RIIO-T3 Digitalisation Strategy

December 2024

SP Energy Networks

Contents

Introduction

This document introduces our first digitalisation strategy looking ahead to the RIIO-T3 price control period, building on the foundational work completed during the T2 period. Our T3 strategy focuses on providing the digital platforms required to facilitate the transformation of data, supporting the creation of new ways of working across Transmission business.

It is important to note that the scope of this proposed strategy is currently under review by Ofgem and awaits their determination on our T3 submission. As we advance our digitalisation efforts, we will continue to provide updates on our T2 progress every six months through separate action plan updates.

Industry Context and Challenges

The UK's energy system is evolving to achieve Net Zero, necessitating an extraordinary shift to establish strategic electricity transmission infrastructure and connect up to four times the current generation capacity to the grid in a fraction of the usual time, all while maintaining exceptional reliability and safety standards.

Speeding up the delivery of this infrastructure is both critical and demanding. The UK has made remarkable strides in developing renewable generation sites, moving closer to decarbonising the economy and providing clean, secure, and affordable electricity.

However, without the essential transmission infrastructure, we cannot deliver this power to homes and businesses, resulting in high constraint costs and idle clean energy, which could undermine Net Zero objectives.

To facilitate this transformation, the SPT business plan outlines how we will boost transfer capacity from 6.6GW to approximately 18GW by 2031. The Secretary of State's challenge to cut the timescale for building strategic transmission by three years, as highlighted in the Electricity Networks Commissioner's report, is central to SPT's goals. Digitalisation and data access are vital for achieving these objectives swiftly.

Role of Digitalisation

Ofgem defines digitalisation as using digital technologies to transform an organisation's operating model, creating new value opportunities.

Digitalisation is vital for SPEN's RIIO-T3 plan. Achieving a four-fold increase in energy transfer requires more than just hiring additional staff; it demands process redesign and technology like automation and AI. This will create capacity, automate tasks, improve user experience, and allow focus on valuable activities.

Data and digital solutions are key to a modern energy system. Our RIIO-T3 Digitalisation plan outlines how we will use data and technology to achieve our goals and prepare for Net Zero. Where in the past, processes, transactions, and decisions have been digitised but often remained siloed, resulting in our teams working with incomplete data, low-quality data, or requiring high levels of effort to acquire data. We now see the opportunity to derive insight from trusted data and use technology to transform to new ways of working which are better suited to meet the demands that are being placed on our operation.

Digitalisation will also drive value for money for customers by enabling more efficient and effective planning and investment in the network. This is achieved through improved understanding and management of the network, which allows for identifying opportunities for increased efficiency and offering better value to customers. Our plans are developed through stakeholder engagement to ensure robust, sustainable solutions for RIIO-T3 and beyond. This engagement helps us gather feedback and improve our services, aligning our digital plan with broader business and industry goals to drive customer value.

Stakeholder Engagement

Our RIIO-T3 stakeholder engagement activities for data and 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 Transmission business.

Stakeholder Engagement Methodology

A critical part of the process to ensure we get our engagement right for our data and 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. We have also tested our plans with other Network Operators, Ofgem, and the NESO to ensure we support the digital and data transformation of our Industry. Feedback received via our stakeholder engagement process has shaped the goals and objectives of our digitalisation strategy and the proposed initiatives within it.

To support our stakeholders in understanding how our plans support them, we have developed a suite of personas. These provide insight on the challenges and opportunities our stakeholders have shared with us and outline how our plans support these. You can see examples of our personas against each of our Data and Digitalisation initiatives described in this T3 Digitalisation Strategy.

Independent Net Zero Advisory Council

Our Independent Net Zero Advisory Council (INZAC) has been integral to the development of our Data and Digitalisation plans. As an Independent Stakeholder Group (ISG) established by SPEN, they have played a key role in helping to ensure that we have engaged widely and openly with our customers and stakeholders. They have given us guidance, scrutiny and challenge throughout the development of our plans and will continue to do so throughout the RIIO-T3 period.

To develop our RIIO-T3 plans we worked closely with a subgroup of our INZAC members whose expertise aligned with data and digitalisation. This allowed for concise, informed and balanced discussions on our plans and stakeholder engagement activities. We met with our subgroup ten times throughout the development period and

they have pushed us to be ambitious in areas such as data security and the use of personas to understand impact of our data & digital solutions on specific stakeholder groups.

Ongoing Engagement

We recognise that ongoing engagement will be essential for the successful transformation of our energy system and the robust methodology we use will continue to be applied in RIIO-T3 with regular reviews to make sure we capture any stakeholder change. Our engagement with our stakeholders and INZAC will continue throughout RIIO-T3, and this will include engagement with hard-to-reach groups such as the digitally disengaged, to ensure that provision of our digital and data services is in line with all stakeholders and future consumer needs. We will continually develop our Digitalisation Strategy & Action Plan (DSAP) as stakeholder priorities evolve over time, captured through planned events such as our annual Connection Summit.

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

Examples of how stakeholder feedback shaped our plan

How	Who	What	Outcome
Connections Summit:			
A twice-annual event led by SPT to engage with external connections customers.	Over 100 attendees including Scottish Government, NESO, large renewable companies and smaller newly emerging battery companies.	Attendees emphasised the need to reduce the project lifecycle time from application to connection.	This has influenced our entire T3 plan as all of our proposed digital initiatives are designed to improve efficiency and reduce process time across the project lifecycle
Stakeholder survey:			
Launched in March 2024. We issued an extensive survey to a large and wide ranging group of stakeholders to get their views on a wide range of subjects, including data & digitalisation	Over 200 responses received from a wide range of stakeholders including local authorities and community councils across evenly distributed geographical regions.	Stakeholders requested transparency and more details on connections queue progress.	This has guided the prioritisation of customer focused solutions in our T3 plan and led to the development of specific proposed initiatives to improve the information available to customers online.
Open Data Stakeholder Survey:			
We launched our first Open Data stakeholder in February 2024 which focused on seeking feedback on the Portal and the current available data.	We targeted our core stakeholder groups, including but not limited to: Local Authorities, academics, government bodies, industry bodies.	Stakeholders told us that our Portal can be difficult to navigate and that it would be useful to have support in how to use our data that is available on the Portal.	We will enhance our Portal further by developing a more interactive and intuitive experience - minimising the need for offline analysis. We will also develop a suite of 'how to' materials to support less technical users in accessing and understanding the data which we share.
Data Best Practice Maturity Assessments:			
We held internal engagement sessions with stakeholders across the organisation to assess our current level of maturity against the 11 Data Best Practice principles.	We engaged with over 15 different business areas, including but not limited to: our Operations business, Data and Strategy functions, Regulatory Programme and Health and Safety.	Stakeholders told us that there is a lack of visibility of data assets and that data is hard to find, meaning that they spend a disproportionate amount of time looking for data rather than using it.	We will develop a centralised catalogue for our data assets, categorised based on business rules. As part of this we will classify and tag our data assets based on sensitivity and importance.

Digital Principles

The Digital Principles are a set of guidelines based on best-practice but tailored to SPT's needs to govern how the Digital Transformation will be implemented across the business.

Velocity and agility – create a dynamic culture and balanced approach to risk that will allow for the rapid roll out of technologies to help transform SPT's operations at pace.
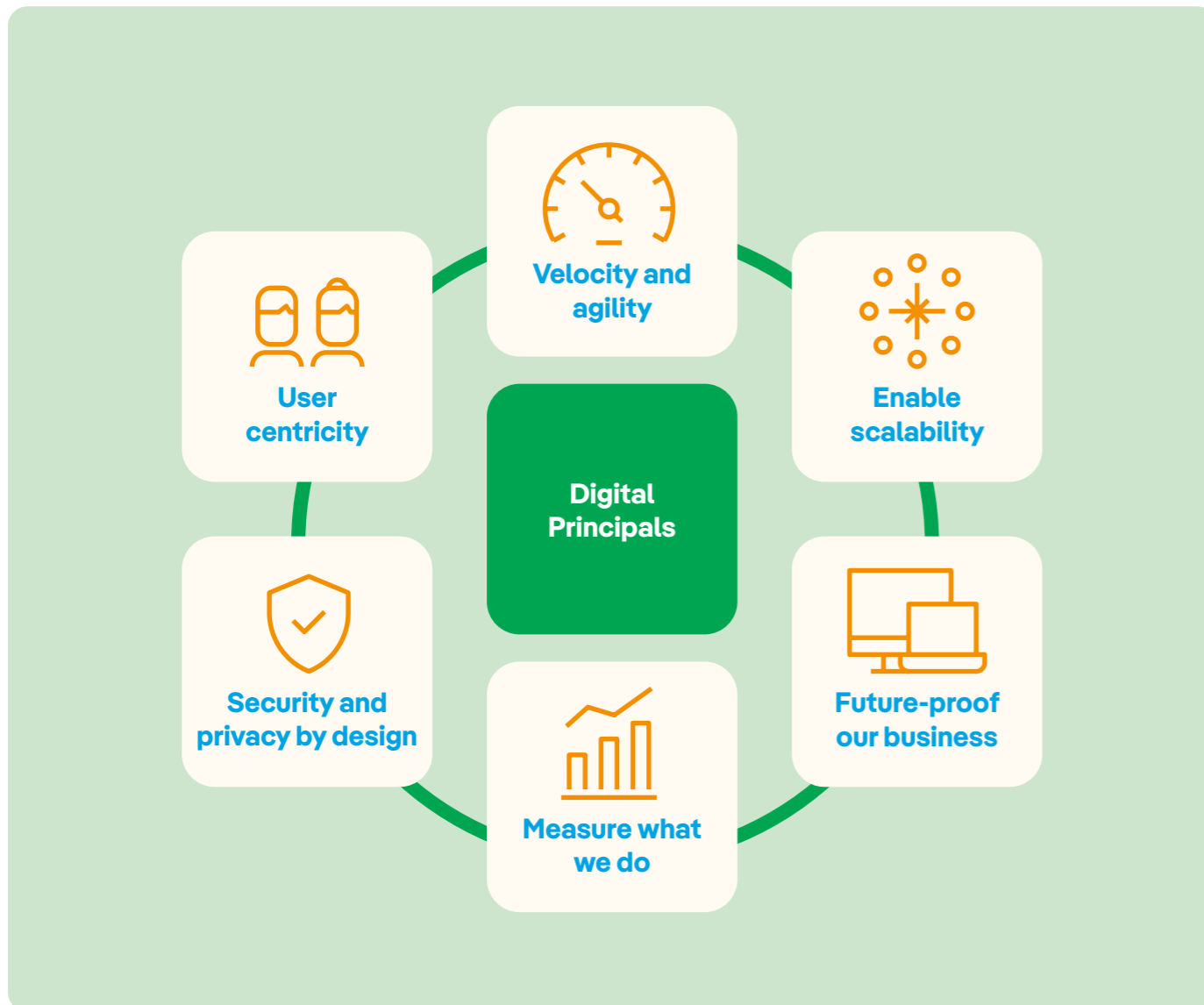
Enable scalability – standardise systems and processes (removing customisation), to enable systems, processes, and people to scale through the removal of complexity from end-to-end processes and integrations.

Future-proof our business – enable our organisation to be a digital-first business, that innovates and leverages opportunities for technology to unleash rapid transformation, whilst continuously upskilling our workforce.

Measure what we do – appropriate KPIs in place to understand where we are succeeding or failing, which are informed and supported by data and insight, to drive activity in the appropriate area when required.

Security and privacy by design – cybersecurity and privacy are at the foundation of all that we do and incorporated into the design of any tools / systems.

User centricity – ensure our users are at the centre of our investments in digital, such that technology enhances employee satisfaction and performance.

[Diagram: Digital Principals]

Velocity and agility

Enable scalability

Future-proof our business

Measure what we do

Security and privacy by design

User centricity

Digital Principals

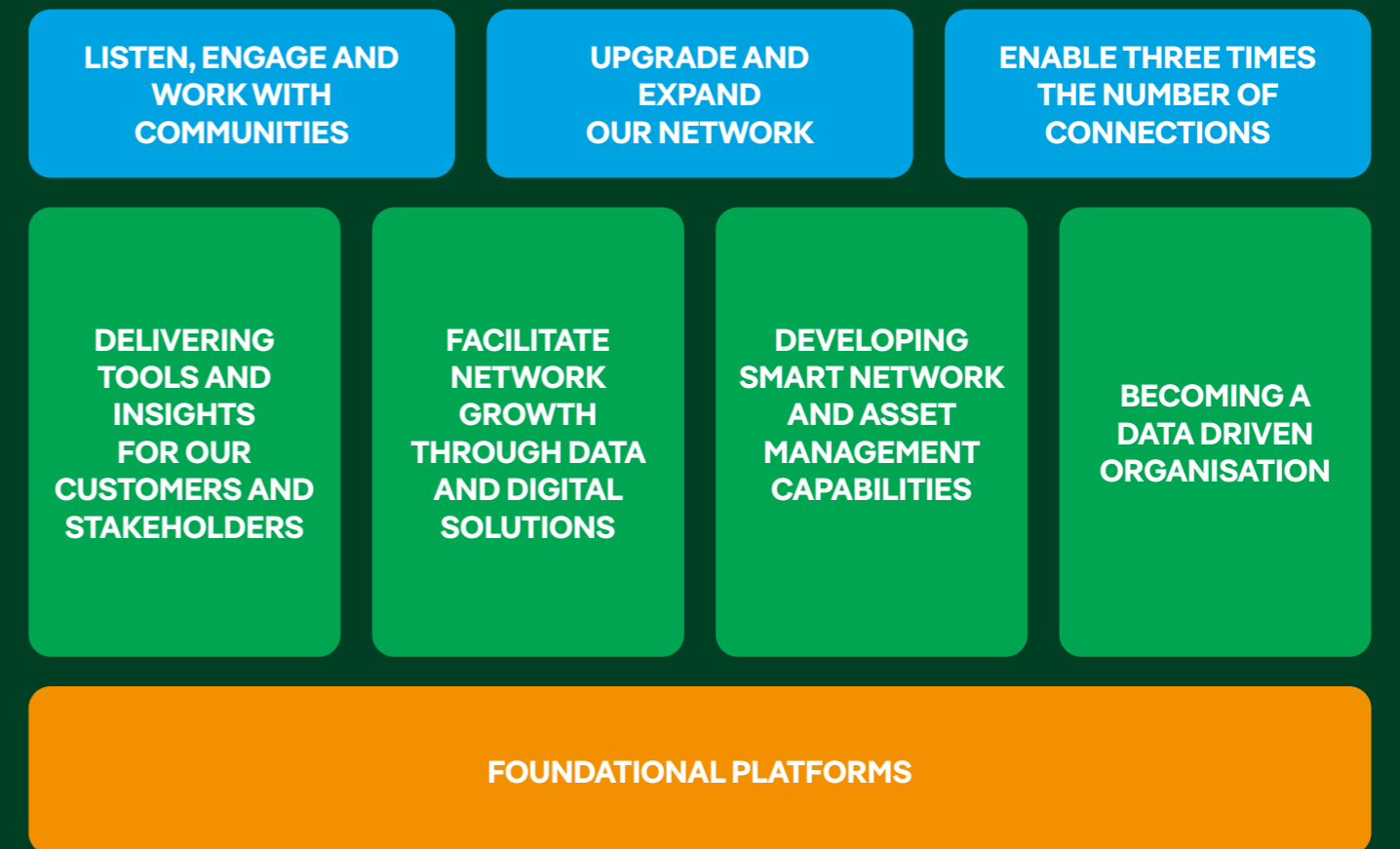# Our 4 Digitalisation Pillars

Our strategy has been aligned to four 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 and digital excellence.

Pillar 1 - Focus on Customers & Stakeholders: We will develop digital solutions to enhance customer experience when engaging with SPEN, providing greater online functionality for customers to "self-serve" while streamlining processes to increase the speed of a connections offer. We will engage our customers and stakeholders on an annual basis and update our digital plans to reflect emerging priorities and incorporated into the design of any tools / systems.

Pillar 2 - Facilitate Network Growth: We will develop digital solutions to enhance project management, network design and land management capabilities to accelerate the T3 programme of capital delivery while facilitating collaborative working with our contractors and other 3rd party suppliers.

Pillar 3 - Smart Network & Asset Management: We will develop digital solutions to enhance our asset management capabilities and increase the use of technology to optimise our field operations, ensuring continued network reliability. We will deliver the technology solutions required to support our environmental & sustainability ambitions and targets.

Pillar 4 - Becoming a Data Driven Organisation: 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.

LISTEN, ENGAGE AND WORK WITH COMMUNITIES	UPGRADE AND EXPAND OUR NETWORK	ENABLE THREE TIMES THE NUMBER OF CONNECTIONS

DELIVERING TOOLS AND INSIGHTS FOR OUR CUSTOMERS AND STAKEHOLDERS	FACILITATE NETWORK GROWTH THROUGH DATA AND DIGITAL SOLUTIONS	DEVELOPING SMART NETWORK AND ASSET MANAGEMENT CAPABILITIES	BECOMING A DATA DRIVEN ORGANISATION

FOUNDATIONAL PLATFORMS

Pillar 1 – Delivering tools and insights for our customers & stakeholders
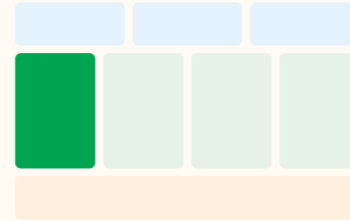
Pillar 1 – Delivering tools and insights for our customers & stakeholders

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 have created a plan that builds on our RIIO-T2 investments to create a suite of integrated platforms designed to deliver enhanced customer experience.

Customer Led Connections Solutions

Our customers have told us that their priorities are to be able to access more information online and have greater visibility of our network to allow them to self-serve quickly and efficiently. In response to this, our RIIO-T3 plan includes several Customer Led Connections solutions in which we will revamp our website to deliver an improved online experience, considering accessibility needs to ensure no one is disadvantaged. This will include developing self-service tools that allow connections customers to create indicative designs and costings.

Improving the speed in which a connections offer is provided to a customer looking to connect to our network is also a key focus in our plan. We will leverage the power of artificial intelligence and machine learning to streamline and automate back-end data collection processes to reduce the time it takes to produce a connection quote.

We will also use AI where possible to enhance stakeholder engagement overall, making interactions more efficient and personalised.
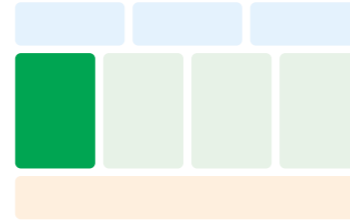
CRM Enhancements

We deployed our new Customer Relationship Management (CRM) solution during RIIO-T2. This provides a single view of customer interactions encompassing all customer journeys. Throughout the RIIO-T3 period we will further develop and integrate our CRM solution to streamline processes and enhance our customers' experiences. Customers will receive a joined-up service where all the information relating to their interactions with us is available at the point of interaction.

Understanding when and where maintenance and network outages are planned is a crucial requirement from our customers so we will develop a customer facing platform to make this information available as soon it is known allowing customers to plan accordingly.

Customer Led Connections Solutions

Pillar 1 – Delivering tools and insights for our customers & stakeholders

Projects
This initiative consists of three projects as detailed in the diagram below:

	#1	#2	#3
Driver	Improve grid visibility for prospective connections customers and wider stakeholders	Improve visibility of a potential connection cost for customer prior to submitting an application	Reduce the time it takes to provide a connection offer to a customer after application
Project	Customer and Stakeholder Heatmap Enhancements	Customer Stakeholder Pre-Application Tool	Automation of Contract Creation
Project Description	Development of near real-time heatmap showing network capacity through automating back-end data processing	Development of a customer facing "self-service" design tool providing indicative connection cost	Automate creation of connection offer packs using artificial intelligence and pulling in data from multiple sources
Outputs	Enhanced transparency of new connection demands, improved data visibility and reporting, and reduced reconciliation efforts leading to higher customer satisfaction by offering a more informed tool for better application quality	Enhanced customer experience with direct access to substation and energisation dates, reduced call wait times and understanding of estimated connection cost prior to submitting an application	Streamlined offer creation process by reducing manual tasks, enhancing data accuracy and automated updates, supporting quicker customer communication and internal decision-making
Timeline	2027	2030	2030-2031
Improved DBP Maturity	Principle 2, 3, 5, 6, 8 & 11 – Delivering for our external stakeholders, this initiative shall create new open datasets which shall be added to our data catalogue; it shall create publicly available data which must align across the industry – common terms shall be adopted, and outputs and datasets will be designed to be interoperable where appropriate.		

Benefits
This initiative delivers a number of benefits to both our external and internal stakeholders. A selection of these benefits is detailed below:

Stakeholders and Customers
- Enhance network information for customers and stakeholders
- View of connection costs before application to aid decision making
- Reduced wait times when seeking initial indicative programme and design
- Quicker project initiation
- Enable self-serve for our customers

Automation and Efficiency
- Streamlined data integration and reduced risks related to data accuracy and reliability
- Advanced algorithms efficiently allocate available resources
- Centralisation of disparate data sources
- Pave the way for forthcoming AI adoption and
- Manage the growing volume of Connection requests

Employee Satisfaction
- Streamlined processes and reduced manual intervention, enabling employees to focus on more strategic, value add tasks
- Improved collaboration due to ease of sharing consistent, accurate information
- Improved interactions with customers who will be aware of likely connection cost before application

Digital & Data Personas

Developer/Contractor

Challenges in my day-to-day role:
Following a refresh, the existing heatmap quickly goes out of date waiting on the next manual update making it unreliable. I get the information I need, but sometimes it's not as timely as I'd like, which can add pressure to keep projects moving on schedule. With more streamlined access to network insights, I'd be able to plan even more effectively and keep everything on track.

In the future:
With advanced pre-application tools a near real time heatmap, and automated updates, I have direct access to the latest connection information, making it easier to make decisions and plan proactively. This system provides a real-time view of each project's status, letting me respond to any changes immediately and confidently keep everything on track.
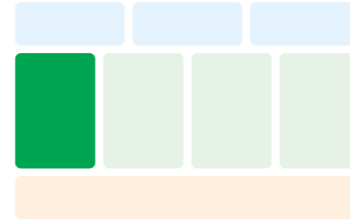
Network Planner

Challenges in my day-to-day role:
The network heatmap lacks real-time updates, which can hinder our ability to respond swiftly and accurately to network demands impact our ability to provide transparent and dynamic data sharing in line with regulatory standards.

In the future:
The new automation for contract creation and an intuitive heatmap systems now provide real-time data, allowing me to model networks faster and with greater precision. The integrated master model enables full network traceability through assets, significantly improving the accuracy of my forecasts and reducing the time spent on manual data reconciliation.

CRM Enhancements

Pillar 1 – Delivering tools and insights for our customers & stakeholders

Projects
This initiative consists of two projects as detailed in the diagram below:

	#1	#2
Driver	Supporting SPT's growing workload, while also improving efficiency, accuracy, and satisfaction	Enhancing customer service capability and transparency by providing real-time maintenance and outage information
Project	Customer Relationship Management	Customer Facing Maintenance & Outage Schedule
Project Description	Implement system enhancements to SPT's CRM application through an agile continuous improvement programme, adopting new features and functionality as they become available	Deployment of a self-service portal for customers to access real-time planned maintenance and outage information
Outputs	Streamlined internal operations and single view of all customer interactions with SPT at point of call. Continuous improvement programme over the T3 period to keep the CRM system updated, optimising user and customer experience	Automated outage and maintenance platform, ensuring current data.is displayed. Improved customer experience with increased transparency and planning capability, helping manage disruptions and enhancing satisfaction
Timeline	2026-2031	2029
Improved DBP Maturity	Principle 2, 3, 5, 6, 8 & 11 – Delivering for our connected customers, this initiative shall create new shared datasets which shall be added to our data catalogue; it shall create publicly available data which must align across the industry – common terms shall be adopted, and outputs and datasets will be designed to be interoperable where appropriate.	

Benefits
This initiative delivers a number of benefits to both our external and internal stakeholders.
A selection of these benefits is detailed below

Stakeholders and Customers
- Self-service tool empowers customers to easily understand planned outages and maintenance, along with any potential impacts
- Transparency in SPT's network planning ensures that communities feel included and engaged throughout the process
- Visibility of Customer data and history in one place, improving interactions and customer experience.

Automation and Efficiency
- Centralised, single source of data, easily accessible for end users.
- Self-serve capabilities for customers will streamline the process and significantly reduce the number of queries related to planned outages.
- Increased automation of process steps, improving operational efficiency.
- Reduced manual errors related to data entry

Digitalisation
- Improved data capture, driving quality and data driven decisions.
- Improved reporting and analytics, reducing the need for manual processes.
- Integration of CRM with core systems, enabling efficient processes.

Digital & Data Personas

Customer Service Manager

Challenges in my day-to-day role:
Salesforce has been a fantastic recent addition to SPT significantly improving our interactions with customers., however, I'm concerned that we risk lagging behind on updates as new features are developed and we won't be able to keep improving the user and customer experience.

In the future:
The new unified CRM system integrates all customer data into one platform, giving me a complete, accurate view of customer interactions across departments. The recent AI updates have improved response times, reduced manual data checks, and allowed me to focus more on solving customer issues rather than unearthing information manually.

Commercial Customer

Challenges in my day-to-day role:
My recent interactions with SPT have greatly improved but planned maintenance and outage notifications could be improved. With the rapid advances in AI, I look forward to any new mutual benefits that upgrades will bring.

In the future:
With the CRM system, SPT has immediate access to all my past interactions and account details. This means they can resolve my issues faster without asking for the same information multiple times, making the entire process more efficient, and I now have access to real-time outage and maintenance schedules whenever I need them. With this tool, I can plan around potential disruptions more confidently, benefiting my operations.

Pillar 2 - Facilitating network growth through data & digital solutions
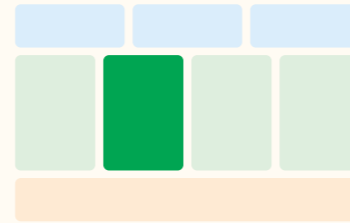
Pillar 2 - Facilitating network growth through data & digital solutions

In RIIO-T3, our customers will need us to deliver connections to and investment in our transmission network at a rate faster than we have historically. Our current processes and systems are not capable of scaling to this volume and pace of network delivery. Within this pillar we are proposing a suite of initiatives that will give us the capability to manage this volume and speed of network growth.

Contract Planning & Procurement

Our network growth programme will be delivered in partnership with third party suppliers who provide a range of services and equipment. We have recently announced the awarding of £5.4bn worth of contract opportunities as part of our planned investment. We are proposing a contract management and procurement initiative that will enable us to manage this complex ecosystem and enhance our interactions with contractors and suppliers, taking into account feedback we have received from them.

Project & Portfolio Management

Our project and portfolio management initiative will build a holistic view of projects across the portfolio of network growth investments, enabling management oversight and portfolio-wide decision making. It will integrate with our wider suite of initiatives across all the four digitalisation pillars ensuring that the relevant information is available to support informed decision making, and that the impacts from decisions are consistently reflected across the delivery programme, speeding up the end-to-end delivery process.

Building Information Modelling (BIM)

Our BIM initiative builds on the foundations we've established during RIIO-T2 and delivers a wider and deeper transition which will increase our maturity against the BIM methodology. This will impact our organisational model, our processes, our ways of working and our technology solutions as well as our external interactions with third party suppliers, customers and stakeholders. It will facilitate collaborative working across a complex range of projects, enabling the coordination of resources to deliver the scale of investment our RIIO-T3 business plan proposes.
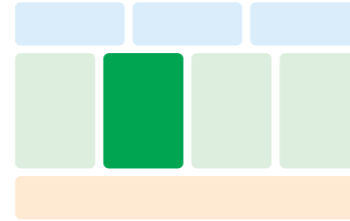
Land & Planning

Managing land and planning processes and the interactions with our customers and communities will also be a focus within this pillar. We will improve our internal land and planning processes through integrations and automation. This will include development of enhanced online offerings and will allow landowners to view the progress of projects.

Contract Planning & Procurement Solutions

Pillar 2 - Facilitating network growth through data & digital solutions

Projects

This initiative consists of three projects as detailed in the diagram below:

	#1	#2	#3
Driver	Improve contract management capabilities and management of interactions with contractors as volume of work increases	Enhance the resilience and performance of SPT's supply chain and implement risk mitigations	Efficient management of the increased volume of contract and procurement activities
Project	Contract Lifecycle Management Platform	Central Supplier & Supply Chain Risk Management	Procurement Process Automation
Project Description	Implementation of a Contract Lifecyle Management (CLM) platform to manage contractor interactions	Implementation of a central Supplier & Supply Chain Performance & Risk Management platform	Introduction of an AI solution to automate manual procurement processes e.g. invoice processing
Outputs	Streamlined interactions with contractors with enhanced accuracy of information being shared ensuring contractual compliance	Enhanced monitoring and reporting, supporting proactive decision-making to allow a focus on priority needs, ensuring a resilient supply chain	Faster turnaround times, cost savings and improved data accuracy ensuring regulatory compliance
Timeline	2028	2028	2028-2029
Improved DBP Maturity	Principle 2, 3, 5, 6 & 8 – Delivering for our internal project teams, this initiative shall create new project datasets which shall be added to our data catalogue; it will systematise new data which will be interoperable with linked systems – common terms shall be adopted when data abstraction layers (i.e. API) are created.		

Benefits

This initiative delivers a number of benefits to both our external and internal stakeholders. A selection of these benefits is detailed below

Automation and Efficiency

- Streamline processes, reduce manual intervention, and minimize errors, leading to more efficient, reliable contract management.
- Providing a holistic view of supplier performance and associated risks, will improve decision making and speed for tendering, procurement and project management teams.
- More dynamic supplier approach will help SPT become the 'customer of choice' and adapt to rapid global market changes, ensuring the right resources are allocated to support Net Zero goals and network scaling.

Supply Chain

- Improved contract management and supplier performance tracking leading to stronger, more collaborative relationships with suppliers.
- Risk Mitigations as advanced data analysis and a holistic view of supplier performance can help identify and mitigate risks before they become critical issues.
- Improved demand forecasting accuracy, helping to ensure that inventory levels are optimised and reducing the risk of stockouts or overstocking.

Employee Satisfaction

- Streamlined processes and reduced manual intervention, enabling employees to focus on more strategic, value add tasks.
- Holistic view of contract and supplier data and associated risks will help employees make more informed decisions.
- Centralised platforms and a common understanding will foster collaboration and communication across teams.

Digital & Data Personas

Project Manager

Challenges in my day-to-day role:

The process is laborious, and I often face limited insight into supplier performance, which can hinder effective decision-making during procurement and project execution phases. Additionally, as the volume of projects increase our supply chain model is unsustainable and can be ineffective in addressing supply chain risks.

In the future:

With the integrated contract and procurement system, I can now manage contracts and track procurement workflows in one centralised platform. This reduces the chances of missing key details and allows me to handle approvals faster and more accurately, improving overall compliance and reducing risk.
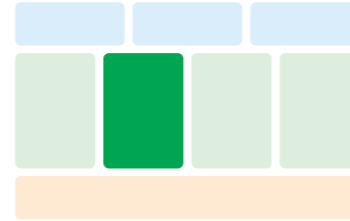
Supplier

Challenges in my day-to-day role:

There's currently limited visibility on the status of tenders which means facing frequent delays. The lack of automation makes it challenging to get updates and the high volume of fixed price contracts often leads to misunderstandings and unexpected requirements.

In the future:

The new procurement and contract system provides real-time updates and communication, allowing me to stay informed of any changes as they happen. I can now plan more accurately, meet deadlines more consistently, and manage my contractual obligations more efficiently.

Project and Portfolio Management Solutions

Pillar 2 - Facilitating network growth through data & digital solutions

Projects
This initiative consists of three projects as detailed in the diagram below:

	#1	#2
Driver	Improve efficiency within SPT's project management processes to accelerate project delivery	Improve collaboration between teams and enhance process efficiency by quick location of documents required
Project	Single Project and Portfolio View	Document Management Tool
Project Description	Implementation of an enterprise level transmission project & portfolio management tool that allows programme & cost data to be seen and managed in one place	Implement centralised document management tool with consolidation of multiple existing document management systems
Outputs	Increased project management efficiency to enable the scaling of tasks such as project planning, cost management, and reporting	Helps SPT employees find relevant documentation more easily, improving process efficiency and employee satisfaction. Eliminated duplication of work caused by the difficulties in finding documents
Timeline	2027-2028	2027-2028
Improved DBP Maturity	Principle 2, 3, 5, 6 & 8 – Delivering for our internal project teams, this initiative shall create new project datasets which shall be added to our data catalogue; it will systematise new data which will be interoperable with linked systems – common terms shall be adopted when data abstraction layers (i.e. API) are created.	

Benefits
This initiative delivers a number of benefits to both our external and internal stakeholders. A selection of these benefits is detailed below

Automation and Efficiency
- Enhanced process efficiency through automation, eliminating the need for users to manually sift through multiple data sources.
- Consolidating data, providing a holistic view of project completion and financials, enabling more effective decision-making.
- Utilise the power of AI to support automation, categorisation and interrogation of documents.

Collaboration
- Improved ability to collaborate with contractors by using the industry standard project tool and formats
- Better collaboration and communication among teams, leading to more cohesive and effective operations
- Enhanced collaboration tools can promote knowledge sharing and best practices

Employee Satisfaction
- Usability improvements resulting in increased employee satisfaction and experience
- Improved employee productivity, as more time can be spent on 'value-add' work
- Streamlined processes and reduced manual intervention, enabling employees to focus on more strategic, value add tasks.

Digital & Data Personas

Project Manager

Challenges in my day-to-day role:
Juggling multiple complex projects across different teams is a constant challenge. I have separate tools for scheduling, resource allocations and tracking costs. This fragmentation often leads to misaligned timelines, resource conflicts and unexpected delays.

In the future:
With the new project management platform, I have a single, integrated view of all projects, including real-time progress updates and costs. This unified view enhances my decision-making and enables me to allocate resources more effectively, align timelines across teams, and focus on delivering projects on schedule, and handle the increased workload effectively.
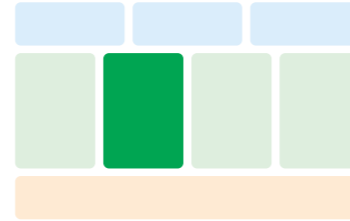
Contractor

Challenges in my day-to-day role:
I feel there is room for greater collaboration, which would enhance our overall project outcomes. Additionally, quicker and more accurate reporting would significantly improve our efficiency and decision-making processes. The time it takes to receive project information can sometimes hinder our efficiency, and better planning would help us avoid cost variations and reduce extra work.

In the future:
With the project management solution, I have full integration meaning real-time access to project schedules and updates, making it easier to plan my tasks. I'm now better aligned with the project team at SPT, and I can deliver my work on time without disruptions.

BIM Transformation Programme

Pillar 2 - Facilitating network growth through data & digital solutions

Projects
This initiative consists of three projects as detailed in the diagram below:

	#1	#2	#3
Driver	Streamline project planning and design, reduce costs and enhance data driven decision making	Improve stakeholder engagement by enabling immersive design	Capture precise digital measurements of the existing pre-BIM infrastructure
Project	BIM Transformation	Augmented Reality (AR) / Virtual Reality (VR) Design	Site scanning (Scan to BIM)
Project Description	Full implementation of BIM methodology and associated digital platforms as business as usual across our strategic contract portfolio to maturity level 5	Improvements to the networks design process using Augmented Reality (AR) and Virtual Reality (VR)	Site Scanning through use of 3D laser scanners using LiDAR to create BIM models of all existing sites
Outputs	Improved cost forecasting, minimising design amendments and clashes during construction, and significantly reduce project timelines	Enhanced stakeholder engagement and improved data exchange by identifying design changes, clashes, and amendments early, supporting SPT's goal to reduce construction and asset costs	Incorporation of advanced 3D scanning technologies to provide high resolution real-time digital capture of site conditions, enabling precise up to date asset records
Timeline	2026-2031	2030	2030-2031
Improved DBP Maturity	Principle 2, 3, 5, 6, 7 & 8 – Delivering for our internal project and asset management teams, this initiative shall create new asset and project datasets which shall be added to our data catalogue; it will systematise new data which will be interoperable with linked systems. Critical to the success of BIM will be to have robust data quality metrics in place to ensure it completed adequately.		

Benefits
This initiative delivers a number of benefits to both our external and internal stakeholders. A selection of these benefits is detailed below

Stakeholders and Customers
- Enhance stakeholder engagement through collaborative data sets
- Reduced costs and better deal for customers with lower instances of variations
- Safer and more predictable project delivery; clients, contractors and stakeholders

Pace and Scale
- Enhanced collaboration between contractors, partners and SPT through use of common tools
- Early identification of risks
- Increased accuracy of design, lower re-work and variations through use of digital twins
- Improved asset handover which will reduce project timelines and clearer outputs

Sustainability and Environmental
- Enhanced environmental data capture and reporting
- Reduction of waste output from both SPT and 3rd party contractors
- Accurate calculation of embodied carbon to ensure reduction targets are met
- Facilitation of environment goals and compliance as increase visibility will drive corrective actions

Digital & Data Personas

Engineer

Challenges in my day-to-day role:
I have to visit site frequently to verify construction details which leads to inefficiency and delays. Misunderstandings can often arise between teams resulting in inaccurate cost projections and inconsistent data. I struggle to offer an as-built view for our customers.

In the future:
I now have access to fully integrated, 3D model of our projects including real time site scans that capture precise data. I can quickly assess conditions without being on site and generate accurate representation of each project phase. This saves me time, reduces rework enables us to identify and resolve issues early and ensures the design is consistent across teams.
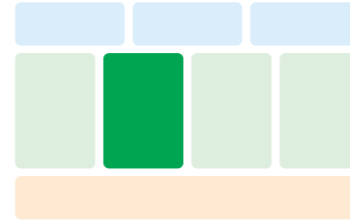
Contractor/Consultant

Challenges in my day-to-day role:
My work requires detailed visualisations of construction designs but without a real-time view or interactive tools, it's difficult to fully analyse and communicate the impact of design changes. Accessing the latest project files and design updates takes time which introduces delays to decision making.

In the future:
This BIM platform now includes VR and AR capabilities enabling me to experience and immersive 3D view of the project remotely. I can walk through the design in a virtual space spotting potential issues before construction begins. This tool allows me to collaborate closely with the SPT engineering team making design assessments faster and more comprehensive while reducing the needs for on-site adjustments.

Land & Planning Solutions

Pillar 2 - Facilitating network growth through data & digital solutions

Projects
This initiative consists of two projects as detailed in the diagram below:

	#1	#2
Driver	Need to centralise land rights data, improve operational efficiency through automation, and enhance data accuracy and stakeholder confidence	Need for improved land & planning data management, enhance stakeholder engagement, ensure regulatory compliance and efficient reporting
Project	Digitalisation & Reporting	System Development and Integration
Project Description	Consolidation of all land rights records into SAP plus the deployment of mobile tools to capture and update data real time into our estates management system & Land GIS	Implementation of a landowner portal to streamline and improve interactions between landowners and SPEN including payment processes. Integrate Land GIS system with land ownership information, enabling staff on site to identify ownerships of land
Outputs	Enhance network security and strengthened stakeholder confidence by enabling more efficient management and sharing of land rights data. It will also improve data accuracy, operational efficiency, and environmental impact through drone surveys	Streamlined payment processes, improved landowner communication, and enables asset information access via portals
Timeline	2027	2028-2029
Improved DBP Maturity	Principle 2, 3, 5, 6, 7, 9 & 11 – Delivering for our external stakeholder (local authorities and land owners), this initiative shall create new asset and project datasets which shall be added to our data catalogue; the initiative shall create a publicly accessible portal for controlled access to relevant data.	

Benefits
This initiative delivers a number of benefits to both our external and internal stakeholders. A selection of these benefits is detailed below

Stakeholders and Customers
- Improved accessibility due to digital platform consolidation
- Virtual town halls allow for transparency of the decision-making process to the public
- Partnerships with councils/landowners ensure that data is accurate, and kept up-to-date
- Access to information and status updates via Portals

Scale and Pace
- Enabling the delivery at scale and pace through land and planning process efficiency to support network expansion
- Real-time data flow to enhance operations by streamlining asset identification and landowner information
- Increased speed of payment process to reduce overall end to end project lifecycle

Automation and Efficiency
- Centralised digital platform for storage of land records with integration to Corporate systems
- Easier to integrate and manage drone-captured videos
- Facilitate efficient payment processes and information sharing
- Direct access to land registry and creating land rights

Digital & Data Personas

Landowner

Challenges in my day-to-day role:
Managing communications and payments for land agreements with SPT can be slow and inconvenient. Lack of real-time information creates delays and uncertainty about land use.

In the future:
The new landowner portal gives me real-time access to payment updates and important documents. This platform simplifies my interactions with SPT and ensures that my land-related concerns are addressed promptly.

Project Manager

Challenges in my day-to-day role:
Managing land rights data across multiple platforms is inefficient and prone to errors. Tracking document changes or site updates can be challenging, leading to potential project delays.

In the future:
Using an integrated system, I can access all land and planning data in one place. This streamlining supports smoother project planning and allows me to focus on strategic priorities without delays.
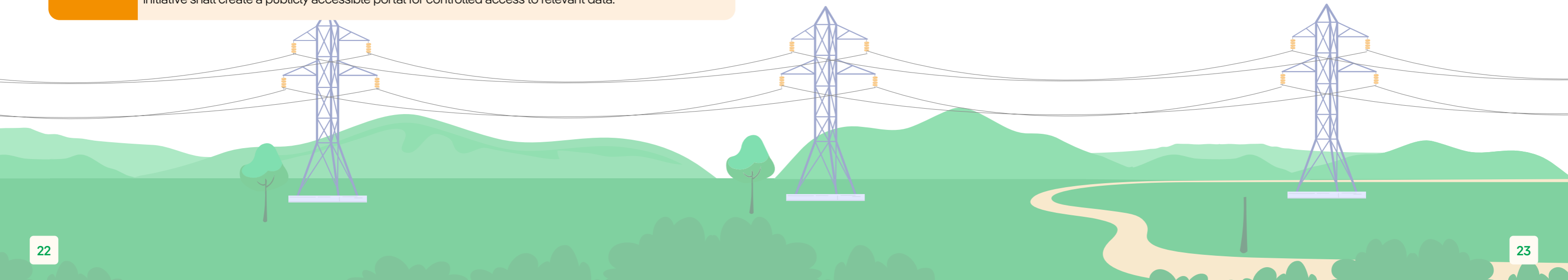
Pillar 3 – Developing smart network and asset management capabilities
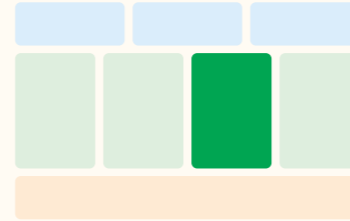
Pillar 3 – Developing smart network and asset management capabilities

Visibility and management of our network and our assets is a core function of any networks' operations. The central role that our network plays in the move towards a decarbonised energy system, coupled with the increasing risks to energy security arising from a diverse set of factors such as cyber-attacks and climate change, mean that we need to transform our approach to network operations and asset management.

Asset Management

Our asset management systems are central to our drive for operational excellence in the management of assets. These allow us to design changes to the network, plan and safely deliver work, schedule resources, inspect and maintain assets, model power flows, understand asset risk and consequence of failure, manage vegetation and manage land rights amongst many other functions. In RIIO-T2, we have deployed several core asset management solutions.

In RIIO-T3 we will significantly enhance these to improve our users' experience and enable new capabilities such as improving integrations, capturing more data, optimising the use of resources, performing more detailed analytics and ensuring the solutions are scaled to the volumes of work we foresee.

We will upgrade our works and asset management platform which will introduce new capabilities that we help optimise our transmission operation. We will enhance our

solutions that deliver the Network Asset Risk Metric (NARM) calculations, including the additional asset types and the updated Common Network Asset Indices Methodology (CNAIM) as outlined in Ofgem's RIIO-3 Sector Specific Methodology.

Field Technology

We will deliver a roadmap of improved field services by leveraging predictive analytics, real-time data monitoring, and automated reporting to streamline processes related to field activities for planned and reactive work. We will also optimise our inspections and maintenance process by leveraging the latest technologies.

Environmental Compliance

We will implement environmental solutions that align with our sustainability goals. These solutions will help us track, report on and reduce our environmental impact, and support our long-term sustainability targets within SPEN and the wider UK.

Asset Management Solutions
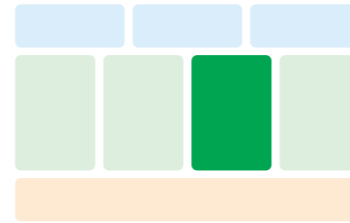
Pillar 3 – Developing smart network and asset management capabilities

Projects

This initiative consists of five projects as detailed in the diagram below:

	#1	#2	#3	#4	#5
Driver	The necessity to integrate geospatial data as part of decision-making for network expansion	Regulatory requirement for enhanced risk management and reporting under Ofgem's RIIO-T3 framework	To handle increased complexity and pace in network planning while ensuring data security and collaboration	Future-proof critical asset management processes, creating efficiencies across a range of works and asset management processes	The requirement to eliminate inefficiencies caused by fragmented data systems and enhance productivity through intuitive data access
Project	GIS Optimisation	NARM Enhancements	Network Modelling Enhancements	Works and Asset Management Optimisation	Employee Assistant for Project and Asset Information
Project Description	Introduction of new functionality and enhanced features as part of our 5-year GIS strategy, facilitated by the move to ArcGIS Utility Network	Development of Civil Asset Models in GIS & SAP / application of NARM framework to Civil Assets	Implementing new network modelling tools and processing power	Transition to the new generation of SAP ERP (S4/HANA) as our core asset management system	Creation and implementation of an AI-enabled assistant for project and asset information
Outputs	Enhanced network visualization and connectivity modelling, improved data sharing and integration, better asset management with 3D views, and streamlined operations through fully integrated BIM.	Enhanced efficiency and visibility of civil assets and ensures full compliance and benefit from the NARM methodology	Enhanced network modelling capabilities and power to model potential impact of new infrastructure projects across the UK	Faster connection delivery, improved network investment, and better asset inspection and maintenance	Enhanced user interactions by providing accurate and context-aware responses. Streamlined communication to reduce misunderstandings, and improve efficiency for SPT employees
Timeline	2029-2031	2027-2029	2027	2027-2031	2029-2030
Improved DBP Maturity	Principle 2, 3, 5, 6, 7 & 8 – Delivering for our internal asset management teams, this initiative shall create new asset and project datasets which shall be added to our data catalogue; it will systematise new data which will be interoperable with linked systems. Critical to the success of asset risk management will be to have robust data quality metrics in place to ensure it completed adequately.				

Benefits

This initiative delivers a number of benefits to both our external and internal stakeholders. A selection of these benefits is detailed below

Stakeholders & Customers

- Trusted asset and network data enabling informed decisions
- Visualisation tools enabling enhanced customer and stakeholder interactions
- Improved accessibility due to digital platform consolidation
- Enhanced network information for customers and stakeholders

Automation and Efficiency

- Improved process efficiency reduces cost of operating and maintaining the network and delivering work.
- Streamlined data integration and reduced risks related to data accuracy and reliability
- Automated solutions for NARM calculations to meet enhanced regulatory requirements
- Comprehensive network modelling ensuring designs lead to an economic and efficient network

Employee Satisfaction

- Usability improvements resulting in increased employee satisfaction
- Streamlined processes and reduced manual intervention, enabling employees to focus on more strategic, value add tasks
- AI powered assistant providing easy access to network and asset data

Digital & Data Personas

Network Modelling Analyst

Challenges in my day-to-day role:

The complexity of the network modelling has increased substantially due to the volume and changing nature of connected devices, and this is forecast to increase substantially during RIIO-T3.

The existing solutions are stored and run locally my own laptop, making it difficult to share and collaborate with colleagues, creating a risk of data loss or corruption.

In the future:

With new modelling tools and increased processing power, I can now confidently run large and complete simulations for potential network designs understanding the detailed impact on the network UK wide. I can now collaborate and share design work with my colleagues and gain greater insight through advanced analytical capabilities.
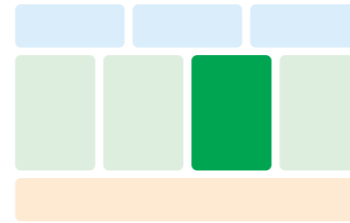
Network Planning and Design Engineer

Challenges in my day-to-day role:

Our current asset management tools have supported us well, but with the recent surge in network projects, they're becoming stretched. Accessing data is sometimes slower than we'd like, and managing asset information across different systems can be time-consuming. An updated, integrated system would help us keep pace and make decision-making more streamlined.

In the future:

With a cloud-based infrastructure supporting upgraded tools like SAP S/4HANA and GIS optimisation, I can seamlessly access, analyse, and share real-time asset data. This advanced system allows for multi-user working and quicker data retrieval, giving me a comprehensive view of assets and enabling me to make informed decisions with ease. The integration of 3D asset representation, full network connectivity models, and new GIS layers ensures all asset details are centralised and up-to-date, which is crucial for effective planning and scaling.

Digital Field Technology

Pillar 3 – Developing smart network and asset management capabilities

Projects

This initiative consists of three projects as detailed in the diagram below:

	#1	#2	#3
Driver	Improve the speed and accuracy of field maintenance activities by automating and digitising inspections processes and resource allocation	Improve field operation efficiency, enhance asset data integrity captured in the field and improve decision making	Optimise the inspections programme the use of latest technologies to allow for predictive maintenance
Project	Inspection and Maintenance Management Platform	Easy On-site Asset Identification	Technology-Enabled Inspections
Project Description	Implementation of a centralised Inspections & Maintenance Platform through continued development and implementation of our mobility & scheduling solution	Deployment and use of QR codes and RFID scanning technology	Use of Artificial Intelligence, Machine Learning and IoT devices to modernise and optimise inspections & maintenance processes
Outputs	Automated inspection and maintenance scheduling, enhancing efficiency, reliability, and safety with tools for tracking and analysis, using predictive analytics, real-time monitoring, and automated reporting to minimize downtime and optimise resource use.	Enhanced operational efficiency and accuracy with asset information made available on site in real time	Improved inspection efficiency, automated defect detection, and increased asset lifespan
Timeline	2030-2031	2030-2031	2030-2031
Improved DBP Maturity	Principle 2, 3, 6, 7 & 8 – Delivering for our internal asset management team; it will systematise new data which will be interoperable with linked systems. The digital tools enable validation of data on collection, increasing data quality.		

Benefits

This initiative delivers a number of benefits to both our external and internal stakeholders. A selection of these benefits is detailed below

Customers and Stakeholders

- Reduced likelihood of network outages due to potential network issues being detected in advance
- More efficient maintenance programmes resulting in reduced requirement for access to customer's land
- Reduced likelihood of network outages as a result of moving to a predictive maintenance programme

Automation and Efficiency

- Real-time data flow and synchronisation to enhance I&M operations
- Streamlined asset identification, tracking and management
- Automated timely updates regarding asset information
- Accurate, reliable asset data available real-time to field staff
- Scalable platform to handle an increase in assets and maintenance activities

Employee Satisfaction

- Enhanced employee experience through reduction of manual data entry and verification tasks
- Real-time access to consistent, reliable asset data records
- Improved safety of field operatives, as all incidents reported promptly

Digital & Data Personas

Field Technician

Challenges in my day-to-day role:

I spend too much time using different systems to identify assets and enter their condition information which is inefficient and can introduce errors. On site issues aren't relayed in real time, and the lack of integration and fragmented process will become increasingly difficult to manage as our asset base grows.

In the future:

When I arrive on site, each asset has an ID tag that I can scan to access all relevant data and any outstanding issues. This makes my day of inspecting assets and reporting their condition much simpler and more intuitive. As a result, I can cover more ground, and the information I gather is accurate and up-to-date. The quality and speed of my work are greatly improved, allowing me to accomplish more. My team didn't need to expand in proportion to the extra assets added to the network.

Network Data Analyst

Challenges in my day-to-day role:

I struggle with compiling accurate analysis because I have to interact with multiple systems, often encountering errors and out of date data. The manual data entry and collation process is time-consuming and complicated ultimately affecting the time I can dedicate to analysis which impacts the quality of insights I can provide.

In the future:

The new platform has made it easier to perform comprehensive and accurate analyses. This will enhance our ability to provide valuable insights that can drive better decision-making and strategic planning. The new initiative ensures that asset data is accurate and up-to-date, thanks to automated identification and data entry. This improves the quality of data available for analysis, enabling me to provide more reliable and actionable insights.

Environmental Compliance Solutions
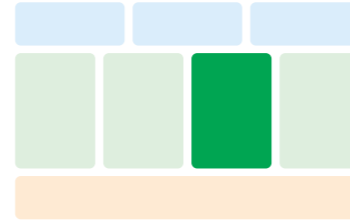
Pillar 3 – Developing smart network and asset management capabilities

Drivers & Projects

This initiative consists of four projects as detailed in the diagram below:

	#1	#2	#3	#4
Driver	Improve environmental data accuracy, align with best practices and collaborate with other transmission operators for consistency	Achieve 10% BNG on consented projects and enhance Natural Capital through local strategic nature partnerships	Reduce our scope 1, 2, and 3 GHG emissions efficiently and minimise carbon in construction projects	Recycle or reuse 100% of our waste by 2030 and achieve 30% recycled content in top materials
Project	Environmental Compliance and Reporting	Biodiversity Management	Greenhouse Gas Emissions Management	Resource Use and Waste management
Project Description	Development & implementation of central ESG reporting platform & analytics capability	Fully digitise biodiversity data and integrate with GIS and Inspection and Maintenance systems	Develop a centralised carbon footprint reporting system, gather accurate Scope 3 emissions data from the supply chain, and create tools to manage whole life carbon in new projects using BIM data	Digitisation of the waste and materials management processes and related data
Outputs	Strategic foundation for SPT's digitalisation journey, enabling complete digital transformation of the environment and sustainability business area	Fully digitised biodiversity data, reporting and insights capabilities developed, providing business insight and compliance, aligned with SPT's future needs	Accurate collection, monitoring, and reporting of Scope 1, 2, and 3 GHG emissions, and whole life carbon management practices per PAS 2080 specification implemented	Automated data collection, monitoring, and reporting on waste and materials management, aligning with goals of becoming a zero-waste company by 2040
Timeline	2027-2028	2029-2030	2027-2028	2029
Improved DBP Maturity	Principle 2, 3, 5, 6, 7 & 8 – Delivering for our environmental management teams, this initiative shall create data collection mechanisms, all the outputs of which shall be added to our data catalogue and made accessible; it will systematise new data which will be interoperable with linked systems.			

Benefits

This initiative delivers a number of benefits to both our external and internal stakeholders. A selection of these benefits is detailed below:

Stakeholders and Customers

- Reduced risk of postponement due to environmental constraints
- Work collaboratively to develop common approach for Biodiversity Net Gain
- Regulatory compliance including with environmental agencies and adherence to environmental reporting standards
- Supports the achievement of sustainability targets through better data management.

Reporting and Insights

- Enhanced reporting transparency and communication of environmental results against targets and Ofgem commitments
- Centralised, integrated reporting capability of all environmental and sustainability data
- Contractual and supplier decisions to be based on environmental performance
- Ability to monitor progress towards Net Zero GHG
- Removal of multiple reporting mechanisms and processes

Automation and Efficiency

- Cost efficiencies associated with automated processes and effective data management
- Automation of contractor waste, carbon and materials management processes
- Improved data accuracy, maturity and integrity
- Automation of GHG emissions calculation
- Al and machine learning for predictive analytics, trend analysis and to support report generation

Digital & Data Personas

Compliance Officer

Challenges in my day-to-day role:
Collecting verifying and tracking environmental data manually is labour-intensive, with a high risk of errors. Reporting on biodiversity and emissions requires extensive cross-referencing and increases the risk of missing important compliance deadlines.

In the future:
Automated data collection and reporting systems allow me to monitor biodiversity and emissions easily. This technology gives me accurate insights into compliance, enabling proactive decision-making and improving our environmental footprint.

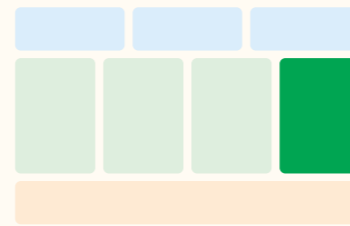### Customer

Challenges in my day-to-day role:
I appreciate SPT's commitment to environmental standards, though accessing real-time updates on these initiatives could be easier. Greater transparency would allow me to stay better informed about SPT's impact.

In the future:
Digital compliance tools provide me with instant access to the latest environmental metrics and SPT's sustainability efforts. This transparency strengthens my confidence in their operations and environmental responsibility.

Pillar 4 - Becoming a Data Driven Organisation

Pillar 4 - Becoming a Data Driven Organisation

Our RIIO-T3 plans enable us to treat our data as a valuable asset, enhance our capabilities to maximise the value from data, and build the trust to securely share our data with our customers and stakeholders, all in line with Data Best Practice.

Foundational Data Developments

During RIIO-T2, our foundational developments have focused on our data governance framework; developing our Informatica tool, a suite of data governance policies, and our governance arrangements – with leaders from across the organisation engaged on ensuring compliance with Data Best Practice. We also established our Network Data and Intelligence function; responsible for stewarding our data strategy, supported by our Business Transformation Directorate, collectively developing solutions with Data Best Practice designed in. 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.

Data Governance

We will build on our successes, rolling out a prioritised programme of cataloguing our data assets in Informatica, and assessing the quality of our data. This will enable us to develop clear visibility of our data assets, to measure the quality of our data across our organisation in a standardised and automated fashion, and to identify and deliver an improvement programme which benefits our data users.

Data Sharing

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 data sharing and data services, building on the launch of our Open Data Portal. We will publish new datasets, deliver intuitive visualisations, and enhance the security and accessibility of our Portal, enabling us to surpass the requirements of Principle 11 of Ofgem's Data Best Practice guidance.
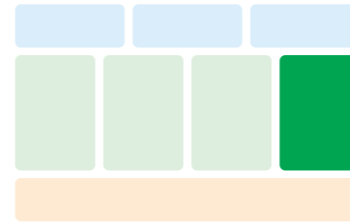
UK Government recently published findings of their Digital Spine feasibility study, setting out plans for a centralised Data Sharing Infrastructure. Our plan sets out how we will deliver this, working closely with the NESO and Ofgem to improve the ability to exchange data within our industry, ensuring trusted data flows to Ofgem, the NESO, and other actors in the energy system.

Data Reporting and Analytics

We will deliver the scaled roll out of data products on our Azure platform, developing internal and external use cases to support the needs of our business and the wider industry. This includes solutions for enhanced asset condition analysis, modernising regulatory reporting, improving asset management, and developing climate resilience insights.

Data Governance

**Pillar 4 - Becoming
a Data Driven Organisation**

Drivers & Projects

This initiative consists of the projects as detailed in the diagram below:

#1	
Driver	With the recent exponential increase in the volume of data generated across our organisation, and the growing demand for access to this data, we need to implement robust data governance across our entire organisation
Project	Investment in data governance to enable SPT to manage transmission data assets
Project Description	We will incrementally deploy our data governance platform Informatica into our organisation, building a comprehensive inventory of our data assets, categorised by business rules, and providing a solution for data quality management. To be able to operationalise our deployment of Informatica, we will develop, implement, and monitor a suite of data governance policies and processes
Outputs	• A comprehensive inventory of all our transmission data assets with associated key attributes • A solution for data quality management in our organisation • Implementation, and monitoring, of a suite of data governance policies and processes
Timeline	2026-2031
Improved DBP Maturity	Principles 1, 2, 3, 4, 5, 6, 7, 9, 10 & 11 – Our Data Governance initiative is the fundamental enabler to compliance with DBP; by establishing policies, standards, and procedures for how data is collected, stored, accessed, and protected, it ensures that data is trusted and fit for purpose.

Benefits

This initiative delivers a number of benefits to both our external and internal stakeholders.
A selection of these benefits is detailed below:

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, meeting our stakeholders' expectations.

Customers & Stakeholders

- Utilisation of Informatica's built-in quality solution, means SPT 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 its location, flow, and ownership. This allows our employees to dedicate more time to valuable data analytics instead of searching for data. It also helps identify and reduce duplicated work and errors, leading to increased operational efficiency.

Digital & Data 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 don't know who is responsible for the data I'm looking for, so I spend a lot of time emailing departments to find out. When I get the data, I must review to understand the data and if the quality is good enough for my needs. I spend a lot of time locating and understanding data, rather than using it. I also get a lot of queries about how data sets interact - something that is difficult to answer when data is stored across the business.

In the future:
With the Data Catalogue I can now easily see all of the data within SPEN. It shows who the Data Owner and Business Data Steward is which makes it easier to request data or ask questions on it. It also contains supporting information on the data assets which means I can quickly see if the content of the data is what I'm looking for. I can see the Data Quality score and decide whether it meets my needs. It shows relationships and lineage so it is much easier for me to answer the questions on how datasets interact with each other.
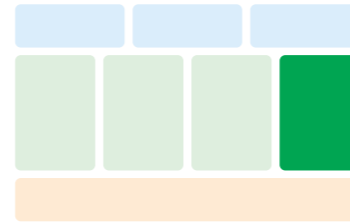
Asset Manager

Challenges in my day-to-day role:
With an existing portfolio of assets covered on NARM, and an additional 30,500 to be included in T3, the assurance of our asset data is hugely challenging. We have to verify inspection data is valid, timely and of good quality. Moreover, with a variety of assets this becomes increasingly complex and this data needs assured.

In the future:
With automated data quality checks within Informatica I can rest assured the data is automatically scanned at source through the entire process, I can pin point where my data has come from and quickly identify any non-conformities in input and output data.

Data Sharing & Security

Pillar 4 - Becoming
a Data Driven Organisation

Drivers & Projects
This initiative consists of the projects as detailed in the diagram below:

#1	
Driver	Data Sharing plays a critical role in enabling Net Zero and, under Ofgem's Data Best Practice Guidance , all Network Operators are obligated to treat their data as "presumed open".
Project	Investment in our Open Data Portal to develop new capabilities, visualisations, datasets and accessibility requirements in line with our stakeholder needs.
Project Description	We will invest in Data Sharing and Security to build on the success of our Open Data Portal, addressing the evolving challenges in data security and stakeholder expectations. This includes enhancing our existing Open Data Portal, hosted by Opendatasoft, to improve stakeholder accessibility and provide additional supporting information for better data interpretation and usage. We will also develop a range of data visualisation capabilities to graphically represent our datasets, allowing users to explore our data visually within the Portal
Outputs	• Enhancements to our Open Data Portal to meet Data Best Practice standards • Enhanced accessibility features for our portal users • Development of advanced visualisation capabilities to graphically represent datasets and allow users to explore our data visually, aligned with their needs • Implementation of a systematic and robust vetting process and enhanced access control management
Timeline	2026-2031
Improved DBP Maturity	Principles 2, 3, 4, 5, 6, 7, 8 & 11 – Our Data Sharing and Security initiative facilitates our approach to "presumed Open", ensuring that all our published datasets are in line with the standards set by DBP.

Benefits
This initiative delivers a number of benefits to both our external and internal stakeholders.
A selection of these benefits is detailed below:

Network Operations
• Enhanced security protocols ensures that only authorised personnel can access critical data, minimising the risk of data breaches and unauthorised use.

Customers & 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
• Seamless access to our data in multiple formats supports efficient collaboration with both our internal and external stakeholders, this allows our colleagues to dedicate more time to carrying out dataset enhancements in line with stakeholder needs.

Digital & Data Personas

Renewables Developer

Challenges in my day-to-day role:

I find it difficult to find data to support my needs. As the data is usually tabular, it is difficult to see trends or areas to focus on, limiting ability to identify opportunities or issues. Limited capabilities in the system means I must download the data and analyse within my own reporting tools, which is time consuming. As someone with accessibility needs, navigation can also be difficult.

In the future:

I can now find datasets more easily and the ability to view data geographically helps me to quickly identify locations where we may invest, providing certainty for our business. The new visualisations increases the usefulness of the data, allowing trends and patterns to be identified. The portal also now caters for my accessibility needs, making the experience more comfortable and productive.
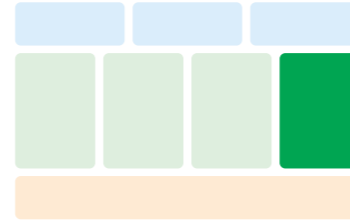
Academic

Challenges in my day-to-day role:

I am aware of SP Energy Network's Open Data Portal, but due to the complexity and technical nature of the datasets I find it difficult to understand how I can best use it to meet my needs. I am also unaware of what other data exists in the organisation that could be used to enhance my outcomes. Additionally, inconsistencies in dataset formats across different industry Open Data portals make it challenging to stack and analyse datasets efficiently.

In the future:

The comprehensive documentation and user guides that explain the datasets in detail, including their structure and use cases make it easy for me to understand how to use them. This is supported by the provision of online training sessions that help me to understand and utilise the data more effectively. Efforts to standardise the format of datasets across different portal facilitates easier integration and analysis.

Data Sharing Infrastructure

Pillar 4 - Becoming
a Data Driven Organisation

Projects

This initiative consists of two projects as detailed in the diagram below:

	#1	#2
Driver	Driving secure and seamless data exchanges to foster innovation, enhance operational efficiency, and support strategic decision-making across the energy sector	Integrating with a robust data sharing infrastructure to enhance efficiency
Project	Deploying the Data Sharing Infrastructure in SP Energy Networks	Development of use-cases: Outage Planning Strategic Planning Connections Reform Regulatory Reporting
Project Description	The Data Sharing Infrastructure shall utilise cloud technologies for data loading, storage, real-time messaging, and data standardisation, integrated via secure gateways with SPEN's Data Platform. It shall support key use-cases such as enhancing outage planning through standardised data exchanges, aiding NESO in strategic network planning by aggregating asset and planning data and benefiting customers by aligning transmission data for the connections process. Additionally, it shall support regulatory reform by facilitating data exchanges with Ofgem. This infrastructure ensures secure, efficient data exchanges, promoting regulatory compliance, operational efficiency, and innovation in the energy sector – full extensible for future use-cases.	
Outputs	2026 - The cloud infrastructure to support the DSI will be deployed, configured, and tested to accommodate the centrally developed software as a service (SaaS) DSI product – this will be developed in line with reference architectures agreed by the interim DSI governance. 2026 - The SaaS data preparation node (DPN) product will be deployed and maintained in line with releases from the centrally controlled DSI project as required and agreed through the interim DSI governance. 2026 to 2031 – data for each use-cases, agreed through the interim DSI governance, will be provisioned to core SPEN data systems, this data will be prepared for connection to the DPN – this data will be developed to agreed interoperability standards available at the time. 2026 to 2031 – each use-cases, agreed through the interim DSI governance, will be configured and released through the DPN.	
Timeline	2026-2031	
Improved DBP Maturity	Principle 2, 3, 5, 6, 8 & 11 – Delivering for our external stakeholders, this initiative shall create new open datasets which shall be added to our data catalogue; it shall create publicly available data which must align across the industry – common terms shall be adopted, and outputs and datasets will be designed to be interoperable where appropriate.	

Benefits

This initiative delivers a number of benefits to both our external and internal stakeholders.
A selection of these benefits is detailed below:

Better Planning and Forecasting

- Opportunities for more timely data sharing enables more accurate planning and forecasting, optimising resource allocation and improving system outcomes

Secure by Design

- Enhanced Data encryption and access control Ensures only authorised personnel (as per the trust framework) can access critical data, minimising the risk of data breaches and unauthorised use

Increased Transparency

- Improved data management allows for real-time updates and visibility into the connection process. Customers can track the status of their applications, understand delays, and receive timely notifications, leading to increased trust and satisfaction

Digital & Data Personas

Renewables Developer

Challenges in my day-to-day role:
When I am managing my connections for wind, solar and battery storage I am required to watch multiple sources of data to assess prospective connections.

In the future:
With the Data Sharing Infrastructure I have confidence the connection queue information is synchronised between the NESO and network operators meaning we are all working from the latest data.

Data Consumer

Challenges in my day-to-day role:
I receive multiple reports, models and data from many stakeholders, the data content should be in a standard format but mistakes are still made meaning I need to validate reports from each network operator.

In the future:
With the Data Sharing Infrastructure I can now automate the consumption of all of my reports, across three transmission licences, it is a huge time saver – all the data is validated at source meaning I get reliable and trustful data.
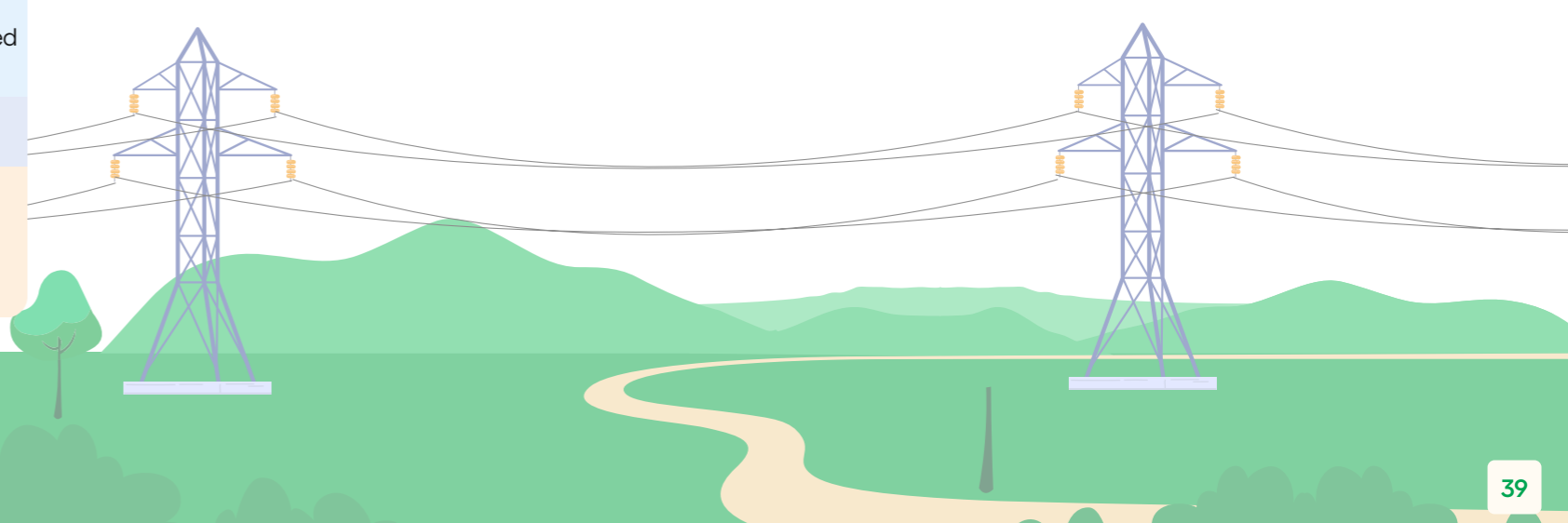
Data Platform, Analytics & Reporting

Pillar 4 - Becoming
a Data Driven Organisation

Drivers & Projects
This initiative consists of the projects as detailed in the diagram below:

	#1	#2	#3
Driver	Improve grid visibility for prospective connections customers and wider stakeholders	Proving a robust data platform to feed Open Data and the Data Sharing Infrastructure	Efficient Data for Asset Management
Project	The Data Platform, Reporting, and Analytics initiative aims to enhance SPEN's data accessibility and readiness in alignment with Ofgem's Data Best Practice. This project involves developing a hybrid data infrastructure that integrates both on-premise and cloud environments. The platform will consolidate diverse data sources, apply advanced analytics, and establish a robust DataOps framework		
Project Description	**Customer and Stakeholder Engagement:** Enhancing data sharing and transparency through systems like the Open Data portal and Data Sharing Infrastructure. This will improve service delivery, customer satisfaction, and regulatory compliance	**NARM Extension:** Enhancing the Network Asset Risk Management system by improving data models, standardising input data points, and expanding coverage to more asset types. This will improve risk management and asset reliability	**Modernising Reporting:** Moving beyond Excel for regulatory reporting by centralising input data sources and creating interactive user interfaces. This will streamline reporting processes and improve data accuracy and timeliness
Outputs	The NARM and Customer Connection use-cases will be delivered by 2027, modernising reporting by 2028, and the single asset view and climate resilience use-cases by 2029. The dates specified represent the fully functioning development stage. An agile approach will enable the development of an MVP followed by incremental releases, ensuring continuous improvement and adaptation to changing needs		
Timeline	2026-2031		
Improved DBP Maturity	Principle 2, 3, 5, 6 & 8 – Delivering for our internal project teams, this initiative shall create new projects datasets which shall be added to our data catalogue; it will systematise new data which will be interoperable with linked systems – common terms shall be adopted which data abstraction layers (i.e. API) are created.		

Benefits
This initiative delivers a number of benefits to both our external and internal stakeholders. A selection of these benefits is detailed below:

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

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

Improved Reliability and Safety
- Extending NARM to a broader range of assets helps identify additional potential risks across the network, leading to fewer unexpected outages and safety incidents

Digital & Data 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 as scale difficult.

In the future:
With the Single Asset View I can log into a single system and find all the relevant data on a single pane of glass, it has vastly reduced in-depth analysis into asset issues.
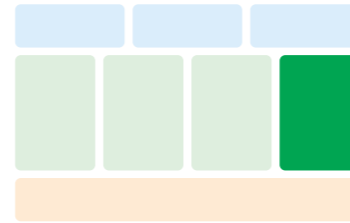
Data Analyst

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.

Foundational Platforms & Solutions

Pillar 4 - Becoming
a Data Driven Organisation

Projects

This initiative consists of three projects as detailed in the diagram below:

	#1	#2	#3
Driver	Reduce manual processes and lower operating costs by a move to cloud hosting to automate infrastructure provisioning	The need to unify cloud events and telemetry, enhancing scalability, innovation, agility, and cost reduction	The need to automate cost-control, enabling scalable cloud usage while minimizing costs and maximising value
Project	Move to Cloud	Multi Cloud Management with AIOps	Implementation of FinOps
Project Description	Migration programme from on-site servers to cloud hosted	Implementation of a Multi Cloud Management Platform with AIOps	Implementation of a FinOps platform
Outputs	Reduced reliance on on-premise systems, enabling SPEN to respond swiftly to increased transmission service demands. This shift will also lower IT operating costs over time by leveraging economies of scale	Enhanced scalability and service quality, reducing operational risks. Machine learning will detect resource usage anomalies, while an AIOps platform will provide actionable insights and recommendations through a unified management interface	Costs savings through a cloud hosted infrastructure. FinOps platform will ensure SPEN has the tools to monitor our IT estate spend more efficiently as cloud resource consumption increases
Timeline	2027-2028	2027-2028	2029

Benefits

This initiative delivers a number of benefits to both our external and internal stakeholders. A selection of these benefits is detailed below:

Pace and Scale

- Moving to a cloud-based infrastructure allows for rapid scaling of IT resources to meet increased demand without significant hardware costs. This agility supports faster innovation and responsiveness to business need
- A cloud-first approach removes manual processes and increases automation in provisioning infrastructure, leading to reduced operating costs over time

Observability

- The adoption of an AIOps platform will enhance service quality by automatically detecting and addressing anomalies, thus reducing the risk of operational incidents or outages
- AI-driven operational insights and improved productivity through a single management interface

Financial Control

- Implementing FinOps will foster cost efficiencies and financial predictability. A consumption-based model in the cloud offers opportunities for cost optimisation and better financial control
- Enhanced visualization of projects enables more effective design decisions, accurate cost estimates, and tracking, supporting efficient project delivery.

Digital & Data Personas

Cyber Security Manager

Challenges in my day-to-day role:
Managing security across on-premise and cloud systems is complex, and the risk of operational incidents keeps me focused on reactive measures rather than strategic oversight.

In the future:
With multi-cloud management and AIOps, I have the tools to proactively monitor and manage security incidents. AI-driven insights enhance my ability to respond quickly, keeping our systems secure while reducing incident rates.

Project Manager

Challenges in my day-to-day role:
Coordinating IT needs across projects is challenging due to limited cloud integration and frequent manual interventions. These limitations make project scaling and resource management difficult.

In the future:
With the shift to a fully cloud-integrated environment, I have the scalability and responsiveness I need to handle increased demand efficiently. Cloud infrastructure simplifies my workflow, letting me focus on strategic project needs.
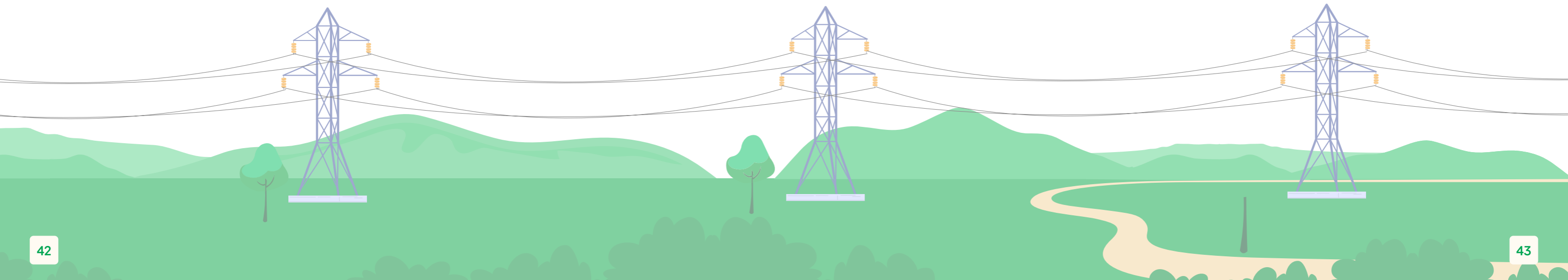
Delivery Roadmap

Delivering our Digitalisation Strategy will be a substantial programme of work and will rely on introducing new skills into our business, embracing change management, and ensuring a robust delivery model.
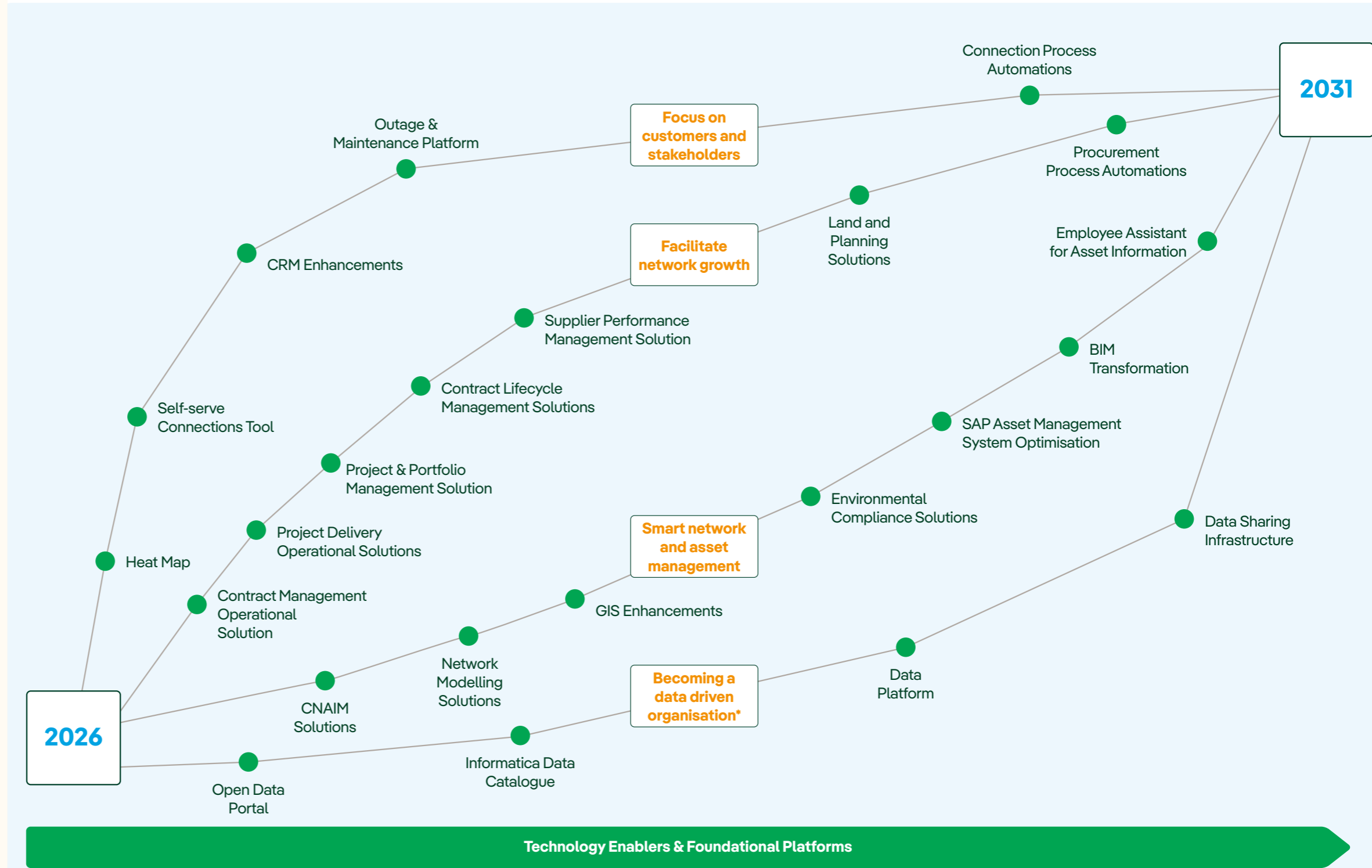
In 2023, we implemented a new operating model, transforming our digital and data teams, setting us up for the scale of the challenge ahead and onboarding new skills and capabilities across system architecture, data engineering, data science and project management. Our data and digital teams are now established, and our teams have been collaborating to deliver data and digital solutions working in conjunction with subject matter experts across our organisation.

Our delivery programme has been segmented into value streams, each responsible for the design, development and delivery of projects aligned to a specific theme. Our value streams have clear accountability for end-to-end products and systems lifecycle, providing application support for systems within their remit.

Our delivery model is underpinned by two central support functions, providing change management and solution architecture expertise to make sure the programme delivers quality, outcomes and value. One of the key principles of our delivery model is to ensure the right delivery method for each initiative with the right mix of internal and external resources and skill sets. This hybrid resourcing model utilises a combination of external partners and SPEN staff, allowing us to develop our people and build more skills and capability internally, driving cost and efficiency.

We use an agile delivery approach as this enables us to deliver benefits for stakeholders early and incrementally and lets us engage with end users on an ongoing basis, ensuring that we can iterate and evolve our plans in real time as the needs of our customers and stakeholders evolve.

For RIIO-T3, our five-year programme has been developed into a roadmap which sets out the key milestones in the delivery of our digital and data initiatives. This is aligned to our four 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. We have also ensured that our delivery roadmap is not concentrated to one area at any given time, ensuring that we are balancing the needs of our business alongside our programme of activity.

2026

2031

Connection Process Automations

Outage & Maintenance Platform

Focus on customers and stakeholders

Procurement Process Automations

CRM Enhancements

Facilitate network growth

Land and Planning Solutions

Employee Assistant for Asset Information

Supplier Performance Management Solution

Self-serve Connections Tool

Contract Lifecycle Management Solutions

BIM Transformation

SAP Asset Management System Optimisation

Project & Portfolio Management Solution

Project Delivery Operational Solutions

Smart network and asset management

Environmental Compliance Solutions

Heat Map

Data Sharing Infrastructure

Contract Management Operational Solution

GIS Enhancements

CNAIM Solutions

Network Modelling Solutions

Becoming a data driven organisation*

Data Platform

Informatica Data Catalogue

Open Data Portal

Technology Enablers & Foundational Platforms

*Please note that the Data initiatives will be delivered incrementally over the T3 period.

Data Best Practice

In alignment with Ofgem's requirements, we are committed to measuring and assessing our organisational maturity and compliance with the Data Best Practice (DBP) principles. To achieve this, we have developed a comprehensive assessment framework that quantitatively measures our compliance across all 11 DBP principles.

To populate this framework, we conducted extensive interviews across various directorates and functions within our organisation. This thorough approach ensures that our assessment is both accurate and reflective of our current practices.

We have also set ambitious maturity level targets for each DBP principle, aiming to achieve these by the end of T3. Our strategy for improving these maturity levels is grounded in a detailed analysis of all Data & Digitalisation T3 initiatives. By evaluating the benefits these initiatives will deliver, we can enhance our compliance with each DBP principle effectively.

Our priorities are closely aligned with feedback from both internal and external stakeholders. Based on this feedback, we are focusing our efforts particularly on Principles 1, 5, 6, 7, and 11, as these have been identified as high-demand areas by our stakeholders.

Identify the roles of stakeholders of data assets:
Clearly define and document the responsibilities and roles of all stakeholders involved in managing and using data assets to ensure accountability and effective data governance.

Use common terms with data assets, metadata, and supporting information:
Standardise terminology across data assets, metadata, and supporting information to facilitate clear communication and understanding among all users.

Describe data accurately using industry standard metadata:
Employ industry-standard metadata to provide precise and consistent descriptions of data, enhancing its usability and interoperability.

Enable potential data users to understand the data by providing supporting information:
Offer comprehensive supporting information to help users comprehend the context, structure, and quality of the data, making it easier to use effectively.

Make data assets discoverable to potential data users:
Implement mechanisms to ensure data assets are easily searchable and accessible to those who need them, promoting wider usage and value extraction.

Enable potential data users to understand the data by providing supporting information:
Offer comprehensive supporting information to help users comprehend the context, structure, and quality of the data, making it easier to use effectively.

Learn and deliver to the needs of current and prospective data users:
Continuously gather feedback from data users to understand their requirements and adapt data services to meet these evolving needs.

Ensure data assets are interoperable with assets from other data and digital services:
Design data assets to be compatible and integrable with other data sources and digital services, facilitating seamless data exchange and collaboration.

Protect data assets and systems in accordance with security, privacy, and resilience best practice:
Implement robust security, privacy, and resilience measures to safeguard data assets and systems against threats and ensure their integrity and availability.

Store, archive, and provide access to data assets in ways that ensure sustained benefits:
Manage data storage, archiving, and access processes to maximize long-term value and usability of data assets.

Treat all data assets, their associated metadata, and software scripts used to process data assets as presumed open:
Adopt a default stance of openness for data assets, metadata, and processing scripts, making them accessible to the public unless there are compelling reasons to restrict access.

No.	Principle	Level 1	Level 2	Level 3	Level 4	Level 5
1	Identify the roles of stakeholders of data assets			● →		●
2	Use common terms with data assets, metadata and supporting information		● →		●	
3	Describe data accurately using industry standard metadata		● →		●	
4	Enable potential data users to understand the data by providing supporting information			● →	●	
5	Make data assets discoverable to potential data users			● →		●
6	Learn and deliver to the needs of current and prospective data users		● →			●
7	Ensure data quality maintenance and improvement is prioritised by data user needs			● →		●
8	Ensure data assets are interoperable with data assets from other data and digital services			● →	●	
9	Protect data assets and systems in accordance with Security, Privacy and Resilience best practice			● → ●		
10	Store, archive and provide access to data assets in ways that ensures sustained benefits		● →			●
11	Treat all data assets, their associated metadata and software scripts used to process data assets as presumed open			● →	●	

Key

● Maturity level at end of T2
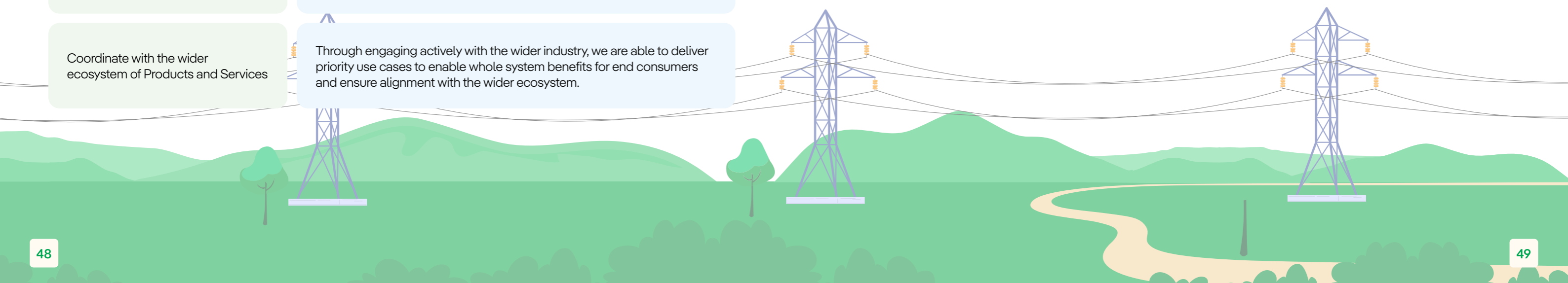
● Maturity level for end of T3
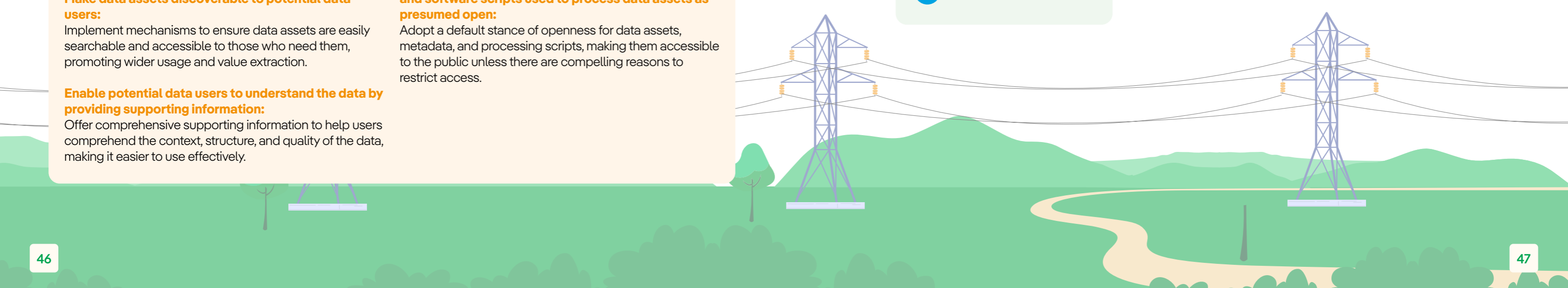
DSAP Principles

Our T3 Digitalisation Strategy aligns with the principles outlined in Ofgem's Digitalisation Strategy and Action Plan (DSAP) guidance as follows:

Digitalisation Strategy Action Plan	How we have applied this in our strategy
Prioritise providing benefits to the stakeholders who pay for the Products and Services as well as benefits that are in the public interest	We clearly set out our Products & Services as Initiatives for our stakeholders. Within these we assess the need for the change and define what benefits these will have for end users.
Ensure Products and Services work towards a defined vision	We have clear alignment between our Digital Initiatives and overall Strategic Goals to ensure their delivery.
Take full advantage of opportunities to deliver benefits early and to iterate improvements to Products and Services	Adopting Agile methodologies plays a key role in steering our strategy, we have continued to invest in the enhancement of our workforce's proficiency in Agile principles and practices to have the ability to deliver in an agile manner with the minimal viable product developed
Enable stakeholders to understand the Products and Services, the status of their delivery and how to access them	As described in the Stakeholder Engagement section, we have transmission specific use cases where we educate stakeholders on the delivery of our Products and Services.
Ensure visibility about the nature and status of actions in the Digitalisation Action Plan	We keep our Digitalisation Action Plan up to date, with all updates to our documents available to view online in a user friendly, digital format and we will continue to evolve this website based on stakeholder feedback.
Ensure there is shared understanding of success and performance is measured	We have internal tools to ensure there is visibility of projects enabling risks to be managed and a clear view of what success will be from project initiation through to delivery
Coordinate with the wider ecosystem of Products and Services	Through engaging actively with the wider industry, we are able to deliver priority use cases to enable whole system benefits for end consumers and ensure alignment with the wider ecosystem.

SP Energy
Networks