understanding of each asset's physical context and its role in supporting both current and future network loading.

We will be able to plan work across our network more efficiently and have clear visibility of the impact of our interventions. We will also understand the relationship our assets have with their physical location including the following: land ownership, environmental considerations, and vegetation.

Change Drivers

The increasing importance of data and digitalisation in modernising the energy system and transitioning to Net Zero is a significant driver. By leveraging digital technologies and data analytics across greater interconnected asset datasets, we can make informed decisions and optimise our asset and network management.

By automating processes and utilising advanced data analytics, the initiative aims to streamline asset management and maintenance processes.

Status Update

Realising the benefits of connected assets is something that will develop and mature towards the end of the ED2 period. Currently the focus in ED2 has been in improving and implementing the underlying asset management systems and improving asset data quality which will improve the effectiveness of connecting the assets together. We are now making use of our LiDAR data to assist in our inspections and maintenance process and will look to implement and improved vegetation management system using satellite imagery.

Benefits

Real-Time Performance Monitoring

- Sensors feed live condition data to control centres
- Early detection of abnormal readings to prevent equipment damage
- Immediate alerts for faster fault response and repair

Enhanced Grid Stability

- Automated load balancing based on asset feedback
- Smoother integration of renewable generation onto the network
- Reduced risk of local overloading or instability

Proactive Outage Management

- Predicts and locates faults before they escalate
- Minimises downtime through quicker fault isolation
- Transparent communication to customers about restoration times

Personas

Operations Engineer

Challenges in my day-to-day role:
I need real-time data on transformers and switchgear to predict potential failures, but much of our monitoring is still manual or limited to basic alarms. It's frustrating not knowing what's happening until something trips.

In the future:
Connected sensors on the assets will feed performance stats directly to my dashboard. I'll receive early warnings, so I can schedule maintenance before a failure. This means fewer outages, less disruption, and a far more proactive approach to keeping power flowing.

Commercial Generation Customer

Challenges in my day-to-day role:
I run a medium-scale solar farm, and it's hard for me to figure out when the network is nearing capacity or how to coordinate peak generation times with SPEN. Communication feels patchy, and it slows our expansion plans.

In the future:
By tapping into a connected network of assets, I'll see up-to-date grid capacity information and get alerts for times when my generation might be curtailed. This transparency means I can plan better, lower downtime, and make sure my solar output syncs with the demands of the grid.

Pillar 2

Connected Worker

Overview

With greater penetration of DER and electrification of transport, heat, and industry, we forecast a significant increase in the volume of field work we must deliver to ensure that our network facilitates the energy transition to Net Zero.

We have modelled several scenarios which all show total customer peak demand increasing, which can be attributed to the combined effect of EVs and heat pumps. Hence, it is crucial we streamline our field work management processes and equip our field staff with the right tools to deliver customer and stakeholder expectations in a timely and cost-effective manner.

Our vision for our field staff is to have simplified and digitally enabled processes for managing and delivering field work, using a consolidated and integrated suite of technologies and systems. In addition to enabling efficient delivery of a higher volume of work, achieving our vision will maximise productivity, safety, and user experience of our field staff (internal staff and contractors) and improve service for our customers and stakeholders.

This initiative will deliver the field and back-office technology, integrated with our core asset systems to improve and automate the scheduling of work and allocation of resources which will streamline processes related to field activities for planned and reactive work, improving Operational Efficiency, Customer Service and Safety and Environmental Performance.

Change Drivers

To meet significant increased work volumes, efficient work allocation and resource optimisation is critical for timely delivery of work. To maximise field staff productivity, it is imperative that we eliminate unnecessary time-consuming processes to focus staff on value-adding activities. This will be enabled by benchmarking task duration and tracking worker productivity trends.

As we look to improve the sustainability of our operations, field work optimisation provides the opportunity to reduce our greenhouse gas emissions, material use and waste generation.

Status Update

Within the last 2 years we have made strides towards our Connected Worker initiative by implementing a digital solution that optimises our work allocation, streamlines our work execution in the field and improves end user experience. Initial focus will be on 5 operational workstreams: Inspections, Maintenance, Investments, Connections and Reactive Work.

The end-to-end process for Substation Inspections and Maintenance has been transitioned into Salesforce Field Service meaning all work in these areas are scheduled, despatched and carried out within the one system which gives optimised routes, easier data capture, improving quality, and better visibility for management within the back office. Focus has now moved to the development and integration of the remaining 4 workstreams.

We have rolled out Start Risk Assessment within Salesforce, meaning all field staff are completing on-system risk assessments to ensure safe on-site conditions before work commences. This solution improves the ease and speed of access to risk assessments for back-office staff.

Benefits

On-Site Digital Tools

- Technicians can access live schematics, job instructions, and safety data
- Augmented reality or mobile tablets reduce reliance on paper
- Fewer errors from outdated site information

Improved Field Safety

- Automated checklists and digital workflows for hazard assessments
- Real-time communication with control rooms for emergency updates
- Health & Safety managers can monitor compliance more effectively

Higher Productivity in the Field

- Remote guidance from experts speeds up complex repairs
- Faster data capture for asset condition, reducing manual documentation
- Less time spent travelling back to depots for paperwork or clarifications

Personas

Field Technician

Challenges in my day-to-day role:
I'm always juggling paper schematics and job notes, and sometimes I discover that they're out of date when I arrive on-site. It's frustrating having to call the control centre for details I should have had from the start.

In the future:
With Connected Worker technology, I'll have a rugged tablet or AR headset loaded with the latest designs and safety instructions, so I can complete tasks confidently without wasted trips or confusion. Plus, if something changes, I'll see the updates in real time.

Health & Safety Coordinator

Challenges in my day-to-day role:
Verifying that on-site teams are following correct procedures can be slow because I rely on phone calls or after-the-fact paperwork. By the time I learn about a potential issue, the team might have already finished the job.

In the future:
With a Connected Worker platform, I'll see live updates on job status and any hazards flagged by the technicians, enabling me to quickly react to any concerns raised. This helps keep everyone safer and ensures we follow compliance rules rigorously.

Pillar 2

Supply Chain, Procurement & Logistics

Overview

This initiative aims to digitalise the logistics and warehouse workflows and optimise processes by improving the use of data, adopting an Integrated Supply Chain solution, and streamlining manual processes. Mobile apps, advanced technologies, and in the long-term predictive analytics, will support the drive to digital transformation in logistics, warehousing, and transportation.

The initiative focuses on several key areas:

- **Digital Procurement:** Implementing digital tools and platforms to automate procurement processes, reduce manual tasks, and improve accuracy and efficiency.
- **Supplier Management:** Enhancing supplier relationship management through better data integration and communication, ensuring that suppliers meet our quality and sustainability standards.
- **Logistics Optimisation:** Utilising data analytics and digital technologies to optimise logistics operations, reduce transportation costs, and improve delivery times.
- **Sustainability:** Promoting sustainable practices throughout the supply chain, including reducing carbon emissions and waste, and ensuring ethical sourcing.

We will reduce excess inventory due to more accurate stock levels leading to more sustainable and environmentally friendly operations and increased efficiency in the delivery and receipt of goods by minimising transactional and invoicing effort for both warehouse staff and suppliers.

Change Drivers

During the RIIO-2 period we are expecting a significant increase in the volume of work we will need to execute across our network which will drive a significant increase in the volume of requests through our supply chain and logistics function.

It is imperative that our fundamental logistics processes are digitalised, and manual processes eliminated or mitigated, to enable us to meet the needs of our field staff, customers, and suppliers.

Status Update

We have developed a digital catalogue for our logistics inventory with over 1900 product lines digitalised and visible on the catalogue platform which will increase the speed and ease of locating equipment and drive efficiency within our field operations. Additional functionality has been added to the digital catalogue allowing all users across the organisation, including in the field, to order personal protective equipment (PPE) on their device quickly and easily, automating the back end purchasing process.

Further enhancements and projects within this initiative have been scoped for delivery over the remainder of ED2 including enhancements to our current inventory management tool due for release in Q2 2025.

Benefits

Unified Inventory Management

- Real-time visibility of stock levels across all depots
- Automatic alerts when critical parts run low
- Avoids over ordering and costly stockpiling of seldom-used items

Faster Procurement Processes

- One integrated platform for bidding, contract awards, and invoicing
- Streamlined approvals, reducing manual sign-off bottlenecks
- Lower administrative overhead and quicker supplier payments

Stronger Supplier Relationships

- Clear communication channels for delivery schedules and feedback
- Transparency in contract performance and compliance metrics
- Encourages collaborative partnerships to drive innovation and cost savings

Personas

Procurement Officer

Challenges in my day-to-day role:
We keep inventory data in several separate systems, and I'm constantly worried we'll run out of critical parts or order too many of something we rarely use. It's a balancing act that relies too much on guesswork.

In the future:
With a consolidated digital supply chain tool, I'll track materials across all depots in real time, so I know exactly when and where to place orders. This means no more over ordering, less waste, and cost savings that ultimately benefit our customers.

Equipment Supplier

Challenges in my day-to-day role:
Submitting bids, managing purchase orders, and getting paid can be frustrating because the procurement process is spread across different portals and emails. Delays are common, and visibility is poor.

In the future:
Using a single integrated procurement platform, I'll see open tenders, track shipment statuses, and access invoices instantly. Payments will be processed faster, and communication with SPEN will be far clearer—making it easier to collaborate on future projects.

Pillar 2

IoT Smart Initiatives

Overview

The IoT Smart Initiatives are designed to leverage the power of Internet of Things (IoT) technology to enhance the efficiency and effectiveness of our energy network. By integrating IoT devices and sensors throughout our infrastructure, we aim to achieve real-time monitoring, predictive maintenance, and optimised energy distribution.

As projected in our initial ED2 plan, we have begun deploying a significant increase in LV network monitoring connected to secondary comms, which will greatly increase the volume of data we can leverage using this technology.

In addition to LV monitoring, many HV monitors (Earth Fault/Passage Indicators, Network Controllable Points, etc.) are also capable of providing more information than is currently collected (battery alarms, detailed electrical measurements) which would enhance longer term trending, fault and design analysis. Where we have comms capability with sufficient bandwidth and devices capable of sending data to SCADA and non-SCADA endpoints simultaneously this data can be collected by FieldOnline and used for these longer-term analytics.

This initiative will create a cyber secure IoT infrastructure that SPEN will build on to enable the connectivity of thousands of network monitoring devices. The IoT infrastructure created will enable data connection and processing which enables a more efficient, near real-time response to incidents and critical events occurring on the network.

Change Drivers

The demands on the electricity distribution system are anticipated to increase dramatically as we move towards net zero with more DER and electrification of heat and transport. This will result in much closer monitoring of network behaviour and consequently more data. SPEN have a need to collect more data from more monitors but in a more coherent and cost-effective way.

Status Update

We have successfully implemented an IoT platform which now consumes alerts from LV monitors. We have rolled out approximately 5000 LV monitors on the distribution network to date, making good progress on the overall target of 14,000 by the end of ED2.

Work is now underway to bring data from Power Quality Monitors (PQMs) into the new IoT platform with the project currently in design phase. SPEN will be deploying hundreds of additional PQM devices by the end of ED2 which will all feed into the IoT platform once fully implemented.

The data from both LV monitors and PQMs enable SPEN to identify faults on the network before they happen and respond to faults quicker than before. The IoT platform will continue to be developed with additional uses cases throughout the ED2 period.

Benefits

Unified Sensor Ecosystem

- Consistent monitoring setup for voltage, temperature, or load across assets
- Central platform collects, processes, and visualises all data
- Easier expansion of new sensor types over time

Data-Driven Maintenance

- Detailed readings reveal subtle trends, guiding proactive interventions
- Real-time detection of minor anomalies before they escalate
- Extends the lifespan of critical network equipment

Enabling Customer Flexibility

- IoT signals inform time-of-use tariff decisions and demand shifting
- Supports more widespread EV charging and local renewables
- Improves overall grid efficiency by aligning supply and demand

Personas

Distribution Automation Manager

Challenges in my day-to-day role:
Right now, we have sensors scattered around the network, but they're all configured differently, and the data streams aren't unified. That makes it tough to spot patterns or respond quickly when something goes off-spec.

In the future:
Once we roll out a consistent IoT platform, every sensor will feed data into one analytics dashboard. I'll get immediate alerts for anomalies, letting me make real-time adjustments or dispatch field teams before a minor issue becomes a major outage.

Faults Coordinator

Challenges in my day-to-day role:
Without precise fault indicators, the teams on site rely on outdated fault-finding methods that can take a lot of time and effort to locate the problem. This means longer repair times, ties up field staff, and frustrates customers.

In the future:
Data from LV monitors give me instant, location-based alerts. Fault distance information pinpoints problems and field staff are directed to the suspected fault location. Customers experience faster restoration, as on-site investigations are minimised.

Pillar 3 – Developing Options to Manage Peaks in Load

Significant increases in Distributed Energy Resources (DER) and the electrification of transport and heat will dramatically expand load on our network, particularly our 'last mile' low voltage network that is not designed to cater for this high utilisation and is therefore less resilient to the expected change.

To enable the load growth, we will need to manage vast increases in volume and frequency of data from technologies such as remote sensors, IoT devices, and drones. This is critical to support our customers' transition to a Net Zero future.

We need to manage this load increase using a combination of traditional engineering (business as usual) and new digital solutions to reduce costs for customers and enable the low carbon transition. The distribution networks are on the front line of customer decarbonisation, particularly at lower voltages. The safe, timely and efficient transition to Net Zero will require step changes in data-driven, automated, and integrated systems for network design and operational management.

Without these initiatives, the continual additions of EV charge points and Heat Pumps to the network will result in electrical overload, leading to power outages, shortening of network asset life, higher overall costs for customers, and possible safety concerns.

Development of the platforms within this pillar will mark a significant step forward in the creation of a digital twin of our network.

We will deliver the capacity that our customers and communities need through:

- Deployment of advanced digital monitoring and control equipment on our low voltage network including the installation of 14,000 LV monitors
- Deployment of 10 constraint management zones in SPD and 12 in SPM enabled by data & digital solutions
- New technology to enable new choices for our customers 'beyond the meter' to support the low carbon transition.

The initiatives in this pillar, which are described in detail in the following pages are:

Engineering Net Zero Platform (ENZ) – The ENZ initiative focuses on enabling the path to Net Zero by integrating innovative technologies and data-driven approaches to reduce carbon emissions and enhance sustainability across the energy network.

Smart Data and Analytics – The Smart Data and Analytics initiative aims to leverage advanced data analytics and visualisation techniques to enhance decision-making, operational efficiency, and customer service.

Pillar 3

Pillar 3 – Developing Options to Manage Peaks in Load

Vision

Deliver a fully automated digital twin of the low voltage network that facilitates effective network monitoring, coordination of design and connections, and faults management.

Change Drivers

- Up to 1.5m new EVs by 2030
- Up to 900,000 new heat pumps by 2030
- 70% Increase in network reinforcement costs
- 16% Increase in peak demand
- 400% increase in flexibility

ED2 End State

- Real-time LV network visibility
- Minimised fault occurrence and time do restore post-fault
- Avoid constraints by design
- Efficient LV flexibility procurement
- Predictive reinforcement and maintenance

How this pillar has evolved over ED2

The scope of this pillar has remained largely on track compared to our original ED2 plan. We have continued to develop our Engineering Net Zero (ENZ) platform and have a steady pipeline of use cases, improvements, and integrations through to the end of ED2.

We are continuing to deploy Network Controllable Points (NCPs) across our network, and we have identified and implemented a project not originally in the ED2 plan that will bring significant value in assisting the roll out of these devices. Implementation of the Salesforce Flow Orchestration technology will standardise and streamline the rollout of NCPs.

Our initiative to maximise the benefit of LV monitors on the network and receiving smart meter data is underway and we have completed a pilot project to identify cables at risk of fault. Results from this pilot have been promising and we are now rolling this out as a fully operational solution. Further use cases for maximising the use of LV monitor and smart meter data have been identified and will be developed over the remainder of ED2.

The replacement PI historian initiative is now underway slightly later than originally planned so we are now looking at a deployment in the first half of 2026.

Deliverables

Deliverables	Status
Develop an ENZ Platform, built directly on the NAVI and Smart Meter Data Integration Fabric (SDIF) solutions to provide an integrated system with enhanced real-time data-driven visibility and control of the LV network.	In Progress
Adopt a new historian solution which manages both SCADA event data and time series data from edge devices and provides easy access to the data for analytics activities.	Planned

Pillar 3

Engineering Net Zero Platform (ENZ)

Overview

The Engineering Net Zero (ENZ) Platform is a significant step forward in the creation of a digital twin of our network and will in time contribute to the development of a National Digital Twin. The ENZ Platform will build on technologies introduced in RIIO-ED1, and will apply across all voltage levels.

The ENZ platform will be extended to integrate granular network usage data from four previously independent data sources which are network monitoring, smart meters, forecasting, and asset condition. This will facilitate real-time data-driven planning and operational decisions. This solution builds directly on the NAVI and Smart Meter Data Integration Fabric (SDIF) solutions put in place during ED1.

We will increase the platform's capability by the widescale roll out of LV network monitors and the incorporation of this capability will be enabled by the big data platform.The platform will be a significant move forward for us as a network operator, and for our customers. It will enable us to predict and respond to customer needs quicker, increase the reliability of supply, and operate the network more efficiently.

Bringing together granular network usage data with forecasting, asset health, risk, criticality, and performance data in one platform will enable us to coordinate, prioritise and efficiently deliver interventions across all drivers - reinforcement, asset modernisation, faults, and connections.

Change Drivers

It is critical that SPEN proactively assesses the impact on our network from expected LCT update, this enable SPEN to plan where, when and how our network is reinforced to connect and manage the demand and generation of LCTs.

Automated network analysis is critical to keep up with the rapid change in our network, each time there is policy change or technology change can impact our forecasting and impact our network planning. ENZ gives the ability to continually iterate our plans as frequently as weekly as the network landscape changes - this includes the new information we gather from LV monitor deployments which is enriching our network insights and can improve certainty.

Status Update

The ENZ minimum viable product (MVP) marks the first phase of the redevelopment of the existing ENZ system. The MVP supports the on-going review, revision, & reporting of the RIIO-ED2 Load Related Expenditure (LRE) plan, and supports the development of the RIIO-ED3 LRE plan. The team has developed a next generation ENZ, by incorporating it onto our NAVI platform. The final stages of testing and validation are underway, against the ED2 ENZ results, with a plan to go-live by end March 2025.

The scope of ENZ Phase 2 is currently being defined, which will introduce further functionality in the more real-time identification of network flexibility, configuration, and reinforcement.

Benefits

Detailed Demand Forecasting

- Consolidates data from EV chargers, heat pumps, and other loads
- Predicts where peak demand will occur, guiding network reinforcements
- Reduces risk of unexpected overloads as low-carbon tech adoption grows

Targeted Infrastructure Upgrades

- Data-driven insights show the most critical areas to reinforce
- Optimises spending by focusing on high-impact improvements
- Shortens lead times for new customer connections

Coordinated Decarbonisation

- Facilitates planning with local authorities, developers, and community groups
- Encourages collaborative decisions on renewable generation
- Aligns with broader regional or national net-zero goals

Personas

SPEN Net Zero Project Lead

Challenges in my day-to-day role:
Forecasting demand surges from new electric vehicles and heat pumps is tricky when so much of our data is in silos. We risk either underestimating and causing overloads, or overbuilding infrastructure that isn't actually needed.

In the future:
With the ENZ Platform, I'll have access to unified data and dynamic modelling tools that let me see evolving usage patterns in real time. I'll accurately predict where upgrades or new solutions are needed, ensuring customers have capacity without wasting resources.

Flexibility Coordinator

Challenges in my day-to-day role:
As we develop the flexibility markets it is important to give longer term certainty on flexibility improvements, calculating this and coordinating with the network planners it complex.

In the future:
The ENZ platform is the common platform aligned to our decision making framework on our load related reinforcement plans; moreover, I can accurately forecast flexibility requirements out three years and the forecasts have improved since integrating more sensor data.

Pillar 3

Smart Data & Analytics

Overview

SPEN are in the process of deploying a significant increase in LV monitoring. There are plans to install an additional 14,000 LV monitors, with a projected estimate of up to 1.8 million data points to be managed by a Historian. Our current historian has capacity for 100,000 data points. In addition, we also need to increase capacity to store LV and potentially Low Carbon Technology (LCT) related information.

We aim to enhance the depth of information captured from our HV network to support long-term trend analysis and design optimisation. This foundational capability is essential for enabling a Distribution System Operator (DSO) model. To achieve this, we must implement a robust long-term data storage solution alongside advanced analytical capabilities.

SPEN current historian will not facilitate the support of key Digitalisation and DSO strategy goals, such as

- Forecasting
- Self-serve connections
- Near-real time capacity/carbon/voltage/fault heatmaps (internal & external use)
- LV (LCT) visualisation & active management
- Predictive maintenance

We will deliver a new historian solution to manage both SCADA event data and time series data and will provide easier access to the data for analytics activities. To maximise the use of the data stored in the historian in the provision of services, we need to have an analytics environment capable of manipulating a high volume of data in a short timeframe.

Change Drivers

Increase capacity required to store LV and potentially Low Carbon Technology (LCT) related information is needed as the uptake of LCT increases.

Minimise the risk of network damage and extended outages by effectively managing the increasing network complexity through enhanced access to and utilisation of high-volume monitoring data.

Status Update

The replacement of our historian was planned for the 2nd half of the ED2 period so the preparatory work for this initiative has recently commenced. Business requirements have been defined and a procurement process initiated for a competitive tender to identify the best solution to meet these requirements. The new historian will be implemented in Q1 2026 and will also replace our Power Systems Alerts tool as part of an overall flexible cloud analytics environment.

Benefits

Centralised, High-Quality Data

- Clean, governed datasets from across the business in one location
- Standardised formats make cross-team collaboration easier
- Reduced errors and rework through verified, consistent data

Enhanced Predictive Insights

- Advanced analytics spot usage patterns and forecast equipment failures
- Data-driven modelling informs load management, reducing network stress
- Real-time dashboards increase operational agility

Innovation and Collaboration

- Open APIs allow universities and tech partners to trial novel solutions
- Rapid prototyping of new tools or algorithms for system optimisation
- Encourages a culture of continuous improvement and data-led decisions

Personas

Data Scientist at SPEN

Challenges in my day-to-day role:
I spend hours cleaning and merging data sets from multiple legacy systems. It's a slow process that limits how quickly I can deliver insights or build predictive models for load management.

In the future:
With a robust analytics platform and better data governance, I'll pull clean, real-time data into my models and dashboards. I can spot trends, like clustering of EV usage, and help the business respond to these patterns quickly, improving network reliability and efficiency.

University Researcher Partnering with SPEN

Challenges in my day-to-day role:
I work on advanced grid algorithms, but obtaining consistent data has been challenging. When data is siloed or incomplete, it's hard to test new methods for load balancing or to validate grid simulations accurately.

In the future:
SPEN's improved analytics environment will give me standardised, high-quality data to run my models and share findings back with them. This will accelerate real-world trials of innovative load management techniques, helping everyone move closer to a smart, low-carbon energy system.

Pillar 4 – Supporting New Business Models & Markets

We play a critical role in meeting the UK's ambitious climate change targets for a sustainable, Net Zero future. While we do this, we must reduce our own environmental impacts, adapt our world-class, resilient network to the effects of climate change, and continue to deliver sustainable value for all our customers.

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

We will achieve this by developing flexibility markets and solutions, actively participating in cross-industry initiatives to identify and develop whole system solutions, and by sharing operational and market data with our customers, stakeholders, and market participants through our online data portal.

In the longer term, Open Data and Digitalisation will help promote cross-vector markets which can address whole energy system challenges.

The initiatives in this pillar, which are described in detail in the following pages are:

Sustainable Operations – The Sustainable Operations Initiative focuses on reducing environmental impacts, adapting the resilient network to climate change, and delivering sustainable value for customers.

DSO Market Operation – The DSO Market Operation initiative focuses on developing flexibility markets and solutions, actively participating in cross-industry initiatives to identify and develop whole system solutions, and sharing operational and market data with customers, stakeholders, and market participants through an online data portal.

Open Data – Our Open Data initiative focuses on expanding our approach to secure data sharing with our stakeholders, in a transparent way, enabling innovation and market development.

Pillar 4

Pillar 4 – Supporting New Business Models & Markets

Vision

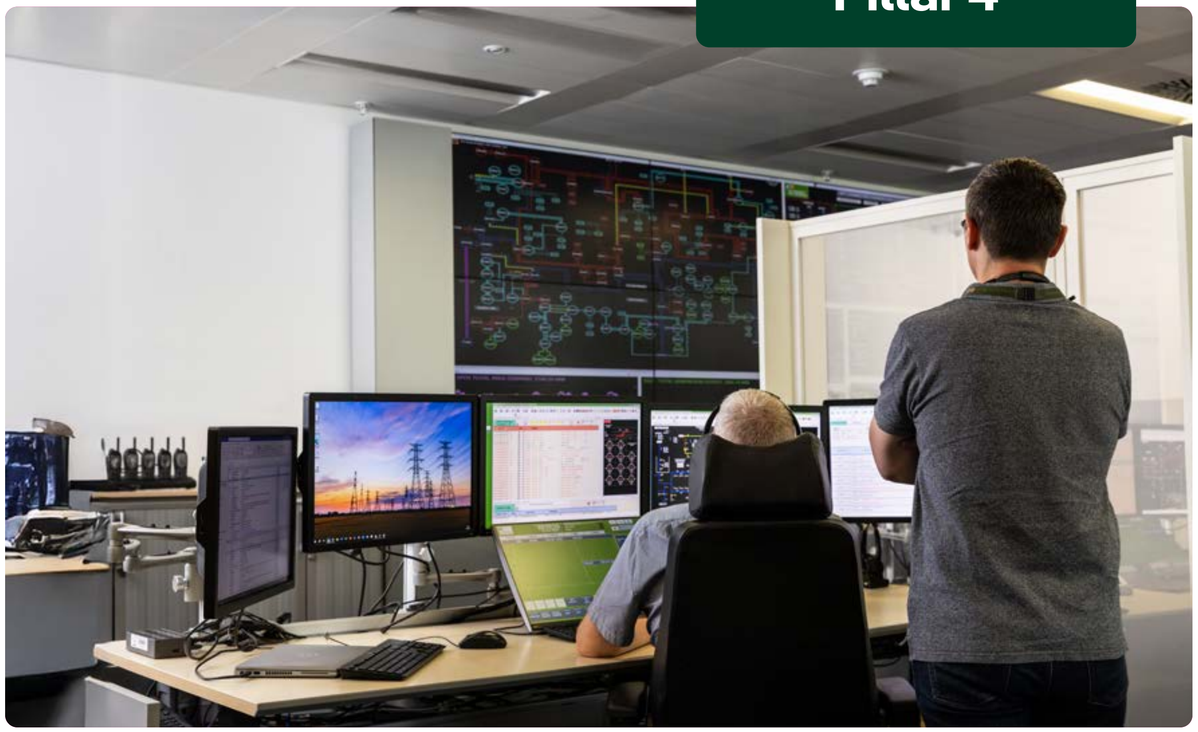
Lead the charge towards net zero by decarbonising our operations and creating an enabling environment for cross-industry entities contributing to the energy transition.

Change Drivers

- Net zero targets: Scotland (2045), England (2050)
- SPEN internal target of Net Zero by 2040.
- Modernising Energy Data principles
- Whole systems thinking
- Facilitation of secure data sharing

ED2 End State

- Distribution System Operator
- Minimised CO_2e and natural capital impact by design
- Extensive cross industry collaboration
- Data treated as 'presumed open'
- Supporting Low Carbon Technology (LCT) ecosystem



How this pillar has evolved over ED2

A major focus area throughout ED2 is to deliver digital solutions to support our environment & sustainability goals and commitments. Since the start of ED2 we have made good progress in this area through delivery of a solution to capture and automate information about waste generated in the supply chain and its eventual disposal.

We have also enhanced our data sets to capture biodiversity, natural capital, and carbon accounting metrics to give greater visibility of our environmental impact and enable process and behavioural changes to be made. We have defined a full roadmap of environment & sustainability projects to be delivered over the remainder of the ED2 period.

The initial focus of our DSO initiative has been on flexibility and we have now implemented a flexibility platform that enables the procurement, dispatch, reconciliation, and settlement of flexibility services. Over the remainder of ED2 the focus for this initiative will be on forecasting and energy market systems.

Our Open Data Portal was implemented in February 2023. We are now focused on enhancing our Portal and its' content to align with the needs of our stakeholders.

Deliverables

Deliverables	Status
Implement a Biodiversity and Natural capital tool to capture and store data to ensure environmental impacts are considered in our operating activities.	In Progress
Carbon accounting is captured and integrated in our corporate systems to monitor our carbon activities to facilitate the transition to Net Zero.	In Progress
Embed circular economy principles (BS8001) to principles in our supply chain by using heat maps to track material use using corporate business intelligence and analytics tools. Our target is 95% landfill avoidance by 2023 and 98% by the end of 2028.	In Progress
A DSO infrastructure that will enable SPEN to manage its systems and deliver new and enhanced projects and services to our customers more actively.	In Progress
Open data platform to enable data transparency and data sharing to drive change in decarbonising our society. Open Data Platform is available now with key upgrade release in 2023/24	Complete

Pillar 4

Sustainable Operations

Overview

It is our vision to embed sustainability into the fabric of how we operate, ensuring decisions are made with a detailed consideration of environmental impacts upstream and downstream of our activities. Digitalisation will play a critical role in enabling the execution of our Environmental Action Plan and help us to decarbonise our operations in an efficient and data-driven manner. Digital technologies will enable us to drive forward our commitment as a business to Net Zero operations by 2040 while enabling the wider energy system to deliver on Net Zero in Scotland by 2045 and England by 2025.

We will build a digital repository of natural capital and habitat information of our assets and utilise this data to aid business decision making processes for projects and management of existing sites. We will evaluate and trial the implementation of available biodiversity and natural capital tools for the purpose of biodiversity baselining and natural capital enhancements.

We will utilise satellite imagery and drones with light detection and ranging (LiDAR) software to capture data that will enhance our condition-based approach to vegetation management, allowing it to be more predictive. The use of drones will increase the frequency of surveys and the height they can be carried out at, therefore improving the quality of data.

We will implement a measurement tool to track and account for non-financial sustainability metrics such as the embodied carbon impact of our operations and supply chain.

Change Drivers

To facilitate the transition to Net Zero and support our ambition to reduce our carbon footprint in line with our science-based targets, we must take active measures to manage and reduce the carbon associated with the infrastructure we design and build (including the embodied carbon).

With sustainability as a core priority, we are committed to ensuring that our projects do not result in a net loss of natural capital or biodiversity. Over time, our goal is to transition towards a model that actively achieves a net gain in natural capital.

Status Update

We have completed the implementation of a new contractor sustainability waste and materials tracking tool, so all waste generated is fully monitored and reported. The digitisation of waste transfer notes, leveraging optical character recognition, has streamlined the data collection process and enhanced data accuracy. This tool facilitates direct input from our contractors, incorporates compliance checks, provides a consolidated view of sustainability data, and fosters greater engagement across the supply chain.

Our core SAP system is currently being enhanced to include carbon metrics associated with labour and materials for projects which is the first step to Carbon Accounting where emissions are tracked in the same way as project costs.

A roadmap of environmental & sustainability digital projects has been fully defined to be delivered over the coming years.

Benefits

Transparent Environmental Metrics

- Real-time tracking of carbon emissions, energy use, and waste
- Clear visualisations of progress against sustainability targets
- Builds trust with regulators, investors, and communities

Lower Operational Footprint

- Optimised fleet usage and greener operational processes
- Reduces waste through better resource planning and recycling
- Sets an example for eco-friendly practices in the industry

Stronger Corporate Reputation

- Demonstrates commitment to net-zero leadership
- Attracts talent and investors aligned with sustainable values
- Opens doors to new partnerships and community initiatives

Personas

Environmental Champion

Challenges in my day-to-day role:
I'm committed to living sustainably and pushing large organisations to lower their carbon footprints, but it's hard to get transparent and meaningful data on their vehicle fleets, waste output, or energy consumption and find out the company's true environmental impact.

In the future:
With improved sustainability tracking, I'll have access to real-time metrics and this transparency will make it easier to rally support for local green initiatives, and collaborate more closely with the company to ensure we all contribute to a cleaner, healthier planet.

Sustainability Officer

Challenges in my day-to-day role:
Collecting info on vehicle fleet emissions, office energy consumption, and waste output is very manual. I can't confidently see where we're performing well or where we need to improve, so setting meaningful targets is tough.

In the future:
With a dedicated sustainability platform, I'll have an overview of all our environmental metrics in one place. I'll see real-time data, which helps me flag inefficiencies and roll out green initiatives. This transparency also means we can show customers and regulators how seriously we take net zero.

Pillar 4

DSO Market Operation

Overview

The energy landscape is quickly changing as the way our customers generate, distribute, and use energy evolves. The magnitude of these changes means there is a clear need for a set of functions and activities to meet our customers' evolving needs, deliver Net Zero, and ensure the continued safe, reliable, and efficient operation of the distribution network and wider energy system for all customers. These functions and activities in turn require new enabling tools, systems, and capabilities. This initiative delivers the required infrastructure across our IT estate to enable DSO.

As our energy system evolves, it will become more complex, dynamic, and interactive. However, these advancements also necessitate new tools for information sharing, the integration of emerging providers and markets, improved coordination in decision-making, and greater transparency across the system.

These tools, combined with data from network monitoring and other sources, enable us to make data driven interventions at the right time so we can meet our customers' needs efficiently. They support greater use of competitively procured flexibility services by allowing us to give more notice and details of network requirements to the market.

Change Drivers

To meet evolving customer needs, we are developing smarter, more flexible network solutions that reduce reliance on traditional reinforcement to lower costs. We are actively exploring flexibility markets with new and existing customers who can adjust their generation or demand, enabling a more efficient and responsive energy system.

Further investment in Market Platform(s) is required to improve the visibility and participation of flexible assets and to support our Neutral Market Facilitator role.

Status Update

Working in parallel with the ENZ initiative, the team is currently procuring SPEN's Integrated Flexibility Management Platform (IFMP). The successful supplier(s) will work with SPEN to deliver an end-to-end solution to take flexibility requirements from ENZ and the LV Control Room through the full lifecycle of flexibility asset registration, procurement, scheduling, dispatch, and settlement.

The solution selection is critical to improve the flexibility service provider (FSP) take up and speed up process automation as the frequency and scale of flexibility trades increases and the timely settlement to FSPs. The MVP for IFMP is expected to start delivering 3-6 months after contract award.

Benefits

Efficient Flexibility Markets

- Simplifies bidding and dispatch of flexible loads or generation
- Market signals help balance supply and demand in real time
- Reduces the need for expensive network reinforcement

Greater Participant Access

- Clear rules and digital platforms encourage smaller providers to join
- Develops local energy markets, empowering communities
- Fosters a more diverse, competitive environment

Enhanced Grid Reliability

- Quick response to peak loads by tapping distributed resources
- Minimises risk of blackouts or overloads with active load management
- Boosts resilience as more low-carbon technologies connect

Personas

Flexibility Services Aggregator

Challenges in my day-to-day role:
I manage a portfolio of industrial customers who can shift their energy usage to off-peak times, but joining local flexibility markets is complicated. There's no streamlined way to see when SPEN wants flexible load or to settle payments promptly.

In the future:
With a dedicated DSO market platform, I'll register our demand response capabilities, bid into available flexibility contracts, and track earnings in real time. This transparent marketplace makes it easier to plan, helps the grid stay balanced, and rewards us for shifting consumption.

DSO Transition Coordinator at SPEN

Challenges in my day-to-day role:
To support and enable the transition from a DNO to a DSO, I have to view and manage local generation, storage, and flexible demand, all while ensuring fair market access. Without the right digital tools, it's cumbersome to manage real-time constraints and multiple stakeholders.

In the future:
With the DSO Market Operation solution, I'll monitor network constraints in real time, automatically invite providers to offer flexibility, and settle transactions quickly. This process will be transparent for participants, making our network more resilient and opening the door to new energy services.

Pillar 4

Open Data

Overview

We recognise the critical role that data sharing plays in enabling Net Zero. This view is shared by Ofgem and, under the RIIO-2 framework, they have introduced the requirement for all network companies to comply with their Data Best Practice (DBP) guidance and the principle that data should be treated as 'presumed open'.

Our stakeholders have told us that access to, and use of, our data is pivotal to their ambitions. That is why our plans prioritise developments in our secure data sharing and data services, building on the launch of our Open Data Portal. We will publish new and enhanced datasets, using industry standard formats where applicable, deliver intuitive visualisations, and enhance the security and accessibility of our Portal. All of this will be aligned with our stakeholders' needs and will enable us to surpass the requirements of Ofgem's DBP guidance. To help our stakeholders understand how our datasets can meet their needs, we will create and publish a comprehensive set of documentation and user guides that detail the datasets and their use cases.

Our aim is to ensure that we can make data openly available for our stakeholders. Where this is not possible, due to exposure of sensitive information, we will continue to work with our stakeholders to identify appropriate controls that can be implemented. This allows our stakeholders to still access, and make use of, our data and allows us to be confident that we are sharing our data in a secure manner. We will continue to collaborate with our Data Security colleagues and adapt our Data Triage process to any updated guidance from Department for Energy Security and Net Zero (DESNZ) and the National Protective Security Authority (NPSA).

Change Drivers

We are committed to sharing data with our stakeholders on a "presumed open" basis, to ensure we meet their needs while also complying with Ofgem's Data Best Practice principle of a 'presumed open' approach.

The demand for data is growing exponentially to securely publish additional, and enhanced, data on our Open Data Portal in formats that meet our stakeholder requirements. We will also continue to carry out, and enhance, our robust Data Triage process to ensure we are meeting data security requirements from the NPSA.

Status Update

To enhance transparency, accuracy, and accessibility of our data, we have updated our Portal and are publishing results of our Data Triage process and Data Quality Assessments. This includes information on the methodology used to compile our datasets, any controls implemented to prevent exposure of sensitive information, and the quality scores of our datasets. We have also published our 2025 Data Roadmap, providing transparency on future publications developed based on stakeholder feedback.

We have enhanced our feedback forms to allow stakeholders to provide more tailored feedback and launched our first video to demonstrate how to use our Portal. Our new "data re-use" allows Stakeholders to share success stories on how they use our data.

Our comprehensive Data Triage framework, aligned with ENA's Playbook and NPSA's Guidance, balances meeting stakeholder needs while also protecting our data and our critical network assets.

Benefits

Network Operations

- Security protocols ensure that only authorised personnel can access critical data, minimising the risk of data breaches and unauthorised use.

Customers and Stakeholders

- Improved access to our data with enhanced supporting information empowers our customers and stakeholders to make better informed decisions and realise their ambitions.

Operational Efficiency

- Easy access to our data in multiple formats supports collaboration with our internal and external stakeholders, allowing our colleagues to dedicate more time to enhancing datasets in line with stakeholder needs.

Personas

Renewables Developer

Challenges in my day-to-day role:
It is difficult for me to find data to support my needs. Data is usually tabular, which makes it difficult to see trends and identify opportunities or issues. Limited system capabilities mean I must download the data and analyse within my own reporting tools, which is time consuming.

In the future:
I can now find datasets more easily. The ability to view data geographically helps me to quickly identify locations where we may invest. The new visualisations make identifying trends and patterns in the data much easier.

Academic

Challenges in my day-to-day role:
I am aware of SP Energy Networks Open Data Portal, but due to the complexity of the datasets I find it difficult to understand how I can best use it to meet my needs. The dataset formats are inconsistent across different industry Open Data Portals which makes it challenging to stack and analyse the datasets efficiently.

In the future:
The new documentation and user guides on the Portal explain the datasets in detail including their structures and use cases. This makes it easy for me to understand how I can effectively use the data to meet my needs. The improvements in standardisation of dataset formats across different industry portals facilitates easier integration and analysis.

Pillar 5 – Investing in the Digital Skills of Our People

Investing in our people will accelerate adoption of digital technology and enable our people to identify new and innovative ways of performing their tasks. We will create highly skilled, digitally inclusive jobs in our local communities.

We recognise the immense value that data & digital skills bring to our organisation. By prioritising these skills, we are committed to providing exciting opportunities for our people to contribute to a modern, digitalised energy system. As a skills-first organisation, we believe that investing in our people's capabilities is key to unlocking innovation and achieving our strategic goals.

Our Commitment to a Digital Skills-First Culture

We will deliver this through:

1. Cultural Change Programme: We will implement a comprehensive cultural change programme to ensure our people understand the importance of data & digital skills. This initiative will highlight the value these skills can unlock for our customers, stakeholders, and our organisation as a whole.
2. Support and Training: We are dedicated to supporting our people during this transition by equipping them with the right agile and digital skills. This includes providing access to cutting-edge training and development resources.
3. Specialist Skills for Net Zero: We will increase awareness of the need for specialist skills to support our transition to net zero. By engaging both external and internal specialists, we will develop and deliver targeted training programmes that address these critical areas.
4. Graduate Programme and Recruitment: Our graduate programme and recruitment policies will be expanded to focus on attracting and nurturing digital talent. This will ensure we have a pipeline of skilled professionals ready to drive our digital transformation.
5. Innovative Learning Technologies: We will leverage digital technologies such as gamification of training and knowledge-based AI assistants to enhance our learning and development programmes. These tools will make learning more engaging and effective, helping our people to continuously develop their skills.

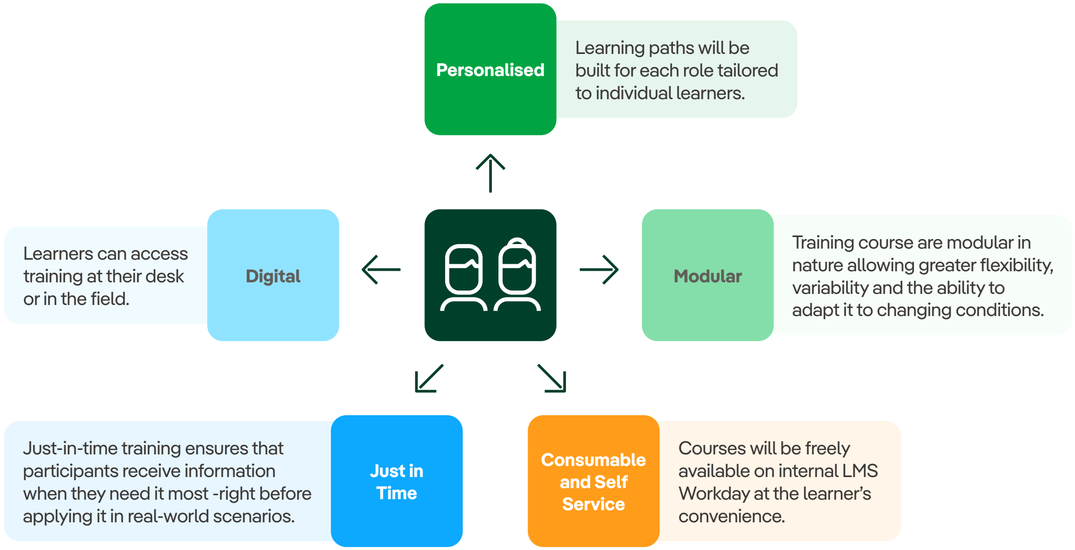
By adopting a digital skills-first approach, we will:

- Foster a culture of continuous learning and innovation.
- Enhance our ability to respond to industry changes and technological advancements.
- Improve our operational efficiency and customer satisfaction.
- Strengthen our competitive edge in the digitalized energy market.
- Support our long-term sustainability goals, including our transition to net zero.

Pillar 5 – Investing in the Digital Skills of Our People

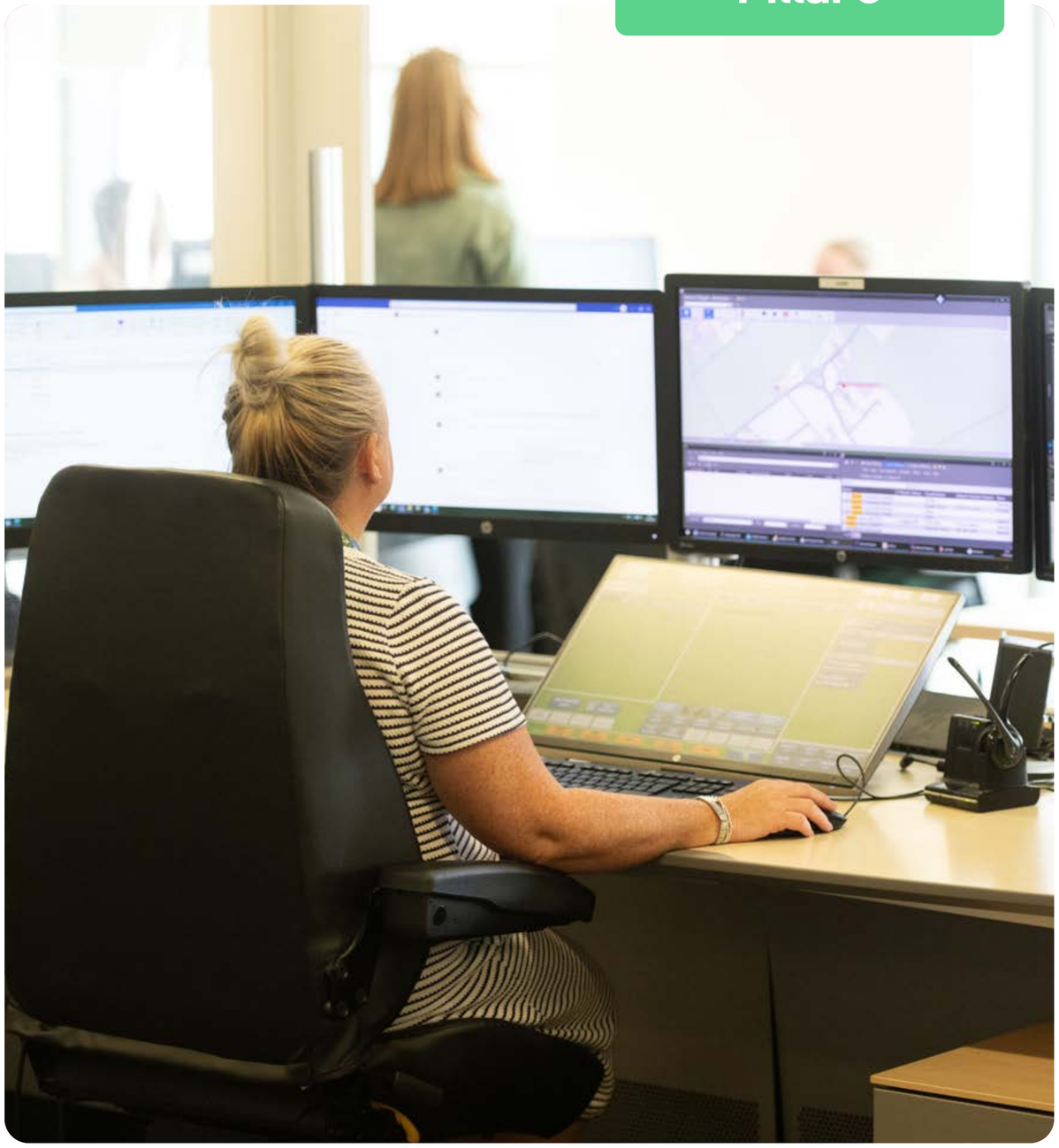
Training Principles

To keep pace with the changing landscape of learning, it is important to move from traditional learning methodologies and adapt to a Human Centred Way of Learning. A shift from just teaching people to enabling them to learn and perform. The focus is shifting the learner from being a passive student who is taught only in the classroom, to an active and self-responsible individual who is learning everywhere and every time.



Deliverables

Deliverables	Status
Workforce Awareness of change	Ongoing
Upskilling to enhance existing skills sets	Ongoing
Training to teach new skills	Ongoing
Recruitment where a gap is highlighted	Ongoing



Pillar 5 – Investing in the Digital Skills of Our People

SPEN Learning Model

Learning at SPEN is characterised by self-direction, experience-based learning and relevance to real-life situations. We follow the principle of 70:20:10 as a guide, ensuring employees can learn on the job, learn from others and have access to formal training where needed.

70%

of learning happens through on-the-job experience.

- Most learning occurs through practical, hands-on experiences and challenges.

20%

of learning happens socially through colleagues and friends.

- Enables you to learn with and through others, by completing tasks and overcoming challenges together through collaboration and feedback.

10%

of learning happens via formal training experiences.

- This the traditional method of learning through formal instruction.

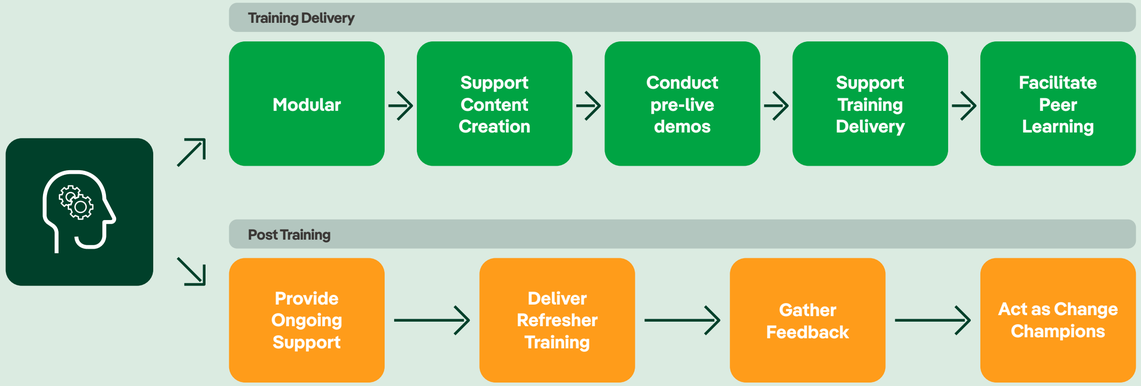
Although it only makes up 10% of our learning, formal training is an essential part of any training strategy. It forms the backbone of successful learning initiatives.

Super Users

To improve the experience of end learners and drive change adoption, we will be leveraging internal superusers to help drive our training programs. Superusers play a crucial role in the implementation of new tools and systems by promoting change and encouraging adoption.

They undergo advanced training to become proficient in the new processes, assist in delivering training sessions, and support the creation of comprehensive training materials. By providing ongoing support and facilitating peer learning, superusers help upskill their colleagues and ensure a smooth transition during this period of change. Additionally, they act as change champions, reinforcing training content and monitoring adoption to identify areas for improvement.

Superuser Support Structure



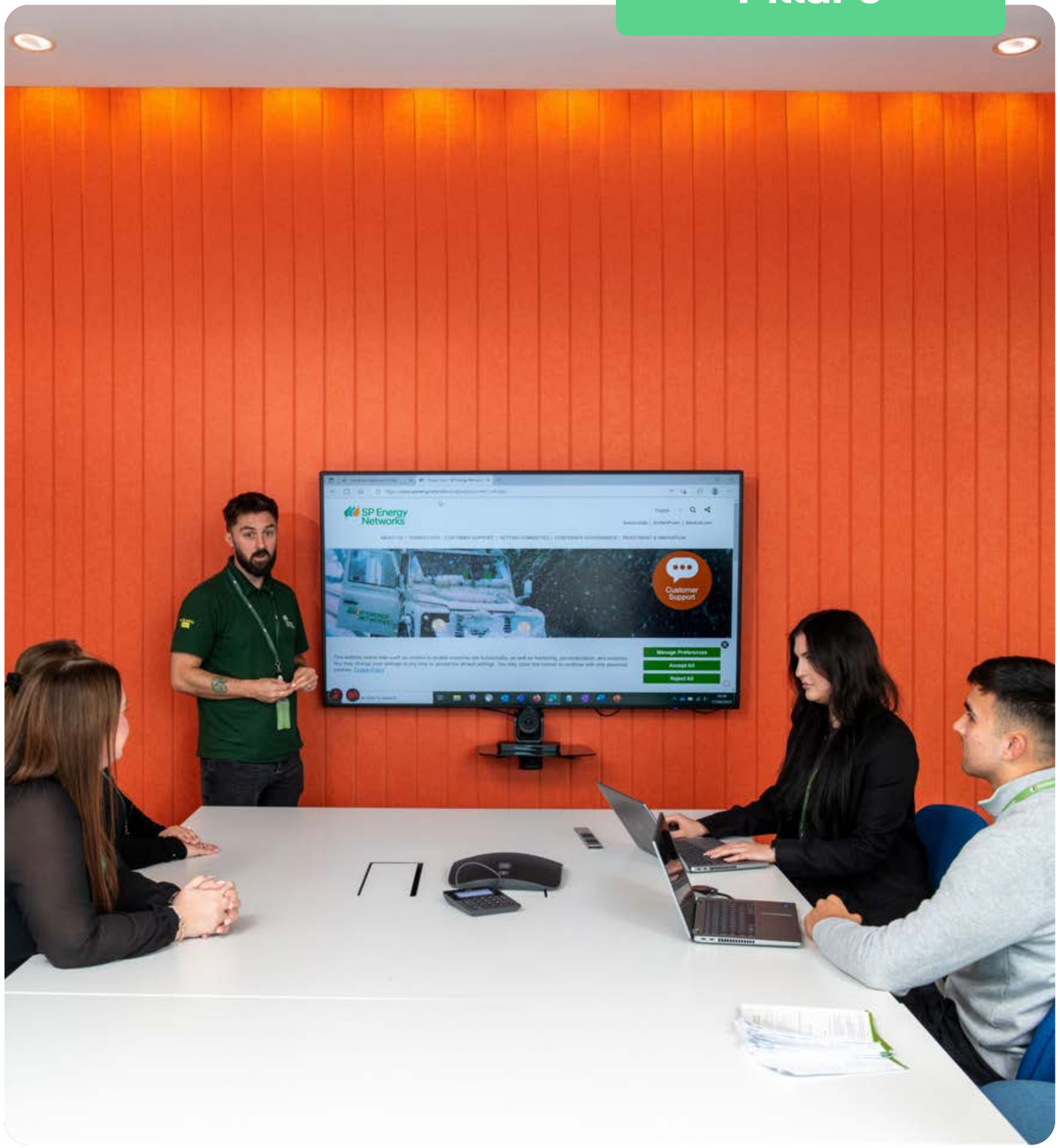
Pillar 5 – Investing in the Digital Skills of Our People

Learning Management System- Workday

We will be utilising our Learning Management System, Workday, to enhance our training programs and ensure a seamless transition to new systems. This platform will play a pivotal role in centralising our training efforts, making learning more accessible, and supporting the continuous development of our team.

Benefits of Workday:

1. Centralised Knowledge Sharing: Provides a centralised platform where all training materials, guides, and resources are stored, making it easy for employees to access and share knowledge.
2. Accessibility: Training materials are easily accessible to all employees, anytime and anywhere, which supports flexible learning schedules and remote training.
3. Consistent Training: Ensures that all employees receive the same quality of training, regardless of their location, which helps maintain consistency in learning and development.
4. Tracking and Reporting: The system allows for tracking learner progress, completion rates, and performance, providing valuable insights into the effectiveness of training programs and identifying areas for improvement.
5. Cost-Effective: By reducing the need for physical training sessions and printed materials, we can significantly lower training costs.
6. Scalability: Easily scale to accommodate a growing number of employees and evolving training needs, making it a sustainable solution for long-term employee development.
7. Enhanced Engagement: Interactive and engaging learning modules to boost employee engagement and motivation to learn.
8. Support for Upskilling: Supports the upskilling of employees by providing a structured and comprehensive approach to learning new digital skills and competencies, which is essential for career development and organisational growth.



Pillar 5 – Investing in the Digital Skills of Our People

Our Agile Upskilling Strategy

An Agile Academy has been developed in collaboration with our corporate IT function to support SPEN in developing a suite of agile skills and concepts. These skills and concepts can provide the basis of our agile upskilling requirements. We have identified and grouped these skills into 3 main learning pathways for different types of learners:

1. Agile Leadership: upskilling our managers and executive teams.
2. Agile Practitioners Scrum & Product Owner: upskilling our centre of excellence, business change, and the wider business.
3. Agile Individual Contributor: just-in-time training for agile teams.

Learning Pathway	Audience
Agile Leaders	Designed specifically for those who are responsible for guiding Agile teams or business areas, ideal for those who seek to deepen their understanding of Agile principles, drive organisational change and foster a culture of continuous improvement.
Agile Practitioners	Designed specifically for Agile Practitioners such as Scrum Masters, Product Owners and any team members who want to advance their understanding of Agile methodologies.
Agile Individual Contributor	Designed specifically for those who want to thrive in an Agile environment, contribute effectively to their teams, and grow their skills in Agile practices.

Agile skills will be used extensively to maximise the value of outcomes delivered, by ensuring that user and stakeholders needs are at the heart of all solutions built. Therefore, it is important that staff have the relevant training in the use of agile methodologies.

Learning Pathway	Purpose
Scrum Master	Focus on developing our Scrum Masters to facilitate Agile processes, coach our delivery teams to maximise digital delivery value by supporting sprint planning and delivery, removing delivery impediments, and ensuring teams effectively collaborate while remaining constantly aligned to adapting goals and objective.
Product Owner	Provide Product Owners with the skills to enable a strong focus on delivering user-centric solutions, gathering stakeholder feedback to adapt digital solutions to changing stakeholder needs while operating autonomously to prioritise work for the team to maximise value delivery.
Agile Development Team	Provide agile development teams with the skills to focus on mastering Agile principles and DevOps tools and techniques to increase flow through automation, securely deliver technical excellence, and seek to shorten user feedback loops, increase team collaboration and strive for continuous learning and improvement.
Leadership	Provide leadership learning pathways focused on supporting the organisational culture change to embrace Agile and DevOps practices, ensuring the structures and decision making processes support agility and promote continuous improvement.
Subject Mater Experts (SMEs)	Provide the skills for Business/Technical process experts to support agility and innovation by improving responsiveness to emerging industry and technology trends and evolving customer needs.

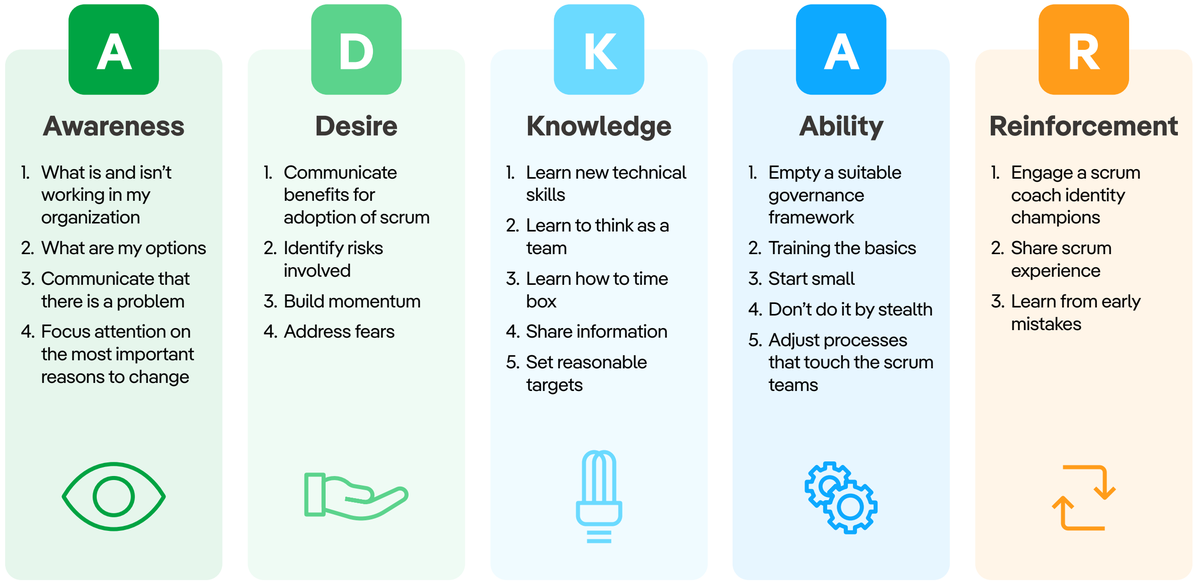
Change Management

Our digital strategy will transform how we work, with people at the heart of this change. We will use an agile version of the well established Prosci ADKAR model, focusing on individual contributors to incremental change. This means breaking down skill transformations into smaller, adaptive programs of change.

Each step ensures our people are confident in:

- Awareness: Understanding the need for change.
- Desire: Wanting to support and participate in the change.
- Knowledge: Knowing what to do during and after the change.
- Ability: Implementing new skills and adapting to new behaviours.
- Reinforcement: Making the change long-lasting.

ADKAR Change Management Model



Pillar 6 – Improving Mastery of Our Data

During RIIO-ED2, we are focusing on developing our framework for Data Governance, including the implementation of our centralised Data Platform, supported by Informatica for data visibility. This encompasses the creation of prioritised data governance policies and our governance arrangements, with leaders from across the organisation committed to ensuring compliance with Data Best Practice.

Our Network Data and Intelligence function, responsible for stewarding our data strategy. This function comprises specialists in data science, data governance, data engineering and data architecture, fields which have not historically been part of our networks business. The initiatives in this pillar, which are described in detail in the following pages are:

Analytics, Operational and Regulatory Reporting

The Analytics, Operational & Regulatory Reporting initiative at SP Energy Networks aims to enhance reporting capabilities by leveraging advanced data foundations and scalable analytics through the Azure Data Platform. This initiative focuses on improving accuracy, efficiency, and readiness for new reporting requirements, while implementing automation to streamline processes. The successful migration of the ENSAPMIG reporting suite to cloud systems demonstrated the potential of cloud-based analytics. The initiative will expand over ED2, advancing Connections, DSO, asset management, and performance reporting. By leveraging modern data practices, SP Energy Networks aims to empower our employees to stay at the forefront of regulatory compliance and operational efficiency through data driven insights.

Data Systems and Platform

Our common Data Platform will become the host of multiple data hubs which represent different operations ranging from connections to DSO. The system shall have the flexibility to integrate data from different core systems including GIS, connections tools, IoT platform and OT environments; through interfaces that enable the timely integration of data through batch or streaming interfaces as appropriate. The Data Platform shall be designed for ease of use and access with emphasis on well governed data that can be trusted.

Data Governance and Mastery

Through deployment of our Data Governance platform Informatica, we are building up an inventory of all our data assets and their associated key attributes. This enhanced visibility of our organisations' data will offer insights into its' location, lineage, and ownership. At the same time, we are using Informatica's built-in quality management solution to carry out quality assessments of all data assets, allowing our stakeholders to make informed decisions on whether the data is fit for its' intended purpose.

Pillar 6 – Improving Mastery of Our Data

Vision

Our vision is to place data at the core of our operations; using trusted, high-quality data to generate insights that enhance decision-making, business outcomes, and value for our internal and external stakeholders.

Change Drivers

- Ambition to become a data-driven organisation
- Improving access and visibility of our data
- Compliance with Ofgem's Data Best Practice
- Introduction of Ofgem's Data Sharing Infrastructure (DSI)

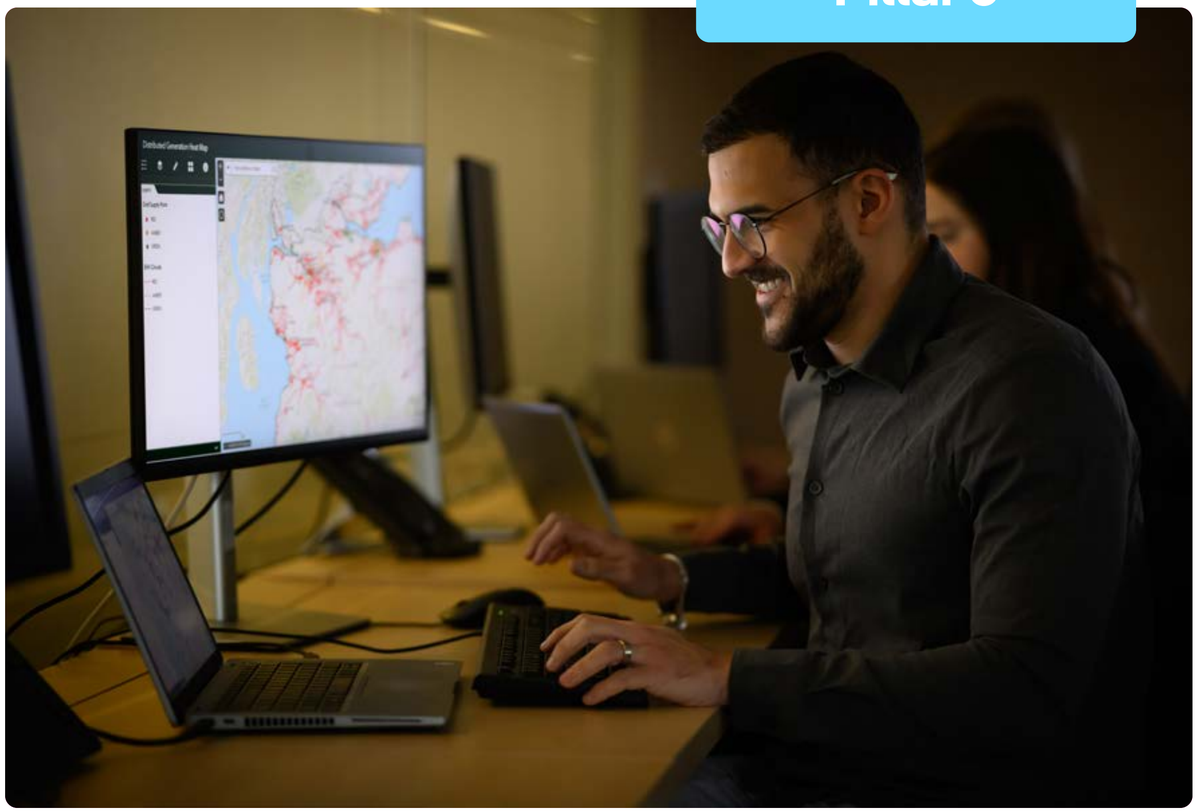
ED2 End State

- Data-driven organisation
- Industry standardised datasets as default
- Enhanced data maturity
- Secure data sharing through Open Data Portal and DSI
- Contributing to Digital Twins

How this pillar has evolved over ED2

During ED2, our newly established Network Data and Intelligence function has worked closely with our Business Transformation directorate to establish the foundations for Data Governance in our organisation. This has included deployment of our Data Governance platform Informatica, development of a suite of prioritised data governance policies, and engaging with leaders from across the organisation on Data Best Practice. These strong foundations enable us to confidently share our data, and we have continued to build on our external data sharing activities through our Open Data Portal, as described in Pillar 4.

Complimenting the processes and policies from Data Governance, several priority business datasets have been identified with synergies between them; with this there has been a renewed emphasis on empowering our users to have access to high quality data through purpose designed data hubs which let users derive their own insights to solve imminent business challenges.



Deliverables

Deliverables	Status
Introduction of a new reporting portal containing dynamic automated reporting across all areas of our organisation.	In Progress
Introduce new data capture mechanisms allowing new types of data to become available and its associated metadata. Big Data tooling will also be introduced to manage the size and complexity of our data landscape.	In Progress
Introduce new technologies, platforms, and models to support the integration between data platforms and systems.	In Progress
Introduction of Data Governance and Mastery to ensure good practices in our data creation, curation, and management.	Ongoing

Pillar 6

Analytics, Operational and Regulatory Reporting

Overview

The Analytics, Operational & Regulatory Reporting initiative aims to enhance SP Energy Networks' operational and regulatory reporting capabilities by leveraging advanced data foundations and scalable analytics through our Azure Data Platform. This initiative focuses on improving reporting across the spectrum by building on existing data foundations to ensure accuracy and efficiency, increasing readiness to respond to new reporting requirements swiftly, and proactively implementing automation where appropriate to streamline reporting processes with data from governed and trusted sources to provide assurances to our data users.

Central to the continued success is making this approach scalable – work is being undertaken to ensure this framework is scalable and provides agility to respond to reporting requirements by: having processes and technologies for our teams to securely integrate required data; process it efficiently using the most suitable cloud analytics depending on the scale of the data; before, securely making reporting outputs to users on a timely basis.

Working with our stakeholders internally and externally has identified priorities for reporting. This initiative will expand over the course of ED2 with further advances in Connections reporting, DSO reporting, asset management reporting, and performance reporting.

Change Drivers

In our ambition to become a data driven organisation is it important to have insights into our business operations for internal decision making as well as meeting our regulatory commitments in terms of regulatory reporting. To achieve this, additional relevant change drivers are: advancing our data foundations, ensuring regulatory compliance, enhancing operational efficiency, scalability and agility, and engaging stakeholders by providing timely and accurate information.

Finally, as Ofgem continues their journey in becoming more digital they have signalled (in RIIO3 price controls documents – the T3 SSMD) their intention to transform regulatory reporting and make it more seamless through integrating it with the data sharing infrastructure – this opportunity maximises the potential for more dynamic and frequent updates to the regulator for their own decision making.

Status Update

Our Data Platform comprises multiple components which is enabling and part of our working model for Operation and Regulatory Reporting including: ingestion, curation, storage and reporting tools. Our ENSAPMIG project has proven ingestion from our core systems including our GIS and will be strengthened through enhanced integration into SAP over the coming period. Through the use of Azure Synapse Analytics combined with Data Lake storage, an effective framework has been developed to load raw data, curate and process, and, to store this and business analytics outputs in a Data Warehouse.

In addition to ENSAPMIG, our NARM project is on-going using the same technologies, in this project the Azure cloud platform has been leveraged to serve data to our CBRM tools – through this approach it enables full traceability of NARM data end-to-end and shall be included in Informatica for assurance purposes.

Benefits

Automation and Scalability

- Through the use of cloud analytics systems, the initiative shall aim to automate report generation allowing the business and data analysts time to focus on insights to drive decision making within the business.

Improved Decision Making

- Access to comprehensive data enables customers to make more informed decisions. They can evaluate different scenarios, assess risks, and choose the best options for their specific needs.

Better Regulatory Compliance

- Better data management ensures that all processes are compliant with regulatory requirements. This reduces the risk of non-compliance providing peace of mind to customers.

Personas

Asset Manager

Challenges in my day-to-day role:
When I am reviewing an asset I need to look up multiple systems to get oil analysis, CBRM and other analytics – it makes analysing assets at scale difficult.

In the future:
With the reporting platform I can access the data through a number of options including through Excel or PowerBI – this access gives me and my team the insights we require to make decisions daily.

Data Analyst

Challenges in my day-to-day role:
When building report it can be difficult to find the correct source of information.

In the future:
With the Data Platform and the Data Governance tool I can search the catalogue and quickly find data spanning multiple systems such as GIS, Connection Data and Project Deliveries.

Pillar 6

Data Systems and Platform

Overview

Central to data operations is a robust data platform that can host, serve data and scale to the needs of the organisation – its' functionality can be split into integration, storage and access to data all of which must be flexible and available for a scalable, sustainable and economic data platform. The data platform is a pre-requisite for evolving requirements ranging from the data sharing infrastructure (DSI), business analytics, regulatory reporting and Open Data – collectively these consumer applications shall be served from a fully governed and assured dataset to ensure high quality outputs.

In recognition of the evolving needs from data our strategy reflects that without a robust data platform, efficiently integrated into our core systems with a range of tools and services to produce actionable insights, our data operations may not scale. Taking further the ambitions of Ofgem's Data Best Practice in which the technology must promote accessibility, interoperability and data re-use to achieve sustainable data benefits; these points combined raise the need for data to be presented within a common data model across core systems, brought together in a common data platform to have accessible data to empower internal users to get the most out of our data.

Our Data Transformation team, over the entire ED2 period and in preparation for ED3, are methodically reviewing the SPEN data landscape to map synergies across teams and are prioritising a number of areas which have been deemed relevant for creating 'Data Hubs' – these are distribution connections, distribution system operators (DSO), asset management, and environment.

Change Drivers

SPEN and the wider industry are becoming data-driven, expectations that data is readily available is natural and drives the need for a robust data platform – requirements stem from analytical needs, data sharing and reporting. The industry is fast evolving, with more coordination across network operators and industry actors such as the NESO, Ofgem and beyond have their own needs to integrated access to our data via the Data Sharing Infrastructure – data is required across multiple systems requiring not only access but interoperability with a common data model.

Status Update

Over the last two years in ED2, the team have delivered a range of data products with the data platform with each requiring data developments and all resulting with reusable business data. The team have developed API suites for integration into the ENA's novel LCT connection platform and to the National Energy Outage Platform (NEOP); the data platform has been leveraged for batch data pipelines for servicing reports and our Open Data Platform as well as Kafka streaming to securely transmit outage data from our distribution SCADA systems. As described in the reporting initiative, the data platform has been the foundation and the tools for developing reporting suites for ENSAPMIG, NARM.

We have commissioned analysis of our core data systems with our data users needs to document these (as per Data Best Practice) and will develop out these datasets at Data Hubs in 2025 / 2026.

Benefits

Data Ready for Decision Making

- Access to raw and processed data enables quick and easy access for answering business and stakeholder questions on-demand by having data proactively curated.

Improved Interoperability

- By working from a more centralised model, relationships between datasets are mapped and designed into the data assets within the Data Platform.

Automation and Scalability

- Through the use of cloud analytics systems, the initiative shall aim to automate report generation allowing the business and data analysts time to focus on insights to drive decision making within the business.

Personas

Open Data Lead

Challenges in my day-to-day role:
Our stakeholders have a range of important questions from our assets and network which are frequent and require a quick turn around. The data is not always ready to provide and I have to work with many teams to provide a single dataset.

In the future:
With the Data Platform the subject matter experts in the business have access to the data they need to quickly provide the data that has been requested.

Asset Manager

Challenges in my day-to-day role:
My role requires access to a range of asset data from multiple systems, this requires many IT requests to get the dataset then I need to bring it together on my local machine to process.

In the future:
With the Data Platform and Data Governance Tool I can see what data is available and can quickly request relevant data. Then I process the data in the cloud, reducing a forensic analysis of an asset from weeks down to less than a day.

Data Governance & Mastery

Overview

The exponential increase in the volume of data generated across our organisation, and the growing demand for access to this data, highlights the need to make sure that we have the right policies and processes in place to govern our data. We achieve this by implementing a framework for Data Governance into our organisation, and the backbone to this is our Data Governance platform Informatica.

Informatica is a cloud-native, Software-as-a-Service (SaaS) Data Governance platform that offers a comprehensive suite of functionalities designed to address various data management needs including data cataloguing, data quality and master data management. We are deploying Informatica, building up an inventory of all data assets, and their associated key attributes, in our Distribution business. This will provide us with full visibility of all our data assets and insight into data lineage and relationships – giving clarity on data accountability, the source of the data and how it interacts with other datasets.

At the same time as building up our inventory of data assets, we will use Informatica's built-in quality management solution to carry out quality assessments of all our data assets – allowing us to identify and deliver a prioritised data quality improvement programme and ensure that our data is fit for purpose.

Change Drivers

We have an ambition to become a data-driven organisation; an organisation that relies on trusted, high-quality data to drive business outcomes, decisions, and value. To enable this, it is essential that we have a comprehensive framework for governing our data and provide full visibility of our data assets, and their key attributes, to our internal stakeholders. This includes making information available on the quality of our data assets so that stakeholders are informed on whether the data is fit for its' intended purpose.

SPEN's licence obligation to comply with Ofgem's DBP guidance also raises a need to change the way in which we manage our data and how we conduct data-centric activities. The licence obligation introduces a mandatory requirement to implement a data catalogue, assign relevant data stakeholders, engage these stakeholders to understand their data needs, and open our data to allow our customers and stakeholders to consume the data they require.

Status Update

We have completed our Informatica Proof-of-Concept on asset data and Minimum Viable Product on customer data, successfully demonstrating the core functionalities of Informatica. We have used Informatica's quality management solution to undertake quality assessments of all openly published datasets on our Open Data Portal and will be publishing the results for transparency. Our roadmap for Informatica deployment throughout RIIO-ED2 is based on prioritised Use Cases, agreed by members of our Data Governance Forum.

We have developed 5 new policies that set out how we will govern data to drive business value and comply with Data Best Practice. The policies cover; Data Governance, Data Quality Management, Data Lifecycle, Data Privacy and Security Classifications and Metadata Management.

Benefits

Network Operations

- Classifying and tagging our data in Informatica based on sensitivity and importance ensures proper classification and protection. This enables us to manage our data securely and efficiently meet our stakeholders' expectations.

Customers & Stakeholders

- Utilisation of Informatica's built-in quality solution, means that within SPEN we can ensure data accuracy, consistency and reliability. This results in higher data quality, which is essential for making informed business decisions and maintaining trust in our data-driven processes.

Operational Efficiency

- Enhanced visibility of our organisation's data offers insights into it's location, lineage, and ownership. This allows our employees to dedicate more time to valuable data analytics instead of searching for data. It also helps identify errors and reduce duplicated work, leading to increased operational efficiency.

Personas

Operations Manager

Challenges in my day-to-day role:
In my role, I find it difficult and time consuming to find the data I need. I spend a lot of time engaging with different business areas to understand what data exists and who is responsible for it. If I have any questions on the data, I don't know who to ask so it takes me longer to understand the data. I also get a lot of queries about how datasets interact, which is difficult to answer when data is stored across the business.

In the future:
The Data Catalogue means I can now easily see all of the data within SPEN, I can also clearly see who the Data Owner is, so I know exactly who to contact about the data. It makes it much quicker for me to find, understand and use the data I need in my role. The tool also displays relationships and lineage, so it is much easier for me to answer the questions on how datasets interact with each other.

Asset Manager

Challenges in my day-to-day role:
In my role, I have to spend time analysing data to understand whether the quality meets my needs before I can begin using it. This can be very time consuming. If there are issues with the quality it can be very hard to quantify these issues and I don't know how to check if they are being resolved.

In the future:
The Data Catalogue clearly displays data quality scores and relevant supporting information for all data assets so I can easily understand whether the data meets my requirements. I can now quickly begin using data rather than spending significant time trying to understand it. If there are any issues with the data quality, I can check the catalogue to see if the score has improved and escalate issues with the Data Owner.

Data Best Practice

At the start of RIIO-2, Ofgem introduced Data Best Practice (DBP) guidance, a suite of 11 principles designed to ensure data is treated as an asset and used effectively for the benefit of consumers, stakeholders, and the public interest.

Compliance with DBP is at the heart of our data strategy and is stewarded by our Network Data and Intelligence function. This section summarises how we currently comply with each principle, as well as the plans we have in place that will advance our maturity.

We will quantitatively measure our maturity of compliance against each of the 11 principles in quarter four of 2025, and repeat this assessment annually. The results of this will be published in our December Distribution Digital Action Plan, promoting transparency. This will allow us to understand what our focus areas should be and track our improvements.

1. **Identify the roles of stakeholders of data assets:**
   Our Data Governance Platform, Informatica, records the Data Owner for each Data Asset. This will continue to develop as we incrementally deploy Informatica. Our newly developed Data Governance Policy describes the data roles and responsibilities in our organisation.

2. **Use common terms with data assets, metadata and supporting information:**
   Informatica will support the development of a business glossary to promote the use of standardised terminology across our organisation. We will continue to collaborate across the industry via working groups to align these definitions as much as possible.

3. **Describe data accurately using industry standard metadata:**
   Our Open Data Portal and Informatica contain metadata that aligns with the Dublin Core Standard. Our new Metadata Management policy sets out the core principles and expectations for collecting and maintaining metadata.

4. **Enable potential data users to understand the data by providing supporting information:**
   Our Open Data Portal provides detailed descriptions of each of our datasets, we also publish our risk assessments and have commenced publication of method statements to give stakeholders transparency around our publication approach.

5. **Make data assets discoverable to potential data users:**
   We have strong processes in place to manage access to our data. We will be incrementally developing Informatica to improve visibility of our data and labelling the data with the relevant classifications to ensure it is handled and shared appropriately.

6. **Learn and deliver to the needs of current and prospective data users:**
   We have a feedback form available on our Open Data Portal so stakeholders can provide feedback at any time. We also proactively engage with stakeholders to understand their experience with our Portal and the data, including our annual Open Data Stakeholder Survey. The feedback from this engagement is used to enhance our Portal and establish our pipeline for future data publications.

7. **Ensure Data Quality maintenance and improvement is prioritised by Data User needs:**
   We have deliberately selected Informatica, to allow us to quantitatively assess the quality of our data assets. Our newly developed Data Quality policy sets out our approach to measuring and monitoring data quality. We have recently completed data quality assessments for all datasets that are available on our Open Data Portal. We will be publishing these results to ensure full transparency with our stakeholders on the quality of our data, feeding into our improvement plans where required.

8. **Ensure data assets are interoperable with assets from other data & digital services:**
   We have revised our data pipeline and data warehouse design to enable data to be interoperable and for re-use across systems, this is being applied in the current scope of our migration of Network Asset Risk Metric (NARM) to the Azure cloud. We have put extra emphasis on revising our data modelling to ensure this data is compatible across source systems. We are also active participants in the Data Sharing Infrastructure (DSI) working groups, working to ensure that future datasets shared through this mechanism will be interoperable.

9. **Protect data assets and systems in accordance with security, privacy and resilience best practice:**
   Prior to sharing datasets on our Open Data Portal, data triage is undertaken by the Data Owner in conjunction with our Cyber Security and Data Protection colleagues. We are also undertaking a full review of our SPEN website to ensure all content has been robustly triaged. We take a prudent view to security, privacy and resilience, and ensure that the balance of open data is aligned with managing risks. We will continue to collaborate with our Data Security colleagues and adapt to any updated guidance from DESNZ and the NPSA.

10. **Store, archive, and provide access to data assets in ways that ensure sustained benefits**
    Our newly developed Data Lifecycle Policy contains guidance on best practice for storing, archiving and deleting data across its' lifecycle.

11. **Treat all data assets, their associated metadata, and software scripts used to process data assets as presumed open:**
    Our data triage documentation published on our SPEN website, sets out our approach to data triage. It provides insight into our decision making on any controls we have implemented to prevent exposure of sensitive information, including the appropriate licensing. Where our data triage process assesses datasets to be 'Open', these are published on our Open Data Portal. Datasets assessed as 'Shared' are made available on our Open Data Portal under a Shared data licence.

Delivery Roadmap

Delivering our Digitalisation Strategy is a substantial programme of work and will rely on introducing new skills into our business, embracing change management, and ensuring a robust delivery model.

In 2023, we implemented a new operating model, transforming our data & digital teams, setting us up for the scale of the challenge ahead and onboarding new skills and capabilities across system architecture, data engineering, data science and project management. Our data & digital teams are now established, and our teams have been collaborating to deliver data & digital solutions working in conjunction with subject matter experts across our organisation.

Our ED2 roadmap sets out the milestones in the delivery of our data & digital initiatives. This is aligned to our six pillars and has enabled us to undertake a change impact assessment, helping us to identify who will be impacted, and to understand the scale of change and support required.

Note: The milestones indicate the completion of a mature product or service. In many cases this will be followed by a continuous improvement programme throughout the RIIO-ED2 period

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