Scottish & Southern Electricity Networks

TRANSMISSION

Digital Strategy

A Strategy for Net Zero

March 2022

Contents

ABOUT US

We are SSEN Transmission, part of SSE Plc, responsible for the electricity transmission network in the north of Scotland. We operate under the name of Scottish and Southern Electricity Networks, together with our sister companies Scottish Hydro Electric Power Distribution (SHEPD) and Southern Electric Power Distribution (SEPD), who operate the lower voltage distribution networks in the north of Scotland and central southern England. As the Transmission Owner (TO) we plan, develop and maintain the high voltage electricity transmission network in the north of Scotland.

The transmission network takes the electricity from generators and transports it over long distances for ultimate distribution to homes and businesses in cities, towns and villages. We do this via our extensive network of overhead lines, underground cables and electricity substations, extending over a quarter of the UK's land mass and crossing some of its most challenging terrain.

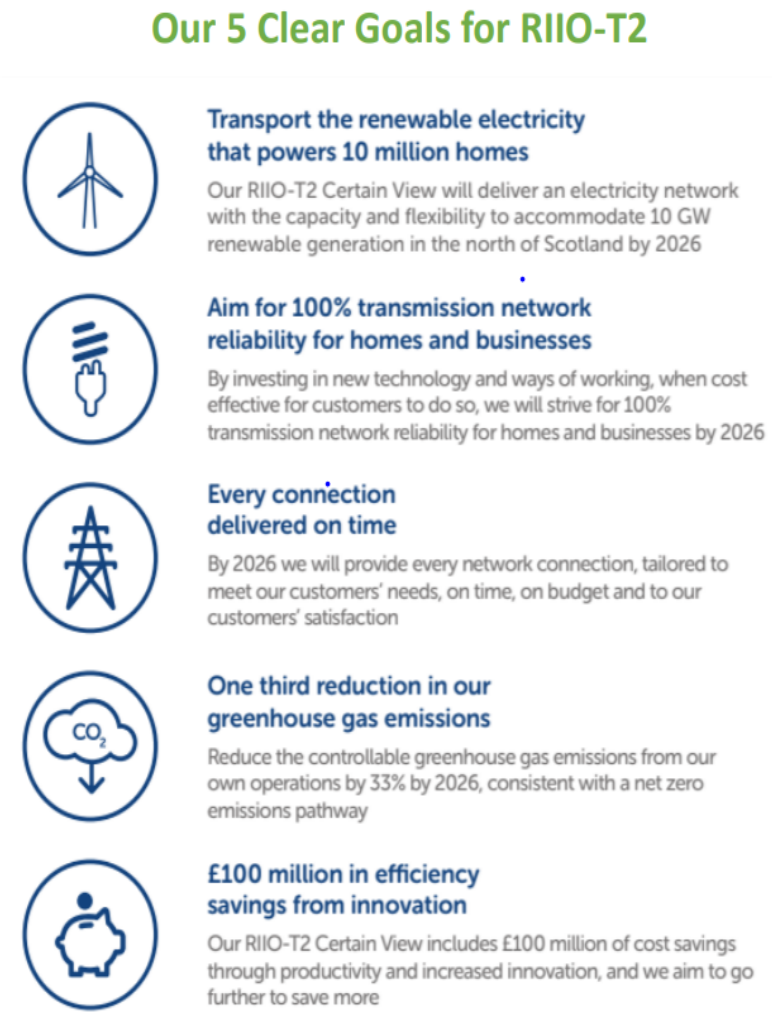
As a natural monopoly, our activities are regulated by Ofgem. This includes the outputs that we need to deliver for our consumers and the associated revenues that we can collect. This is controlled through the RIIO price control framework, where RIIO stands for Revenue made up of Incentives, Innovation and outputs. We are currently within the most recent Price Control, referred to as RIIO-T2, which runs from April 2021 to end of March 2026.

As well as this framework and the drivers within, we have a duty to develop and maintain an efficient, co-ordinated and economical system of electricity transmission.

Scottish & Southern Electricity Networks

TRANSMISSION

WHAT'S NEW?



Our understanding of Digital and what it means for a Transmission Operator has increased significantly since our last Digital Strategy was published in December 2020. Our strategy has evolved to be fully focused on our IT/Digital investments with Operational Technology (OT) and Cyber Security being addressed separately under our Cyber Resilience IT and OT Programmes. The projects we deliver under the Digital Strategy will continue to comply with SSE's rigorous security standards. Our strategy remains aligned to the 5 Key Goals that we defined within our overall RIIO-T2 plan. We are clear on the areas where Digital assists in their delivery.

Our Digital Strategy continues to be underpinned by internal and external feedback – ultimately everything we do within it is for our end customer. We continue to encourage feedback and will act upon it when received.

Our Digital delivery is now organised around five Value Streams – each with a Roadmap outlining the products and outcomes they will deliver throughout the RIIO-T2 period. By presenting these in this Strategy we will re-baseline the 'What' we aim to achieve through the delivery of the Digital Strategy. Each Value Stream Roadmap has a set of Milestones related to capabilities that we will be delivering - progress against these milestones will be reported in our bi-annual Action Plan updates.

EXECUTIVE SUMMARY

Our March 2022 Digital Strategy is the latest iteration of our planning and thinking for digital initiatives that we aim to complete throughout RIIO-T2. We have evolved our strategy and defined a Vision that will guide our delivery. This has brought clarity to the approach we will take to mature our technology foundations and digitally transform end to end value chains, providing our internal and external customers with outcomes that they will value.

To achieve this, we have organised ourselves into five distinct Value Streams that cover the entirety of SSEN Transmission's organisation. We have built a vision for each Value Stream and validated the outcomes for each with our Value Stream Owners – senior Directors from across SSEN Transmission. This Value Stream approach allows us to deliver in more agile ways, deconstructing the complexity of the program to deliver value iteratively.

The 5 Value Streams and their key objectives are:

- **Customer & Stakeholders and Commercial**
  - Re-platform our web presence with ability to iteratively enhance our content and capabilities
  - Introduction of a Stakeholder management system consistent and aligned with our customer strategy
  - Implementation of a new connection management system to streamline and drive efficiency as our business scales
- **Projects & Capital Delivery**
  - Enhance and digitise our Building Information Modelling (BIM) processes with modern tool sets and integrate with other core systems
  - Respond to the growth in number and scale of our capital projects through the delivery of an Integrated Project Management platform
- **Network Planning**
  - Enhance our data insight into Network Performance and Whole System through updated data models
  - Provide relevant and rich information to customers looking to engage and connect with our network

- **Asset Management and Operations**
    - Enhance existing and deliver new capabilities across Asset & Work Management that will drive business and asset performance, resulting in decreased network risk and setting the foundation for further enhancements in RIIO-T3
- **Enabling IT and Business Functions**
    - Creating cross cutting capabilities that supporting the end-to-end business processes that can be utilised to drive value in the other four Value Streams

We understand that the change driven through our Value Streams will be significant – it has the potential to be a disruptor but ultimately act as an accelerator for the value we create for our end customers. We need to underpin our Digital Strategy delivery with an equal focus on culture and ways of working to ensure we are set up for success. We will support our business through this change by focusing on five key dimensions: -

- Customer Centric Development
- Removing Silos
- Iterative and Agile
- Training and Development
- Embracing the Change

Data is at the core of our digital strategy. We have continued to develop our data capabilities to enhance the foundation to delivery on our commitments. This includes significant investments in data quality, data management and analytics. We are embedding with our business that data is a critical asset and has to be managed as such. This is in line with direction from the Energy Data Taskforce, BEIS and OFGEM.

In conclusion, our Digital Strategy follows a vision that has clear outcomes and delivers value to our internal and external stakeholders. These outcomes align with our strategic themes and our five business plan goals. Collectively, the initiatives will enhance our customer's experience with us adding value for our end customers.

INTRODUCTION

Our Digital Strategy is structured into three sections.

We will first outline our Digital Vision and how we arrived at it. We will show how our vision results in a number of outcomes that we are confident will deliver value to our internal and external stakeholders. We will then show how our Digital Strategy continues to be aligned with our business plan strategic themes and our RIIO-T2 goals. This sets the context that our Digital Strategy is fit for purpose and supports what we as a business strive to achieve.

We will then expand on each of each of the five Value Streams : -

- Customer, Stakeholders and Commercial
- Projects & Capital Delivery
- Network Planning
- Asset Management and Operations
- Enabling IT and Business Functions

For each Value Stream we will discuss the key strategic objectives that we are pursuing and the roadmap of initiatives that will deliver them. The roadmap covers the horizon of RIIO-T2, ending in March 2026. Our roadmap shows how our delivery is planned to complete by the fourth year of the plan, giving us contingency in our delivery. We will also outline the principles that we are taking to digital transformation, namely, how we will embrace change and build the organisation's digital skills. We then close the strategy by showing how we have aligned ourselves to the Energy Data Task force principles and provide a short conclusion.

SSEN Transmission uses stakeholder engagement and feedback to continually inform, shape and improve our strategy. Data and Digitalisation is a key theme within our Stakeholder Engagement Plan, and our Digital team will continue to support business functions to understand and capture stakeholder requirements where digitalisation can be a significant part of the solution. We invite all stakeholders with an interest in this area to comment on the questions below. All responses should be sent to Transmission.stakeholder.engagement@sse.com.

This Digital Strategy has been prepared in accordance with the requirements of SpC 9.5 of SSEN Transmission's Electricity Transmission Licence, and delivery of its vision will assist SSEN Transmission in discharging its responsibilities as it exercises its rights and obligations under this licence.

STAKEHOLDERS AND REMOVING BARRIERS

Human and digital interactions

Our approach to engaging with and serving our stakeholders and customers is both human and digital. We are deliberately choosing to offer a human or digital touchpoint, based on customer/stakeholder preferences, accessibility and context of the engagement or service delivery. We are also using automation in targeted areas to release capacity within teams and collect customer insight, this allows us to provide enhanced service during our human interactions.

Removing barriers for stakeholders

In response to stakeholder feedback, we have provided advice and training for stakeholders that were unfamiliar with the digital platforms being used during our engagement, up-skilling this hard to reach group and successfully moving all our community liaison meetings online. The number and diversity of attendees increased as a result.

Accessing this document and other information

We understand the value of involving diverse groups of people in our work and the importance of being accessible and easy to deal with. As a stakeholder-led organisation that works to Account Ability's AA1000 Stakeholder Engagement Standard, SSEN Transmission is committed to continuously improving its stakeholder engagement practice and processes to make sure we are inclusive and accessible throughout your engagement with us. If you would like a printed copy of this document or require it in an adapted format, such as large print, please get in touch so that we can accommodate your preferences.

If you are unable to access our website or reach us via email and require information about our Products and Services, please call our External Relations Team on 0345 0760 530 or write to:

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OUR VISION AND THE PILLARS OF OUR STRATEGY

We have focussed our strategy on four pillars: -

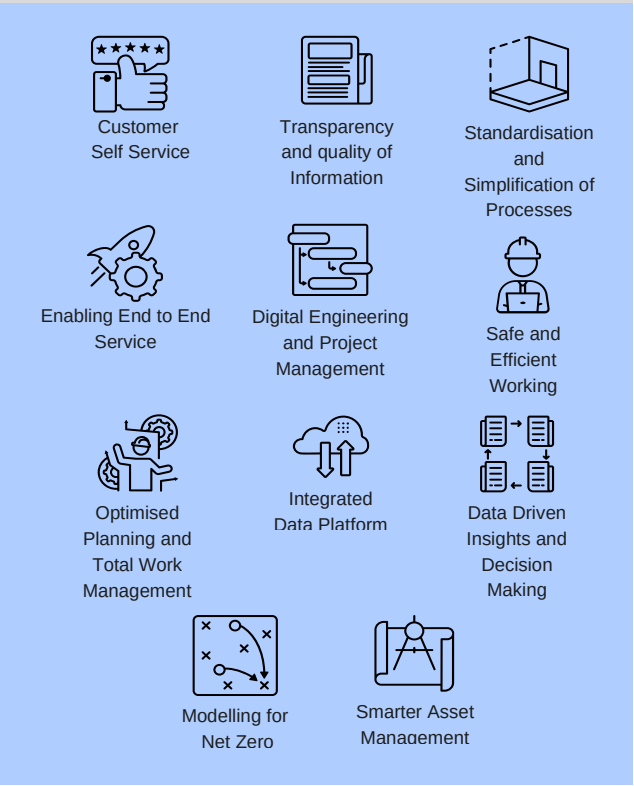
Digital for Customers	Digital Operations	Digital for Net Zero	Digital Capabilities
Investing in technologies and processes that allow our customers to make faster and better decisions on their investments. Defining and improving customer journeys.	Delivering solutions that enable safer and more efficient execution. This brings our customers, internal operations and partners closer together to make our network more resilient and transform it faster.	Using Data and Digital technologies to enable our modelling, engineering and delivery capabilities to expedite the Net Zero agenda.	Focusing on Digital Literacy, Leadership and Capability which enables us to be an agile Transmission Operator and deliver value in an iterative manner for our stakeholders.

Based on these pillars, we can identify where Digital adds value and drive end to end transformation. We have developed our five Value Streams using benchmarks, industry trends and direct engagement with External and Internal Stakeholders to create strategic outcomes and objectives. Using this bottom-up approach, we have defined an overall Vision which guides our investments in this area.

External and Internal Visions – Example from Customer and Stakeholder Value Stream

The table below shows how each of our Value Streams follows a specific vision and how these translate into a set of Strategic Objectives.

Our Value Stream…	Guided by a specific vision….	Manifesting into strategic objectives
Customer, Stakeholders and Commercial	Provide a high quality and transparent multi-channel service to stakeholders, with increased assisted and self-serve capabilities underpinned by an integrated group of fit-for-purpose platforms for entering and accessing information and insight	
Projects & Capital Delivery	A modern, slick and interactive Large Capital Project delivery function moving away from paper and Excel driven processes that exist currently, embracing the modern technology and practices that exist in the world today	
Network Planning	Maximise the value and opportunities presented by having easy access to a wide range of data from across the organisation to support future network modelling & forecasting, regulatory reporting, system planning, connections and innovation.	
Asset Management and Operations	Enhance existing and deliver new capabilities across Asset & Work Management that will drive business and asset performance, resulting in decreased network risk and setting the foundation for further enhancements in T3	
Enabling IT and Business Functions	Creating cross cutting capabilities that supporting the end-to-end business processes that can be utilised to drive value in the other four Value Streams	



ALIGNMENT WITH OUR STRATEGIC THEMES

Digital is a key enabler for both the Strategic Themes and the Five Clear Goals in SSEN Transmission's RIIO-T2 Business Plan. First and foremost, it is aligned with the philosophy and intent of a Stakeholder-Led Strategy, based on the broad principle of making the Right Data, available to the Right People, at the Right Time, to enable the Right Decisions. Digital will build upon a strong IT foundation and create capabilities that will change the way we operate and engage with our customers and stakeholders.

In this section we show the extent to which our business themes are enabled through digital capabilities and the impact that digital will have within them.

Stakeholder Led-Strategy

Taking a Whole System approach to network operation and development to meet current and future customers' needs. Energy networks are built and operated to meet the needs of current and future customers, and so customers' and stakeholders' needs must be the drivers of all activities.

Safe and Secure Network Operations

Using data efficiently to understand, predict and get the best network performance. Energy networks, and especially the high voltage transmission motorways, must be operated safely. They must be reliable, available and resilient to changing circumstances, be these opportunities or threats

Sector Leading Efficiency

Integrated approach to whole life development and operation, using risk-based engineering to deliver value. Energy networks must be affordable to generators and customers, recognising the difficulties of the fuel poor and vulnerable, and be open about the trade-offs between cost and investment for local and national benefits to achieve the clean energy transition.

Leadership in Sustainability

Trusted partner of customers and communities, realising long term benefit for society, economy and environment. Energy networks must be trusted by the customers and communities they serve demonstrating long term benefit for society, the economy and the environment.

Stakeholder Led-Strategy

We recognise that we have a broad set of stakeholders. The engagement we had with our stakeholder throughout our RIIO-T2 planning process and our continued engagement, thereafter, ensures we understand their needs and ensures digital exploitation delivers upon these. Our approach is to build a foundation that can grow quickly and where possible, accelerate delivery.

Implementation of ICCP and achieving easy and accurate flow of information between Control Centres.

Provision of digital tools to our connection customers to enable easier execution of application process, make decisions more accurately and easier, provide for a better customer experience and deliver connections on time and on budget, ensuring all parties are engaged on plans for delivery.

Use of technologies such as Building Information Management and Integrated Project Management to expedite, automate control and planning of projects and increase level of collaboration

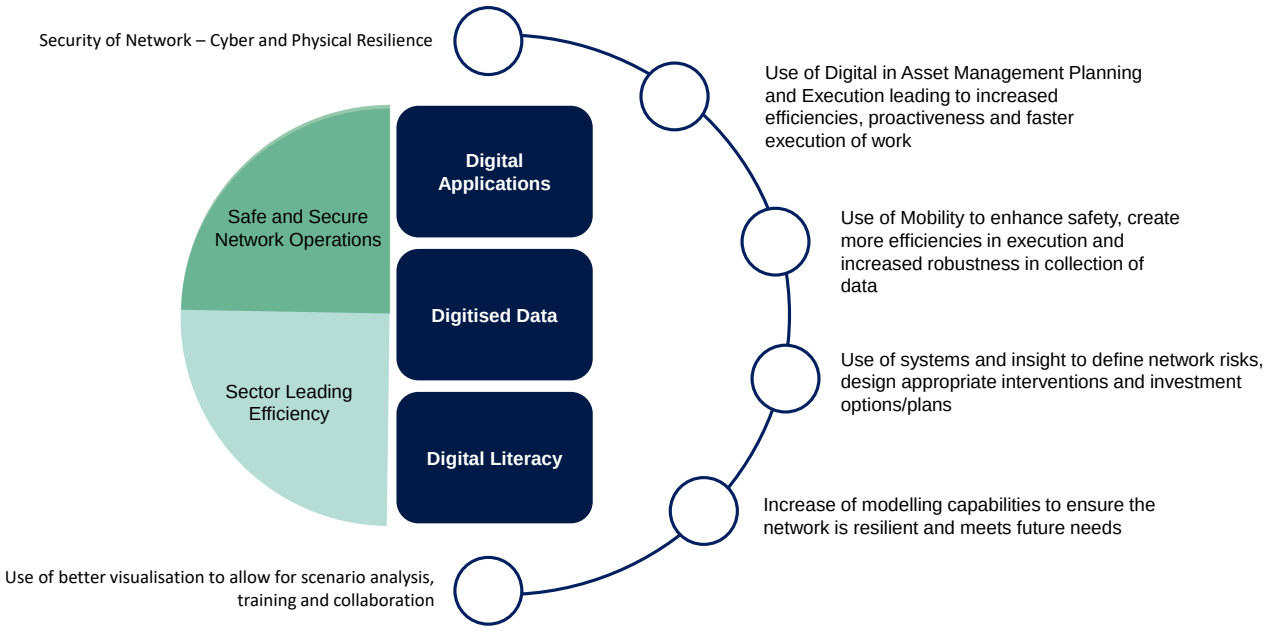
Improved access to data and better visualisation of the network. Provision of Open Data portals to obtain relevant data to be used for studies, investment decisions or academic purposes. The ability to request data and understood likelihood of their provision.

Improved data sharing and visualisation to enable our stakeholders to understand impacts of our proposals and decisions and facilitate easier consultation processes.

Easier methods of Data Collection, better visualisation of data, and increased capabilities in analytics and modelling for improved decision making. Increase in safety, efficiency through digital. Use of digital for enhanced training and easier use of office applications.

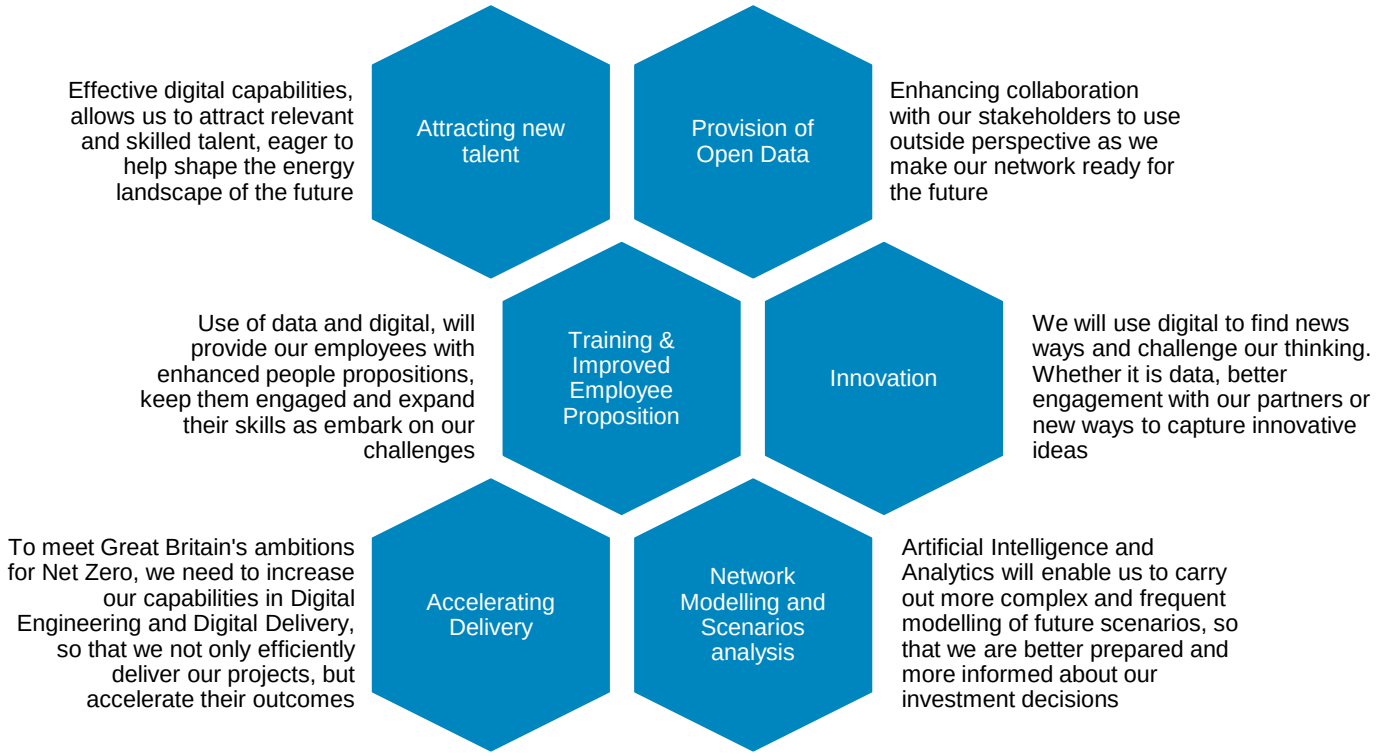
Safe and Secure Network Operations & Sector Leading Efficiency

Digital has a key role to play in our ambitions to operate a safe and secure network and do so efficiently. Our Digital goals are predicated on exploiting data from multiple source systems to speed insight and decision making that directly affects our operational efficiencies. We also recognise that as we bring about Digital enhancements and change in capabilities within our business, given their impact on a wide range of stakeholders, we see Digital literacy as a key enabler.



Leadership in Sustainability

Achieving leadership in sustainability can be enabled with Digital approaches, especially utilising Open Data to better engage with stakeholders as they provide perspectives and views on the future of our network. We want to attract the best and diverse talent, especially those who are passionate about delivering Net Zero and the leading role electricity transmission will take in its delivery. Maintaining and nurturing such talent requires the provision of enhanced employee propositions. Digital capabilities will enable us to achieve this by better analysing and engaging with the talent market, whilst providing our employees with more effective ways to expand their skills. Improved use of data, provision of analytics and modelling capabilities will allow us to assess future scenarios, in a more complex way and more frequently, so that we are better prepared and informed about our investment decisions. Finally, we will use Digital to allow us to faster deliver our projects, especially those that are required for the expansion of green and low carbon generation.



OUR DIGITAL ROADMAP

We have defined our Digital Strategy across five Value Streams. For each Value Stream, we have developed a vision (See previous diagram) and underneath this have defined outcomes and initiatives that will deliver the change and the value that our stakeholders expect of us.

In the following sections we will provide further narrative on the strategic outcomes of each value stream and provide a roadmap of the initiatives that will deliver them. We start by showing that our collective value stream outcomes align with our five business plan goals and conclude this section by showing a consolidated view of each value stream's products and services, and the outcome they provide for our stakeholders and how we measure the performance of these outcomes.

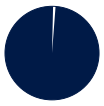
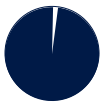
OUR DIGITAL STRATEGY IS ALIGNED WITH OUR RIIO-T2 5 CLEAR GOALS

This diagram shows the summary outcomes of our Digital Strategy and how they relate to the 5 Clear Goals that we committed to in our RIIO-T2 investment plan. As can be seen, our Digital Strategy outcomes are highly aligned with these 5 goals. Leveraging data, and a suite of applications aimed at Customer Management, Capital Delivery, Network Planning, Asset and Operations we will achieve the outcomes stated. We will also invest in enabling IT, such as Cloud, to ensure we standardise the services we use, are able to scale appropriately and drive value faster. We will aim to build Digital technologies that get maximum value from our investments and create a strong platform for enduring growth. This also include strategic capabilities such as Digital architecture, literacy of advanced tool sets, and agile transformation.

In the following section, we will explain the strategy in each of our Value Streams and highlight their initiatives.

Key:

- Significantly aligned
- Highly aligned
- Moderately aligned
- Somewhat aligned

	Strategic Goals				
	Transport the electricity that powers 10 million homes	Aim for 100% transmission network reliability for homes and business	Every Connection delivered on time	One third reduction in our greenhouse gas emissions	£100 million efficiency savings from innovation
	Our RIIO-T2 Certain View will deliver an electricity network with the capacity and flexibility to accommodate 10 GW renewable generation in the north of Scotland by 2026	By investing in new technology and ways of working, at cost efficiency for customers, we will strive for 100% transmission network reliability for homes and businesses by 2026	By 2026 we will provide every network connection tailored to meet our customers needs, on time on budget and to our customers satisfaction	Reduce the controllable greenhouse gas emissions from our own operations by 33% by 2026, consistent with net zero emissions pathway	Our RIIO-T2 Certain View includes £ 100 million of cost savings through productivity and increased innovation, and we aim to go further to save more
Our Digital Strategy Outocmes…					
Enhanced monitoring deployed and combined with other data sources in an integrated data platform to deliver the right data, to the right people at the right time – enabling more informed and quicker decisions to be made. Enhanced whole system scenario and network capability information enabling faster route to Net Zero					
Better insight on the performance of our network and the assets to make more informed investment decisions. When something does go wrong, having the network control and work management capabilities to resolve the issue as soon as possible					
Standardisation in the development and delivery of projects, through an enhanced suite of Project Management tools and a shared environment to collaborate and work with delivery partners					
Reduce waste and cycle time in the projects delivery through BIM and exploitation of standard designs, 3D design and validation and reduced errors from communication errors					
Providing a fit for purpose suite of applications that support the end to end business process and enable the business to deliver the outcomes as efficiently as possible					

CUSTOMER, STAKEHOLDERS AND COMMERCIAL

Our vision in this Value Stream is to provide a high quality and transparent multi-channel service to stakeholders. This is enabled with increased assisted and self-serve capabilities underpinned by an integrated group of fit-for-purpose platforms for entering and accessing information and insight. We foresee nine outcomes in this Value Stream. These are:

Transparency
Stakeholders can easily understand the services offered by SSENT, finding relevant information, processes, costs and timelines

Assisted Self-Serve
Customers are provided with a range of self-serve tools to support their connections journey – assisted point of connection finder, heat maps and portal to view status and interact with SSENT

Tailored Service for Customers
Personal and personalized experience, for different stakeholder segments, through their channel of choice to access the information and assisted services. Supported by increased proactive follow-up and recommendations

Core Systems to support E2E processes
Cohesive and joined up customer and user journeys – no more bridging the gap with Excel

Fit for purpose capabilities
Integrated capabilities deployed to meet the business needs. Business are made ready to receive and exploit the capabilities.

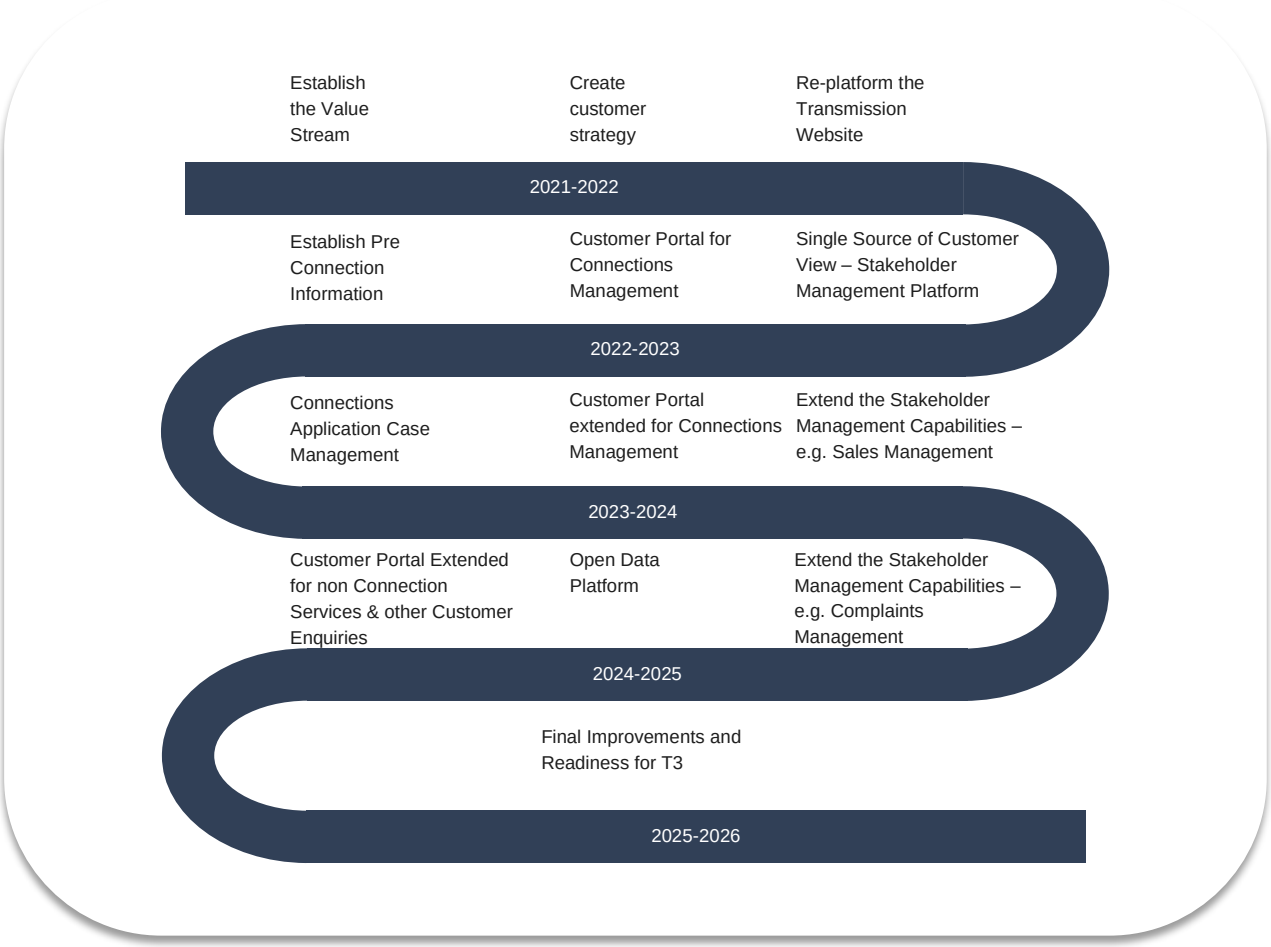
Consistency and quality of information
Simple and easy to enter validated and high-quality information – do it once, do it right and consistently across the business. Simple to report on and analyse the data.

Single View of the Stakeholder/ Customer
All internal teams are able to easily access stakeholder info and insight, as well as record interactions that they have

Assisted Processes & Workflow
Increased automation of repeatable and high-volume processes e.g. surveys and invites and orchestration and governance of complex processes e.g. Approvals or Project Changes

Improving digital literacy of internal teams and stakeholders
Enhanced digital skills and awareness of "the art of the possible" – using and exploiting current and new tools. Give stakeholders a voice on the development and enhancement of the services that they can access

To achieve these outcomes, we are going to invest in the initiatives that produce the following roadmap.



Our Digital Strategy is driven by creating transparency for customers, allowing them to make earlier decisions about their potential investments with us. It will provide our customers and stakeholders with self-service capabilities giving them a digital experience and allows both our customers and our internal teams to achieve efficiencies through ease and speed of work.

To achieve these, we are going to invest in technologies that provide our customers with visual maps of where our connection points are and provide them with relevant information on those connection points so that they make early and appropriate decisions. We are also going to invest in customer portals which allow our customers to make enquiries, see the progress of their application life cycle, have access to relevant information and documentation, but also explain the process through which they engage with us and the ESO as it relates to connections.

We wish to get closer to our customers. As such, we are investing in a Customer Relationship Management (CRM) system that gives us a single view of the customer. This will allow us to effectively segment and manage our interactions with each of them enabling more tailored services. It will introduce the possibility to increase automation so that our customers and our own staff work through their interactions easier, faster and with access to relevant information at any given time throughout the customer journey.

PROJECTS & CAPITAL DELIVERY

In alignment with our strategic themes and our five goals, our vision in this Value Stream is to create a modern, slick and interactive business moving away from the paper and Excel driven processes that exist currently and embrace the modern technology practices. To meet the ongoing project plans as well as future Network growth demands, we need to be able to operate at scale, efficiently and in collaboration with our suppliers and our customers.

To achieve this, we recognise that we must digitise our engineering and capital delivery data and use Digital technologies to enable our Large Capital Project processes.

The outcomes we have foreseen in this value stream area as follows –

Achieve BIM Level 2
Deliver the BIM Strategy through T2 period with people, process and tooling changes that will obtain the required BIM level

Simplify and Standardise Tools
Consolidation of document and drawing management onto a single platform – to enhance standardization and unify ways of working

Common Data Environment
Creating a common and collaborative environment for Transmission and its project delivery partners to seamlessly share data between parties

Getting fit for T3
Improve readiness for T3 and subsequent increased competition, easily access and compare cost data and provide additional value to customers

Remove "swivel chair" entry
Time spent efficiently and effectively, with minimal wastage, entering data once - increased value from teams

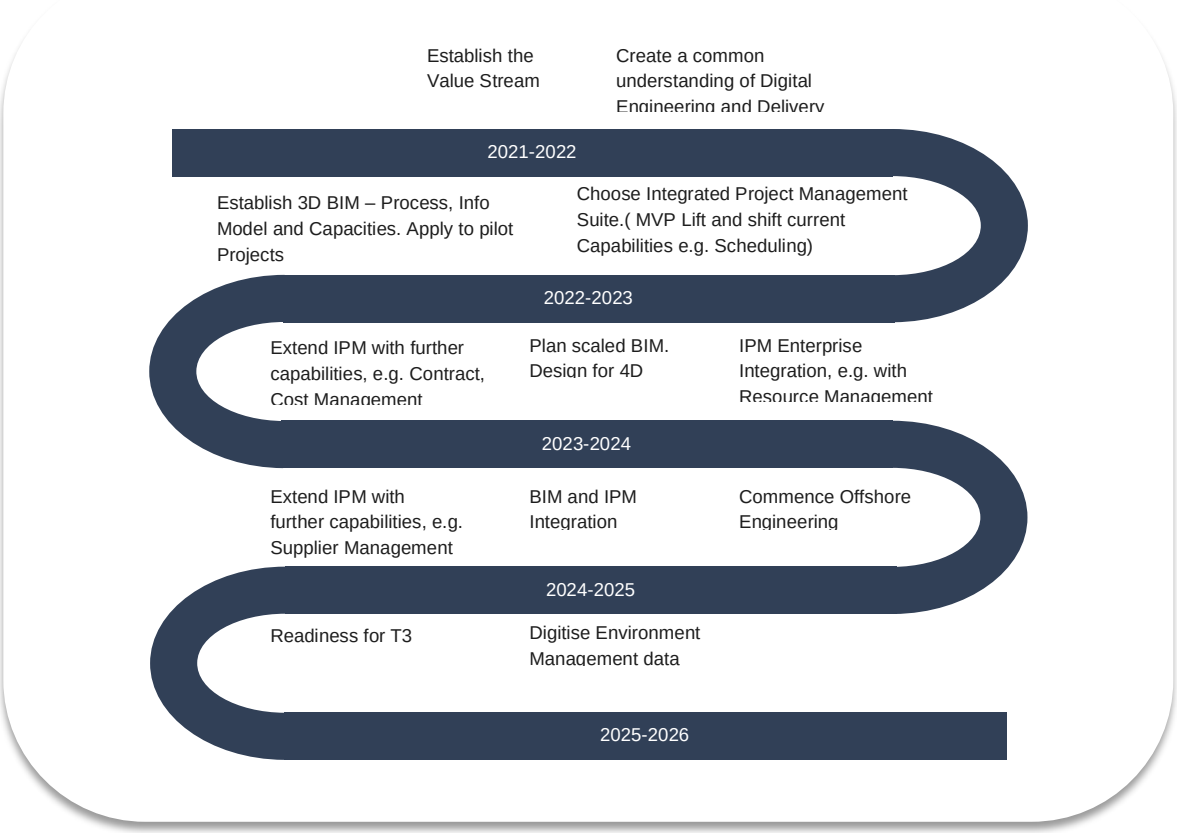
Ready access to information
Information and data easily accessible to support the project development and delivery process, including enhanced exploitation of GIS and data and reporting suite including a consolidated view of all compensation

Enabling smooth transition to Ops
Frictionless handover from projects to operations through the digital collection and continuous enrichment of asset and project information and documentation to enable smooth transition

Enhanced quality of information
Data quality standards are defined and put in place with suppliers through procurement and continuously enhanced

Operational Effectiveness
A simple, integrated and easy to use set of tools and processes that digitises the project delivery method, increase efficiency, minimise the use of spreadsheets and enhance collaboration internally and externally

To achieve these outcomes, we are going to invest in the initiatives that produce the following roadmap.



Our investments will enhance our existing engineering data, in particular Building Information Modelling and implementing Digital technologies to increase standardised design engineering and specifications. As well as fully digitising our Large Scale Capital Projects' processes to increase our scale, become more effective and increase the collaboration with our eco system of partners.

We are exploring best in class technologies that meet our industry context, are fit for purpose and can be mobilised effectively and scaled appropriately.

Building Information Modelling (BIM) will create an information model of our assets that can be leveraged by our engineering teams and partners. This allows us to comply with UK's requirements to have 3D models of building within the UK, but most importantly enable us to work collaboratively, and reduce rework through standardised design methods. It also will set up the foundation for future 3D models and Digital Twins of our assets.

Integrated Project Management will integrate with our BIM technologies and will digitise our process of capital delivery. The technology will provide us with the means to better capture requirements, manage documentation, schedule works, control costs and manage risks. It will also include workflows and automation, so that we can more effectively execute our governance, meet Service Level Agreements in our hand offs and ensure we capture the right data as we pass on asset information to our operations teams.

NETWORK PLANNING

Network planning plays a significant role in planning our network and informs our investments. Our internal and external stakeholders tell us that they need more frequent and more complex analysis and modelling completed on the network so as to inform optioneering and ultimately choosing the best route to make the network resilient, secured, reliable and fit for the future.

We have created a value stream dedicated to Network Planning in our digital strategy. In FY 2022-2023 we will revisit our current plans to refine our roadmap and identify associated strategic Digital use cases. Although these are in development, we know that our strategy is predicated on better use of data. In this instance better use of data is aimed at creating more informed and complex models about the network, allowing us to dive deeper into different energy scenarios and define our actions. It will lead to better analysis of the network's resilience and future capability in order to understand where potential weaknesses are and how we should address these.

We recognise that we need to consider non-network solutions as well as physical investment when it comes to addressing the network requirements and the better use of data allows us to assess better feasibility of overall options.

As we develop our strategy in this value stream, we will focus on the following key strategic themes, which we believe will give our internal and external stakeholders value.

Network Modelling

Our Strategic Objectives:

- Data availability
- Additional Measurement Points
- Integration of key systems
- Implementation of Modelling and analytics systems

Key Outcomes:

- Establish probalistic planning models
- Increase frequency of models
- Align investments
- Use Asset Performance in modelling and analysis

Regulatory Reporting

Our Strategic Objectives :

- Data availability
- Integration of key systems
- Data cleanse
- Enhancement of data capture processes
- Automation of reporting
- Auto validations

Key Outcomes:

- Improved quality of reports – e.g. better alignment of cost and volumes
- Faster and more frequent production of reports
- Improved traceability of reported items

Innovation

Our Strategic Objectives:

- Improved capture of innovation ideas (e.g. through Innovation App)
- Increased collaboration, especially with partners
- Access to data measure performance

Key Outcomes:

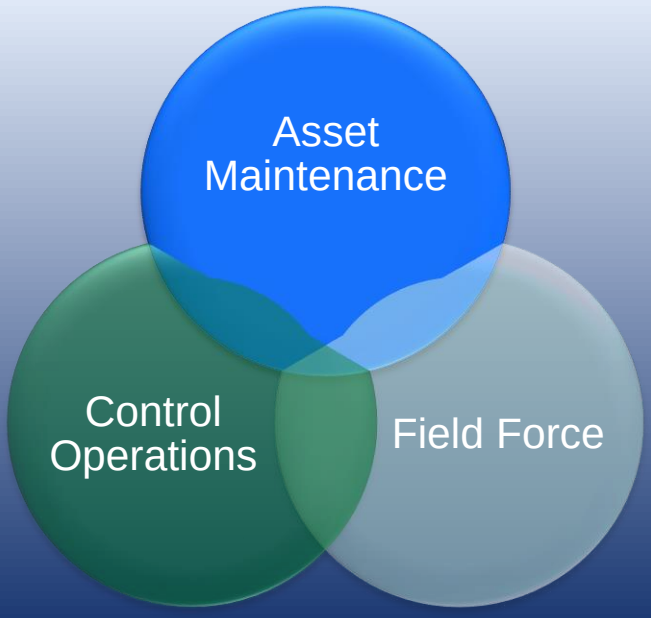
- Faster move from idea to execution
- Improved justifications of ideas through better CBAs
- Better analysis of the Network to identify opportunities for innovation

ASSETS AND OPERATIONS

Our assets have long life and make up part of the Critical National Infrastructure of Great Britain. We need to ensure we maintain our assets in a manner that is cost-effective and provides a resilient, secure, and reliable network of electricity transmission. This means we need to know the location of all our assets, how they relate to their immediate environment, what risks such environment puts on our assets and how we mitigate them. We also need to understand the health of our assets, what risks this creates for our network and how we address such risks.

At the same time, there are unplanned events that impact our network. Storms, accidents, or other factors mean we need to work in a reactive capacity and resolve faults and issues on the network. As such we operate a highly skilled field force that not only maintains our network but addresses any immediate concerns. Our digital strategy in this value stream therefore, covers three areas of Asset Management, Control Operations and Field Force and will aim to achieve the following strategic outcomes.

Our Asset and Operations scope covers three areas that make our network more resilient, reliable and ready for the future

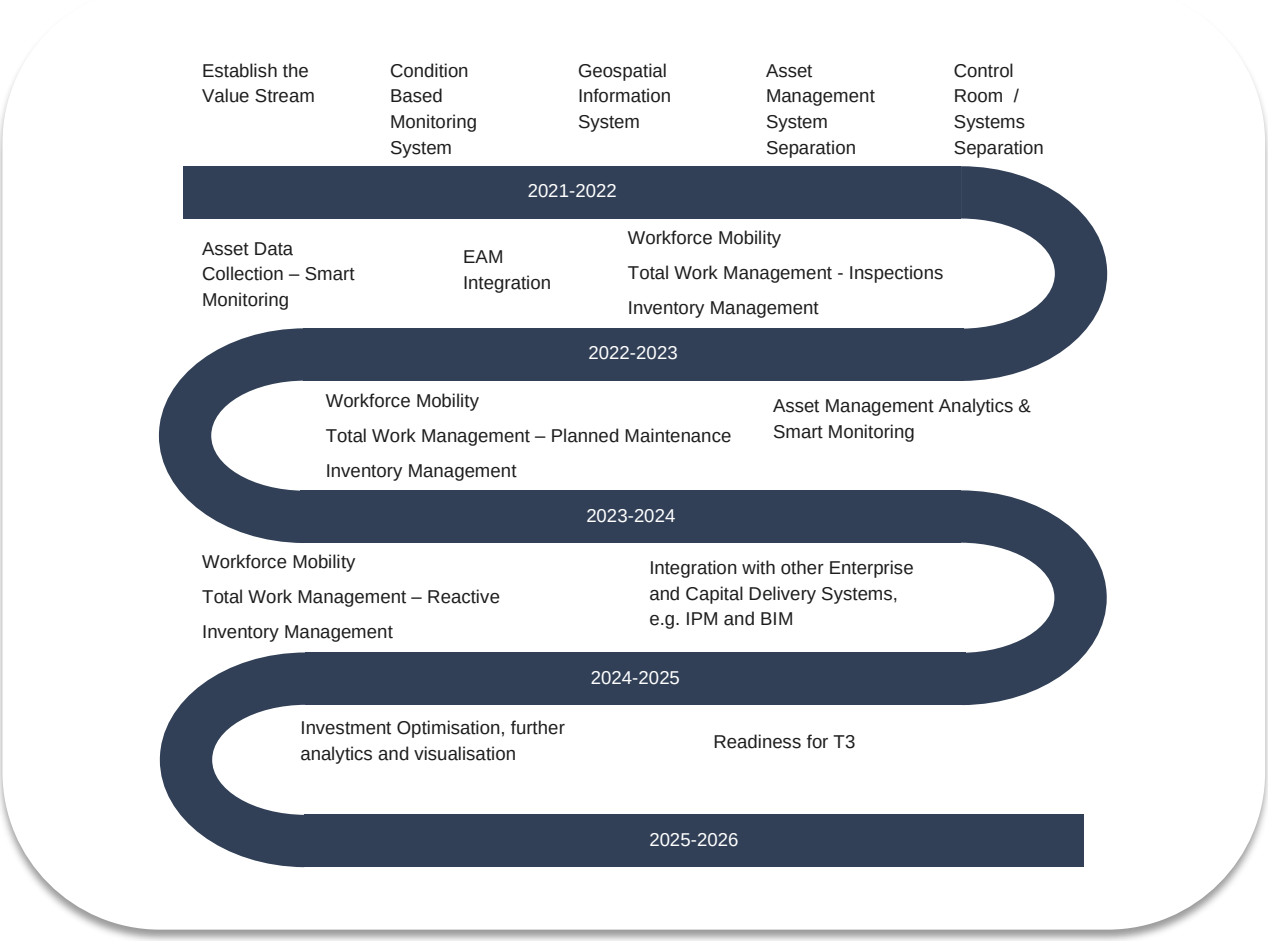


Collect and analyse new and existing asset performance data to support exploitation of predictive and risk based maintenance regimes in RIIO-T3.	Creation and update of digital asset records through the lifecycle of project delivery, with records replicated automatically across relevant systems - leading to increased quality, accuracy and completeness of information handed over to operations	Asset performance and capability management through increased access to a richer asset data set including operational performance from SCADA and alarms.

An integrated asset portfolio with visibility of all planned investment and maintenance work in place to support RIIO-T3 business planning to optimise network risk and investment. Impact of outage changes can be rapidly assessed and action taken.	All field workers able to receive and execute their work and associated documents and information electronically, all safety documentation digitised.	Field workers support the resolution of data defects in the field, all data captured at source and subject to enhanced data quality validation to drive accuracy and completeness of information.	Increased resilience and security of supply, leading to a reduction in interruptions for homes and businesses. Real-time data used to monitor and improve asset performance.

Planners and field engineers are able to access inventory and stock levels. Enhanced insight on spares inventory, reduced risk on key spare items - targeting overall reduction in spares holdings.	Volumes captured automatically and at the right level of granularity, available in a single system for ease of operations, performance management and regulatory reporting. Support the need to capture costs at the right granularity.	Work performance management in place with feedback loops established to enable benchmarks and unit costs to be updated.	Data and insight to support post-fault/event investigations; operational restrictions that are required are captured and noted on asset, GIS and operational systems.

To achieve these outcomes, we are going to invest in the initiatives that produce the following roadmap.



Our roadmap starts with the implementation of our core Enterprise Asset Management (EAM) systems. This gives us the foundation to extend our digital capabilities and at the same time give us the independence we need by separating ourselves from our sister distribution company.

At its core, our EAM is made up of Asset Management, Conditions Based Monitoring (meeting NARM requirements) and Geospatial Information Systems. These systems are to be integrated as part of our roadmap to give us additional efficiencies and set the foundation for good analytics. We will then build on this foundation by adding Total Work Management, Inventory Management and Mobility Solutions. These will allow us to optimally plan our work and execute it safely and reliably.

A key feature of our Digital capability will be to capture effective data and help our staff with provision of timely information as they execute work. As the same time, we will incorporate automation into our process and lifecycle management, for example inclusion of workflow automation to manage and improve SLAs. The integration of mobility and work management with our control rooms will mean we will be prompt on reactive work.

Given the effective data gathering and management and integration of core systems, we will need to increase our analytics capability. We will leverage our data lakes (see next section) as well as our other analytical capabilities to better inform our decision making and become predictive in our asset management work. At the same time, we will use the data to be more precise and optimised in our investment decisions.

ENABLING IT & BUSINESS FUNCTIONS

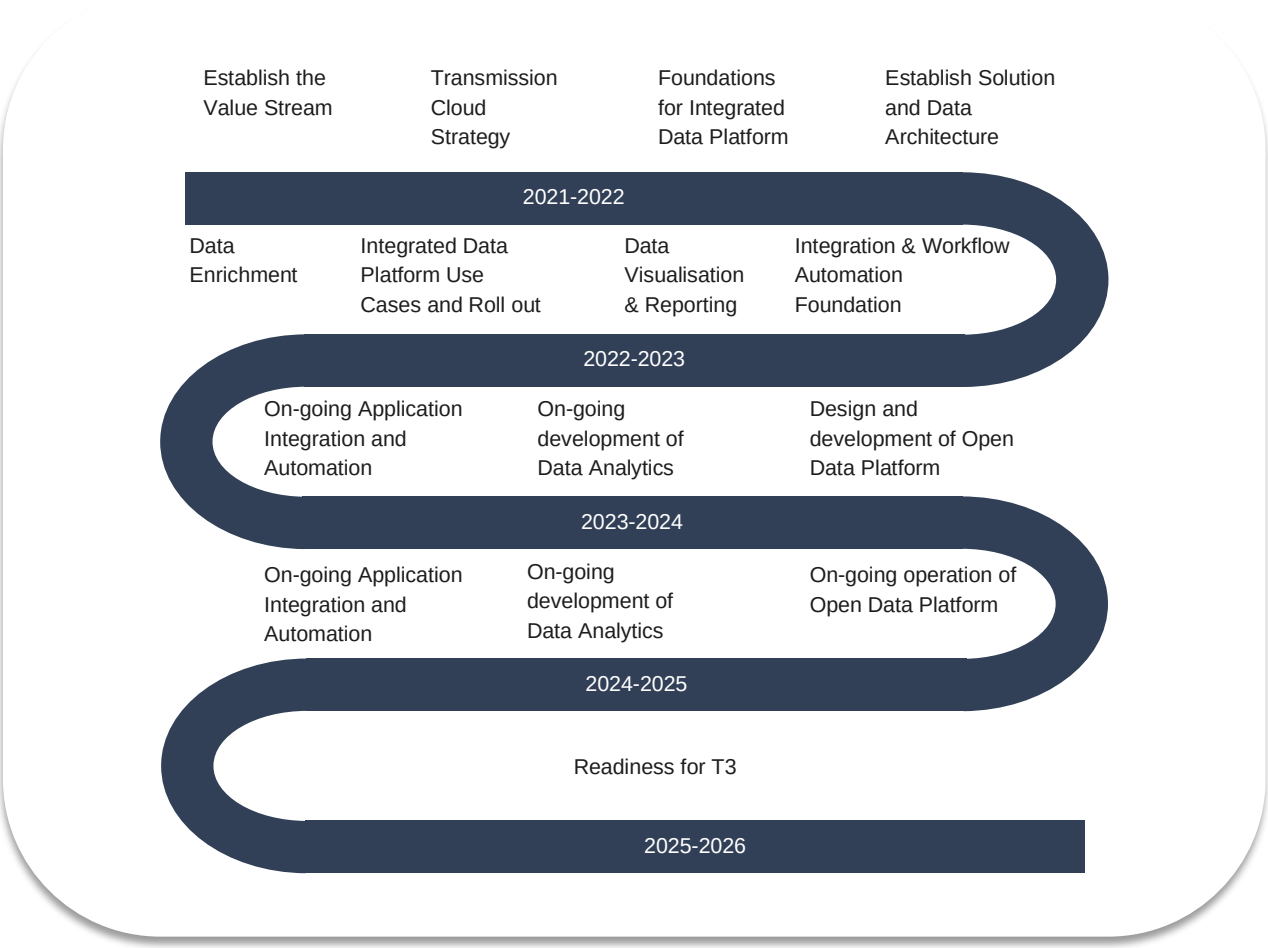
Enabling IT

Our IT value stream is a cross cutting value stream. It is built on an architecture that is Cloud first, without compromising any security protocols. We recognise that as a growing business, we need to have both flexibility and scale and have therefore, adapted this strategy. The architecture will also put in place technologies that enable analytics, automation and integration.

To achieve these objectives, we are pursuing the following objectives.

- Establish a Cloud-first strategy. Cloud technologies exploited to enable rapid deployment of digital capabilities.
- Achieve foundational data integration across existing and new source systems, creating a single data storage.
- Achieve integration across applications and processes, remove data entry duplication.
- Increase control of SSENT data and information, stored in the correct place, improve quality and provide opportunity for exploitation.
- Business-wide access to a central view of SSENT data including Asset, Customer, Projects, Finance and HR.
- Develop automated reporting, analytics and Data Science capabilities.
- Deliver value through identified use-cases, utilise cloud capabilities to productionise use-cases for operational processes where required.
- Open Data Portal – ability to share data required by Open Data Standards via self-service portal.

To achieve this, our roadmap is as follows.



Our enabling IT roadmap starts with defining our Cloud Strategy and putting in place our architectural foundations. We will be prioritising the development of a cloud based Integrated Data Platform. This will allow us to accelerate our analytics capabilities and set the foundation of providing relevant and required information through the Open Data Platform.

We have envisaged investing in data enrichment and quality improvement initiatives to ensure our insights are accurate, varied and rich. Work in this area will be on going and will be a collaboration between our IT and business functions.

We will be looking to leverage our existing platforms to accelerate and build automation, especially as they relate to workflows. Once our automation, integration and data analytics platforms are in place, work to leverage and develop use cases through them will continue. We will also stand up an Open Data Platform, which will be integrated with our customer channels (see section 7.1) and develop the required use cases as we progress through our plans.

Business Functions

Aside from Enabling IT, we will also invest in Digital Technologies that we will be implementing in our business functions, such as Finance. These technologies are enablers and key dependencies to the architecture and solutions that make up the technology landscape of the value streams above.

Examples in this space include:

- **Time Management System** – We will be deploying a new Time Management System which allows us to report effort spent at a more granular way. This system is needed for more accurate performance and regulatory reporting. Another key feature of the solution will be its forward-looking capability, enabling us to plan resource availability which is a key input for our work and project planning. At the same time, the solution will provide our staff with more intuitive digital tools, making their tasks easier, more efficient and more interactive.

- **Safety Reporting Application** – Another capability we are rolling out is an improved safety management application. The entire business will use this tool to make sure every task and daily activity we take has safety at its core. This is about reminding us about our safety obligations, how we remind ourselves on best practice, but also giving us a reporting capability that measures our performance.

This table summarises the products and services provided by each value stream, the outcomes our stakeholders should expect and the performance criteria we have assigned to measure such outcomes.

Value Stream	Products and Services	Outcomes for Stakeholders	Performance Measures
Customer, Stakeholders & Commercial	The products and services offered through this value stream are – • A renewed and refreshed website • Heat Map showing connection points on our network, together with indication of connection capacity • Customer / Stakeholder Portal, giving our customers digital channels to engage with us • Back-end Customer / Stakeholder Relationships Management Systems, giving our internal teams ability to better manage end to end processes and share customer / stakeholder information with the customer	The outcomes provided through these products and services: • A better performing website, with easier search capability and richer content • Customer and Stakeholder Self Services, allowing digital engagement and passing of information • Speeder, more accurate execution of processes across the customer / stakeholder journeys, that removes effort, has more accurate outcomes	The performance measures that will help us assess these outcomes: • Customer Satisfaction of our Website • Internal Team's satisfaction of our Website • Customer Satisfaction Scores for our Connection process
Projects and Capital Delivery	The products and services offered through this value stream are – • Building Information Modelling (BIM) System and associated document repository systems, together with a common data platform for collaboration • Integrated Project Management Tool, giving Capital Delivery Controls and Planning Capabilities as well as	The outcomes provided through these products and services: • Better visualisation of engineering design (3D) • Easier collaboration during engineering activities • More planning and control capabilities for Capital Delivery with ability to share more	The performance measures that will help us assess these outcomes: • Survey reviews on increased collaboration during engineering • Drivers impacting performance of Capital Delivery, e.g. cost, speed

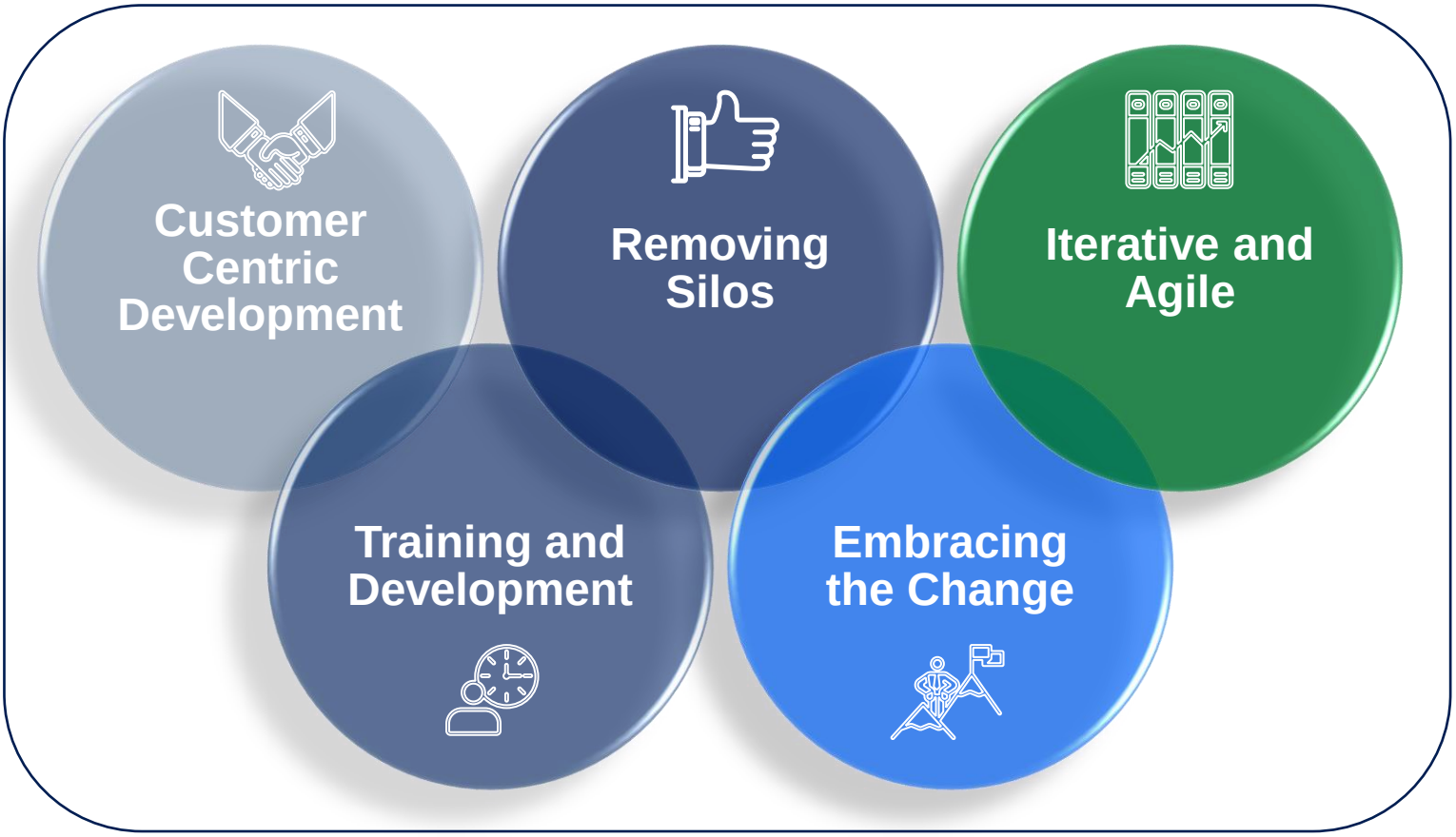
Value Stream	Products and Services	Outcomes for Stakeholders	Performance Measures
	collaboration with suppliers and other stakeholders	information with key stakeholders	
Network Planning	The products and services offered through this value stream are – • High Performance Computing in order to undertake more complex modelling • Analytics and Modelling tools • Consolidation of data sources	The outcomes provided through these products and services: • Higher frequency of modelling with more complex models to carry out scenario analysis, build more investment scenarios and understand network resilience and reinforcement needs • Sharing these outcomes with stakeholders through more data provision and visualisation	The performance measures that will help us assess these outcomes: • Quality of modelling output
Asset Management and Operations	The products and services offered through this value stream are – • Provision of new field mobility systems to field force to support work execution • Integrated back-end Asset Management systems, for optimised planning, work execution and risk analysis of network • Integrated Inventory Management System to support planning and work execution • Provision of more Operational data for improved analysis	The outcomes provided through these products and services: • Optimised asset and work management planning • Easier, safer execution of work by field force • Higher analytical capability, especially for asset risk or predictive planning	The performance measures that will help us assess these outcomes: • Internal surveys of Field Force • Drivers on Improved Planning and Work Execution

Value Stream	Products and Services	Outcomes for Stakeholders	Performance Measures
Enabling IT and Business Functions	The products and services offered through this value stream are – • Creation of an Integrated Data Platform, connecting to variety of data sources to enable analytics • Provision of Integration and Automation Platforms to create process and execution efficiencies • Building a Time Management System for granular effort tracking and better resource planning • Provision of a Safety Reporting tool to enforce better safety practices	The outcomes provided through these products and services: • More analytical capability across the organisation with ability to provide data into the Open Data Platform • Work efficiencies and removal of Swivel Chair process effect • Improved time submission capabilities by staff • Improved Safety Reporting	The performance measures that will help us assess these outcomes: • Increased output on Analytics • Reduced Safety Incidents • Efficiency measures for work execution • Higher staff satisfaction with Time Submission

DIGITAL LITERACY AND DIGITAL TRANSFORMATION

The realisation of the benefits from Digital are dependent on the level of leadership and commitment that is applied. We are committed in ensuring that we not only develop the appropriate digital technologies and capabilities, but that we use them in their fullest for transformation.

Our framework for Digital Transformation is based on following five principles. These are discussed in the table below.



Customer Centric Development

Customer Centric Development means we will be treating our internal and external stakeholders as customers of our Digital developments. We will invest in our processes, tools and ways of working to ensure that we listen to them, work alongside them and involve them in the life cycle of our developments. This way we will ensure the strategic outputs we seek are aligned with their evolving needs.

Removing Silos

We are going to take an end-to-end approach to creating our solutions. We recognise that a single outcome is the result of contributions from multiple functions and teams and therefore, will ensure we understand the end-to-end ways of working, improve them and then digitise. We will focus on a culture of collaboration and create multi-functional teams as we embark on our roadmap.

Iterative and Agile

We are investing in Agile delivery to ensure we produce value for our customers in an Iterative way. We recognise there is a balance to achieve and indeed a journey to travel. However, our focus is on accelerating our output, and in a manner that change does not happen at once.

Training and Development

Increasing the digital literacy of our own staff and our external customers is important. We will ensure we assess the impact of each digital delivery on our broad stakeholders, and where required roll out appropriate training. This training will be a mixture of increasing technical skills, focus on implementing new ways of working and at times introducing our stakeholders to technologies that they have not used before and require ongoing support on.

Embracing the Change

Digital means change. Sometime the change can have a significant impact on those who are affected. We will face this with a culture of embrace. We will be open, honest and transparent to our stakeholders about the change, and ensure we put in place relevant and effective enablement, and engagement practices. We are investing in a Change Centre of Excellence to support us in this endeavour.

ALIGNMENT WITH ENERGY DATA TASK FORCE

We understand Ofgem's Data Best Practice Guidance and are working towards incorporating these principles in our data management practices and our Digital Initiatives. We also acknowledge the recommendations set by the Energy Digitalisation Taskforce (EDiT) and have been working closely with industry peers, ENA and internally to ensure our data strategy, architecture and design are in alignment.

Unlock Value of Customer actions & assets – We are planning stakeholder management sessions to understand the needs of our customers on data. Equally, we want to understand what data might be available to us from them to create a richer flow of information and apply these to different use cases. As seen within our Customer & Stakeholder and Commercial section, as well as our Enabling IT, we are developing an open data platform which is key to sharing data with our customer.

Deliver interoperability – Inter-Control Centre Protocol with ESO and Scottish Power is currently on our plans. Aside from this, Data sharing, definition of data standards, use and application of Common Information Models, creation of data catalogues are activities that we are executing as part of our plans, which align with this principle. We continue to actively work with industry peers and through the Energy Networks Association Data and Digitalisation Steering Group on common initiatives, e.g. National Energy System Map development, Data Request/ Triage Service, Interoperability via Common Information Model application and understand how our digital initiatives need to align with them, for example. Pre Connection Information, and Data Cataloguing.

Implement new digital governance and approach & entities – We have a data strategy and data governance programme in execution. A core part of this is implementing a Centre of Excellence that defines policies, processes, roles and responsibilities and metrics. It also addresses cultural and communication needs so that we adhere to the defined principles. In rolling out our strategy and governance, we are working with internal stakeholders and implementing roles such as data stewards. We are also implementing Axon Data Governance which is a knowledge repository tool that is used to document the data items that require governance.

Adopt digital security measures – Our focus here will be on definition of standards, processes and testing capabilities as well as cyber resilience. The latter is managed through our CRIT (Cyber Resilience IT) and CROT (Cyber Resilience OT) programmes. We have also, developed a Data Triage process in line with the ENA Data and Digitalisation process to Protect Data Assets and systems in accordance with Security, Privacy and Resilience best practice. Throughout development, we will be assigning security architects and assessments to ensure our designs meet the standards that we have set. Our development lifecycles include rigours testing to ensure such standards work in practice.

Enable carbon monitoring & accounting – The main capability that enables this recommendation is the implementation of our Integrated Data Platform, as it allows us to build a variety of different insights, analytical and reporting tools. The IDP can connect to difference data sources. Given that we plan to have rich and high-quality data in our systems and implement a strategy that maintains that standard, the IDP can be used to develop sustainability, carbon counting, greenhouse gas products and reports.

Embed a digitalisation culture – We have already discussed this in the section Digital Literacy and Digital Transformation.

CONCLUSION

Our Digital Strategy follows a vision that has clear outcomes and delivers value to our internal and external stakeholders. These outcomes align with our strategic themes and our five business plan goals.

Collectively, the initiatives will enhance our customer's experience with us, but more importantly provide them with better tools and faster processes to make investment decisions and move toward their realisation.

We are investing to make project delivery faster, and more effective. Our digital engineering and digital delivery initiatives will enable us to produce more effective engineering solutions, through collaboration and better management of processes and information, whilst our digital delivery solutions will enable us to gain more control and more effectively hand over to operation. The benefits of these are on the one hand, that we will deliver our investment obligations quicker, assuring the realisation of net zero ambitions and the needs of the future, but also do so in a manner that is more efficient.

Our Digital Strategy is also aimed at making more efficient, safe and effective operations. We are building a stronger foundation that is 1) separate from our sister company, hence giving us the independence to design and operated in alignment to our own detailed needs, but 2) provides us with the platform to use data, mobility and cloud to add further insight and predictability in when it comes to planning, become smarter and more efficient in our execution and then be scalable as and when we need it.

As seen in our strategy, data is a key enabler. We will be collecting more data and are building the platforms that brings them together for analytics, and reporting. One key area where this is to be used is network modelling. More frequent and complex modelling will enable our business to become more intelligent in its investment decisions, but also more focused on where such investments are needed. Equally, data will be used to give insight across all our operations, from back office all the way to how we engage with customers. We have formulated our strategy that gives us the enabling platforms for these outcomes.

Finally, we have aligned ourselves with the recommendations of the Energy Data Task Force and will continue to assess ourselves to ensure we maintain such alignment as we develop and deliver our plan.