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Digitalisation Strategy

Driving significant, sustained change

2025 Digitalisation Strategy



Executive Summary

UK Power Networks has set a clear intention to maintain our position as the best performing network company in Great Britain against a backdrop of transformative change in the energy system and across society as we decarbonise every aspect of our economy.



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This is the first refresh of the Digitalisation Strategy in the RIIO-ED2 regulatory period. We have made significant progress in implementing our ambitious business plan and have been thoughtful about how our Digitalisation Strategy should evolve given external changes:

- **Artificial Intelligence (AI)** has accelerated in its scope of use and sophistication. Advances in AI are outpacing anything we have seen before. ChatGPT, the popular chatbot from OpenAI, is estimated to have reached 100 million monthly active users just two months after launch. It took Instagram previously 2-1/2 years, the World Wide Web 7 year and mobile phones 19 years. AI engines are now present in every part of daily life from assisting us on our mobile phones to protecting our financial transactions from hackers. We are committed to realising the opportunities this presents to us, ensuring digital and AI act as fundamental differentiators in how we deliver current and future services. We are embracing AI, however, we need to use it with purpose. We recognise that we will only be able to achieve this by building and supporting new skillsets in the workforce such as effectively instructing AI models (prompt writing) or securely using its outputs (safeguarding).
- Increasingly advanced low-code and no-code solutions as well as modular cloud solutions make **software development more accessible and modular**. Having a ready toolkit at our fingertips allows us to build small (minimum viable) products quickly, and scale solutions from there. Where we would have previously taken months to procure software products, we can now build these in weeks.

- In response to this we have transformed: Digital is no longer a remote team delivering large projects to the business, we are now a function **deeply integrated with our stakeholders**, focused on understanding their needs and delivering solutions rapidly. We manage demand on a weekly basis, triage and prioritise initiatives based on business value to be delivered via a mix of in-house teams and external partners.
 - In step with the **technology life cycle shortening**, business and market pressures to respond to changing needs of our customers and the energy system are increasing. For example, the recent connections reform demanded the rapid development of solutions to provision data and tools to customers to facilitate Clean Power 2030 – HM Government ambition for Great Britain to be supplied with clean power by 2030.
- Technology has always been an important enabler for our business
- allowing us to engage and communicate with customers, deliver work more efficiently and to maximise the resilience of our network. To keep pace with the challenges above, our Digitalisation Strategy sets out a framework that will enable us to:
 - **Benefit from AI** though the development of a bespoke AI Strategy, built upon and closely aligned to this Digitalisation Strategy. Our AI Strategy sets out clearly how we use AI to deliver value while protecting our customers, stakeholder and the wider organisation. We identified over 150 uses cases that we prioritised on value, risk and cost.
 - **Be faster** at identifying, provisioning and deploying business solutions by introducing a new, industry leading Digital Delivery Model that enables us to identify, triage and optimise our delivery plan to ensure our customers and stakeholders get the highest benefit from every pound we invest into digital, data and AI solutions.
 - **Improve response** to changing customer and stakeholder needs through close collaboration with our stakeholders and business functions. We are now proactively working with our stakeholders to scope future solutions.

Executive Summary continued

We continue to look outside of sector for best practices. We are learning from renowned multimedia digital companies (Big Tech) on how they serve customer and stakeholder needs, reviewing existing literature and research, as well as closely collaborating with leading industry partners such as Microsoft, General Electric or Databricks. We are pleased to see our efforts are recognised by a number of leading institutions, including:

**Winner**

Digital Transformation Project of the Year (2024)
UK Chartered Institute for IT Industry Awards

Best Customer Experience Redesign (2023)
European Contact Centre & Customer Services Awards

Best Enterprise Tech Project (2024)
National Technology Award

Transformation Project (2023)
British Interactive Media Association

International Energy Engagement Award (2024)
International Energy Awards

Engineering Company of the Year (2022)
British Data Awards

**Highly Commended**

Data Transformation of the Year (2023)
British Data Awards

Energy Champions of the Year (2022)
The Energy Award



We recognise that digitalisation has the ability to drive and enable significant, sustained change across the sector which we need to both respond to and embrace to effectively deliver against our customers’ evolving expectations and needs.

Over the course of this document, we discuss how we will continue to lead in digitalisation and application of AI, incorporating changing customer needs and preferences, and articulating how our Digitalisation Strategy has been formulated based on stakeholder engagement. We will subsequently define what and when we aim to deliver, the associated targeted outcomes, and how we will measure success within our Digitalisation Action Plan.

Stakeholder input is of the utmost importance in informing and iterating our strategies and we are always keen to hear your feedback. If you have a question or comments about our strategy, action plan or associated performance, please do not hesitate to contact us.

You can contact us via:
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Introduction

UK Power Networks aspires to be a leader in data, digital and AI, within and beyond the energy industry.

The transformation that digitalisation is accelerating will drive advancement in how we serve and interact with customers along with providing an increasingly efficient and resilient electricity network in our roles as a network and system operator. We are already benefiting from the development of smarter networks, where advanced forecasting capabilities will deliver optimised investment and utilisation, coupled with compelling consumer propositions and price signals. Further step changes in this area have the potential to maximise the efficiency of the energy system and deliver Net Zero at the lowest cost for society. Digitalisation is key to unlocking this.

We will continue to combine our knowledge of customer preferences with the delivery knowhow and data to deliver a digital experience that enhances the services and products we provide to our customers. Our Smart Connect portal already enables the majority of our domestic customers seeking fuse upgrades to receive approval within minutes to connect their LCTs to our network. Our Customer Service agents are already assisted by AI to provide an even better service to our customers. Leading in this respect requires us to be strategic in our thinking, being targeted in the application of digital capabilities to ensure it delivers meaningful change where it is appropriate to do so.

As part of our continued digital transformation, we are increasingly exploring and implementing AI technologies to enhance operational efficiency and service delivery. Our comprehensive AI Strategy focuses on getting most value from this new and emerging technology in a safe and robust manner. By leveraging AI across various business processes, we aim to improve decision-making, automate routine tasks, and unlock new opportunities to better serve our customer and stakeholders. We do so whilst understanding the risks and limitation of this technology, keeping UK Power Networks and our customers' data secure.

Digitalisation is not something that is just starting – it has long been an intrinsic element of our DNA and instrumental to our performance improvement. However, over recent years we have advanced our internal capabilities, enabling our workforce to continue to deliver against UK Power Networks' vision, setting the benchmark in providing and operating an efficient, resilient, and reliable electricity distribution network.

It is important that digitalisation delivers for customers – all our customers. We cannot deliver products and services that exclude sections of society, and therefore we will continue to keep digital exclusion front of mind throughout the development and implementation of our services. As a leader in digital, we recognise that technology will not solve every problem or meet everyone's needs – it is just one of many tools within our arsenal to improve service and efficiency.

We will also continue to be open to learning and sharing, continuing our participation and leadership in groups such as the Energy Networks Association Digitalisation & Data Steering Group. Research and development are also key, and we will partner with other leading organisations to be at the forefront of innovation and development. We are not facing this challenge in isolation, and by having an outwardly looking and collaborative mindset we will ensure that customers and stakeholders benefit from collective success across the sector.

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Continuing to Deliver Against our Digital Aspirations

With our customers and stakeholders front of mind we strive to be a driving force, leading by example and motivating others as we navigate our way through this ongoing period of unprecedented change.

We will not only deliver improved products and services for our customers and stakeholders, providing choice, ease of use, convenience and satisfaction, but also contribute to the overall advancement of the energy system. Throughout the initial years of RIIO-ED2, we have made significant progress in advancing all areas of our Digital Portfolio Framework (Figure 1), examples include:

- Our industry leading **AI Strategy** sets the guidelines and principles to explore and adopt this new and emerging technology in a safe and secure manner for maximum benefits to our customers, including a clear delivery plan based on business value as well as risk mitigation. It includes a clear plan that we are executing against, having already delivered multiple solutions for our customers, employees and stakeholders to benefit from.
- Adoption of Microsoft's Azure cloud platform and application of cloud-first principles for new solutions, including development of our Enterprise Data Platform. The **cloud migration** initiative has modernised our IT infrastructure by successfully transitioning over 100 software applications from on-premise data centres to the cloud. This transformation enhances agility, scalability, and resilience, reducing operational overhead while strengthening disaster recovery. By optimising costs, lowering energy consumption, and supporting Net Zero commitments, cloud adoption aligns with our sustainability goals. Additionally, it accelerates innovation, enabling faster deployment of digital solutions that improve customer experience and operational efficiency. With a cloud-first strategy, UK Power Networks is leading with vision and driving the digital evolution in the energy industry.

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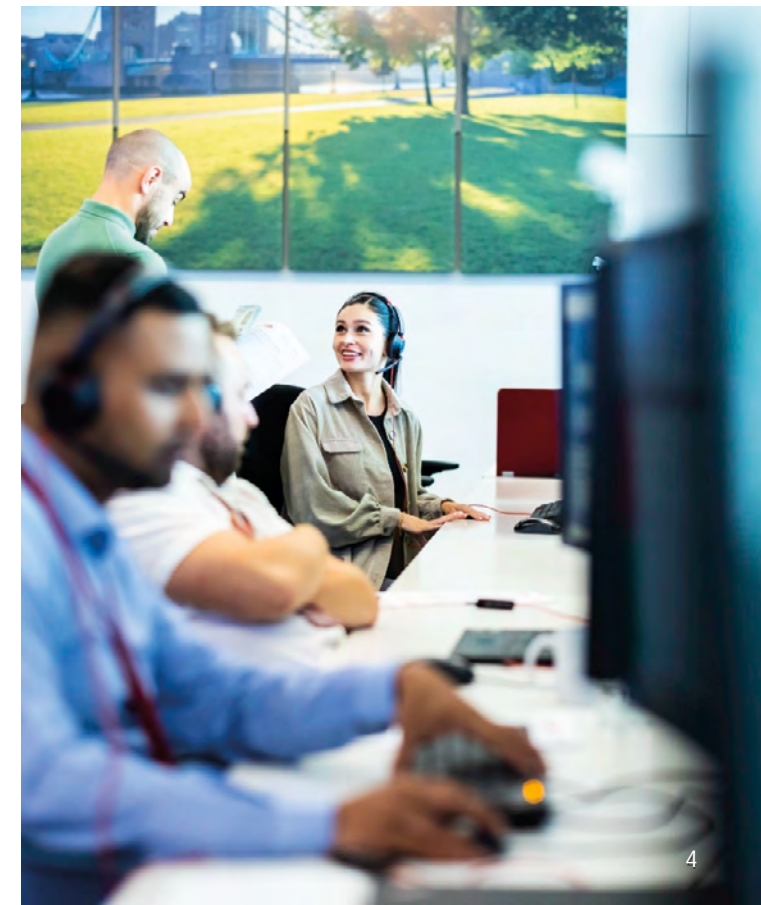
- Enhanced **Cyber Resilience** - We are accelerating our cyber security capabilities to protect critical systems and infrastructure from evolving threats. Through our Cyber Resilience Program, we are strengthening security controls, safeguarding essential services, and advancing towards the Enhanced Profile standard ahead of regulatory deadlines, reinforcing the resilience of our network.
- **Mobile enablement** of our field-based workforce ensures that digital tools for work management and data capture provide a seamless, intuitive experience - more in line with what they experience with their personal mobile devices - leading to greater efficiency and effectiveness.
- Digitising legacy non-digital records, including conversion of wayleave and consent documents and vectorisation of our geospatial network records allows us to make key datasets accessible to digital and AI solutions.
- Innovative development of leading **smart grid capabilities**, such as Forecasting, Flexible Connections, Flexibility and Active Network Management ensures we are able to select the most cost-efficient option to free up capacity on our network.
- Development of advanced analytical capabilities to provide digital apps and actionable insight to improve the experience of customers' interactions with our teams helps us to deliver these tools rapidly at lowest cost.

We have made significant progress in advancing our key approaches, establishing a solid foundation to deliver our ambitious digitalisation program and meet the evolving needs of our customers and stakeholders. We will continue to build upon and evolve in these areas.

In doing so, we seek to understand lessons learned by us and others, and we are confident we will avoid the mistakes of many organisations in taking relatively fixed long-term bets with an assumed low level of uncertainty - e.g. implementing stand-alone digital solutions based on a narrow view of what they think customers will want in the future.

At the same time, we recognise that whilst it is not possible to predict the future, the most effective mitigation for digital disruption is to build digital capability that allows us to remain flexible, operating in an agile manner to adapt and respond in line with market developments.

This is especially critical now where the extent and pace of change affecting the energy sector is truly unprecedented. Through extensive research and exploration of what leading, digitally enabled companies across all sectors and industries have implemented and how they operate, we know what best practice looks like and how it applies to our business.



Our Digital Aspirations continued



In doing so, we understand the key influencing factors that we need to respond to. Set out below is a summary of what we recognise as being these influencing factors, which have informed the shaping of our strategy and digital framework:

1 AI

AI is becoming a key enabler across all areas of digital life, including within our digital energy environment. AI-powered solutions allow us to process and analyse vast amounts of complex data with greater speed and accuracy, predict trends, and support better decision-making across the business. We are using AI to improve visibility across the network, optimise communication channels, and better forecast energy needs and resources. These applications, allow us to deliver smart, more responsive services to customers and stakeholders while maintaining the resilience and reliability of our systems. We can only deliver the best possible service to our customer if we leverage this new and emerging technology efficiently.

2 DSO, Whole System and Net Zero

Whilst the link between digitalisation and decarbonisation may not be immediately evident, we see it as fundamental. For instance, maximising utilisation of the network to increase general efficiency and facilitating the connection of LCTs demands advanced, data-enabled monitoring, smart optimisation and dynamic control of the network. The smart energy future and the target of Net Zero necessitates the development and implementation of digitally-enabled, data-driven capabilities that allow infrastructure systems to readily share data and communicate in a common language to maximise performance. Data is vital to all players in the increasingly complex energy ecosystem and their need to communicate. Our collective ability to deliver whole-system operation is compromised if we can't provide interoperable data through established secure channels.

3 Rising Customer Expectations

Like all areas of society, our customers are being continuously exposed to new and evolving digital services and business models, shaping their expectations for future interactions with companies. In line with this, trends in digitalisation, digital services and data are driving rapid change across the whole of society and our economy. Many aspects of life are moving online and becoming connected. Customers' expectations of good products and services are being set by experiences we receive in our everyday lives – from how we bank, to how we shop. Consequently, we need to accelerate our delivery to meet evolving expectations, informed through effective, regular engagement with our customers, seeking new ways to gain meaningful insight and understanding of their needs and requirements.

4 Digital and AI Literacy

Never before in human history have we seen such rapid advancements in technology. The ability to realise full benefits from the rapid evolution of digitally enabled technologies demands transformation which extends far beyond data and technology. It also requires us to develop and extend the capabilities of our people and embed cultural change. A key consideration in this respect is ensuring that our workforce has a strong baseline of digital and AI literacy, enabling as many employees as possible to access and effectively utilise the data, digital services, and tools available to them.

5 Open Innovation

The Data Best Practice principle of presumed open establishes the need for energy sector participants to openly publish and share network and asset data. This will enable open energy – the ability to easily search, access, and securely share energy data, drive open innovation and facilitate interoperability of systems and processes. The standardisation of data, governance and processes requires sustained coordination and collaboration across the sector to develop new and enhanced systems and practices.

6 Cost Reduction

There is constant demand to deliver new and improved services that are cheaper, faster, greener and better. The prevailing global energy and cost of living crisis makes this more important than ever, and the development of digitally enabled capabilities is key to achieving this. However, it needs to be recognised that digitalisation itself requires considerable investment. It is therefore necessary to ensure that a balance is achieved whereby any digital investment is outweighed by the benefits, ensuring that we are able to deliver the necessary changes to our business and the wider sector at lowest possible cost to the customer. Our customers will not accept digitalisation and decarbonisation at any price, and we therefore need to be prudent and intelligent in how we meet these demands.

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Our Approach to Digitalisation

Digital is often misinterpreted as only relating to IT. Whilst it is of course an important component of digitalisation, we are clear that it is only a part of the equation. This is why we have defined three key pillars within our digitalisation strategy.

 **People**

 **Process**

What people do and how they do it is the most important aspect of any business. For digitalisation to be effective and to maximise its potential benefits, we need to develop our people to foster their skills and capabilities, from grass-roots data literacy, right through to hard-core digital specialisms. We expect AI to fundamentally change the way we work, offering new opportunities across our workforce, and we need to prepare our workforce now for the changes to come. We also need to effectively manage change to support and engage our entire workforce, ensuring they cope and participate in an ever-advancing digital world so that we can fully exploit the benefits of digitalisation. Equally, definition and implementation of effective and efficient processes ensure we provide responsive and flexible delivery, consistent service and reduced costs.



 **Technology**

Digitalisation naturally depends on the efficient and effective delivery and support of contemporary information technologies and systems, as well as user tools and devices, to facilitate the development and delivery of the leading digital products and services our employees, customers and stakeholders demand. It is important for tools to be interoperable so that solutions are integrated and do not add complexity to the customer experience.



 **Data and Information**

Data is the lifeblood of any digital system, and the communication medium by which people and machines interact. The need for whole-system interaction and open data publication is making this more important than ever, requiring us to manage data to ensure it is accessible to the right stakeholders in a usable format. To be helpful, data must be clear, reliable and accompanied by the right context to avoid misinterpretation.



In implementing this strategy, we will ensure that all three of these aspects are fully considered and delivered against so that any implementation is successful and sustained through a culture of continuous improvement.

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Our Approach to Digitalisation continued

We also endeavour to ensure that there is a clear and consistent understanding of what we mean by digitalisation in response to what we have observed as a frequent cause of misinterpretation and misunderstanding – the interchangeable use of various similar terms. With that in mind we provide the following definitions to aid in the digestion and understanding of our strategy:

- **Digitisation** means making non-digital data digital (e.g. converting analogue records);
- **Digitalisation** means realising business opportunities and value, presented by digitisation (e.g. applying automation tools); and
- **Digital Transformation** means changing business models, whether wholesale or incrementally, through the application of digital capabilities (e.g. changes to our operating model).

Framing and Defining our Strategy and Plans

We describe UK Power Networks as having a performance driven culture, delivered within a set of values. With digitalisation being so intrinsic to how we run our organisation, we treat it with the same ambition and discipline as any other part of the business – with detailed plans and performance expectations that map directly from our Vision and Business Strategy.

Customers and employees are at the heart of our Digitalisation Strategy and Action Plan. We believe there is no point implementing digital interventions unless they are ultimately going to make a difference to our customers, stakeholders and employees. By designing our work around the customer’s experience or stakeholder’s view of our products and services, we will serve the energy market more holistically. The knowledge and learnings gained facilitate our continual cycles of iteration and improvement.

We have taken these principles and applied them in our Digital Portfolio Framework (Figure 1).

FIGURE 1: DIGITAL PORTFOLIO FRAMEWORK



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Our Approach to Digitalisation continued

Feedback from stakeholders has highlighted a need to provide greater clarity on how our digitalisation portfolio links together. In response, we have defined this framework which illustrates how investment in foundational IT and data related services (1 to 3) underpin the development of specific digital capabilities across four strategic business areas (4).

Every single one of our investments deliver both direct and indirect benefits for customers. All digital initiatives we plan and implement map to this framework, helping us to shape and coordinate our portfolio of projects and initiatives, ensuring they contribute to the delivery of outcomes for our:

Customer Facing Solutions

Focused on enabling industry-leading access to self-service digital solutions and network data and information.

Employee Solutions

Focused on delivering seamless, intuitive, highly tailored digital solutions for field-based and back-office functions alike.

Asset Management & Operations

Focused on advanced data capture, modelling and decision-making capabilities.

Smart Networks & DSO

Focused on enabling leading network visibility, intelligence and automation.

In defining our strategy, we are conscious that digitalisation strategies and plans can be highly ambitious but lacking in substance. We aspire for our approach to be different – ambitious but practical – with sufficient detail to ensure its credibility. It has been built from the ground-up via a combination of extensive customer and stakeholder engagement, elicitation of knowledge from our staff, evaluation and analysis of our current digital landscape and support from leading digital experts. It is underpinned by our drive to provide the highest levels of customer satisfaction by meeting, then beating their expectations. Our strategy aims to be purposeful and led by the objective of addressing real stakeholder needs – we will only digitalise where it provides value and not for digitalisation’s sake.

Although the focus of our plan targets the development of new services and capabilities, we also need to ensure the right technological foundations are in place. These aren’t necessarily transformational, but rather necessary enabling steps we must take to ensure our ongoing digitalisation journey is a success and truly delivers to customer expectations.

In simple terms, we will invest in exciting, high-quality, contemporary end-user and customer facing solutions and services. This in turn necessitates investment in the less glamorous enterprise applications and infrastructure – all the components below the waterline that may not be visible but which are of utmost importance.



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Our Approach to Delivery

To deliver our digitalisation plan alongside other IT and technology investments, we must ensure we effectively employ appropriate contemporary delivery methods.

We have already embraced agile delivery alongside the traditional waterfall approaches, and we will aim to leverage it further – particularly for digitalisation investments where we believe the approach will achieve greatest value. We have found that agile methods can be the most effective way of iterating, learning and incrementally delivering value, but they are not necessarily suitable for every type of project.

Equally, UK Power Networks also needs the right combination of suppliers to provide specialist skills and augmented capacity in delivery of projects, as well as the ability to operate these new platforms and services in an environment that sees regular incremental change and update.

An important aspect of our external engagement activities which aims to ensure we effectively meet these needs has been our exploration of what digital leaders from across other sectors do and how they do it. Taking inspiration from the best when it comes to implementing and exploiting digital capabilities has helped us to define our approach.

We have, for instance, looked to renowned large multimedia digital companies (Big Tech) for insights into how they serve customer and stakeholder needs, reviewing existing literature and research, engaging with organisations within the sector, and implementing a range of exploratory initiatives. An example of this has been the application of image recognition and digital conversion techniques with Google, or the learning we have attained from discussions with Amazon on their job tracking capabilities which we seek to employ as part of our online suite of self-serve capabilities for customers.

By adopting and maintaining this approach, we are targeting and will continue to target leading application of digital techniques.

The following sections set out our approach and ambition across the key enabling areas.

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Our Approach to Delivery continued



People

To ensure that we continue to deliver best value for our customers and stakeholders, driving digital innovation at pace, we need to communicate with, support, and enable our workforce. It is they, and not the technology and data, that are the most critical component of the future digital ecosystem. To ensure we have a truly digitally enabled workforce we will:

- Actively engage to ensure there is comprehensive understanding and buy-in as to what we are doing and why.
- Upskill individuals and develop entirely new roles ensuring we have appropriate organisational arrangements that allow all to actively contribute to the development of our digital capabilities.
- Ensure that our staff and partner resource are capable of fully utilising the digital tools, systems, and products that we implement.
- Deploy technology solutions, especially AI solutions, to enable individuals to place an even larger focus on the activities our customers value most.

These considerations are of increasing importance as we seek to deliver new and enhanced digital services and products to our customers and stakeholders. Such capabilities will never fulfil their potential value and deliver the associated benefits if we do not have the human capabilities to utilise, support and develop them.

This view is supported by the outputs of our digital skills and attributes assessment which we executed with support from EY (Ernst & Young), providing a baseline view to inform our development plans and recruitment strategies, as well as facilitate ongoing monitoring and tracking of delivery and progression.

Throughout the remainder of RIIO-ED2, we aim to deliver three fundamental shifts in the people and cultural aspects of our operations, as summarised in the table below.

Having examined digital-first organisations within and beyond our sector we have concluded that operating in a digital world, and succeeding with our digital operating model, needs core competencies that have not existed in a network company in the past. These are competencies that Digital First organisations have developed over time. Now, we need to cultivate and implement similar capabilities within our own operations to better serve our customers.

We have already brought leaders and talent into our organisation to seed these competencies in the business. For example, we have developed a community of practice for advanced analytics and decision sciences, along with establishing a data centre of excellence. We have sought out data-minded colleagues from around the business, and upskilled them, and we have invested in the upskilling of those already in data and digital related roles.

The outcome is a community of excellence, of similarly motivated people who are collectively focused on the continual development of our digital capabilities, services and solutions. We will now take the experience gained in implementing this development programme, examining the strategic opportunity to scale and apply it to ensure we possess the skills across all roles that are necessary for the network of the future.

We recognise we are at the very beginning of what is certain to be a prolonged effort in developing our workforce.

TABLE 1: EVOLUTION OF SKILLS AND CAPABILITIES

Past	Now	To
Small groups of expertise around the business	Increasing number of skilled groups and individuals collaborating	A broad network of key skills and capabilities, with critical mass and widespread expertise across the business.
Lack of clarity on digital and data in wider workforce	Good awareness of capabilities and support available	Data literate and digitally competent workforce
Predominantly operationally focused training	Good availability of data and digital training	Targeted digital development pathways at all levels
Time consuming admin and data capture	Select groups supported by AI	Digital and AI enabled workforce

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Our Approach to Delivery continued

Workforce Development Commitments

To achieve the above, we will take a multi-pronged approach to developing our human capabilities:

- Enhance existing and develop new training, as required, to introduce and extend digital related capabilities and increase digital and data literacy.
- Support new and existing employees to develop new skills through a range of facilitated training, self-guided learning, mentoring, shadowing and knowledge transfer from partner organisations.
- Extend our centre of excellence models to engage fully with all parts of the organisation, supporting the development of capabilities throughout independent frontline business functions.
- Implement an independently delivered digital apprenticeship, providing formal training from Level 3 to Level 7 by leveraging the Apprenticeship Levy.

In fulfilling these commitments, we will ensure that our workforce is digitally futureproofed, enabling it to deal with the increasing levels of automation and information we will provide it with in the years ahead, and equipping it with at least the core capabilities necessary to thrive and excel in a digitally enabled environment:

- **General Workforce** will have clear development pathways, progressing from foundational awareness training (focused on fundamentals such as appreciation and understanding of the criticality of data and the role they play in data collection, capture and use), through to targeted, role specific training relating to the tools and technologies they will utilise daily.
- **Digital Specialists** and those in roles involved in the development and support of digital capabilities and solutions will be supported via ongoing career development and upskilling. This will ensure they continue to bring the latest and best thinking and approaches into the business, allowing our customers to continue to enjoy a continual improvement in the service we provide. Central to this is the introduction of our Digital Apprenticeship Programme which aims to develop capabilities across a broad range of digital roles and specialism.

Although digital capabilities need to develop across the organisation, we have also established a core of central expertise to coordinate our efforts in this area. By bringing together our existing data engineering, Dev Ops, and analytics capabilities, we will enhance these areas through targeted professional development, recruitment, and outsourcing. This approach will combine sector-specific, UK Power Networks, and digital domain expertise, enabling us to deliver better and faster solutions that respond more effectively to the needs of our employees and customers. Above all, the centres of excellence we have established will continually disseminate knowledge, expertise, and best practice across all business areas and throughout the supply chain.

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Our Approach to Delivery continued



Process

In implementing digital, we also need to consider how existing processes need to be adapted and revised to integrate with digital delivery, and how those that do not currently exist are adequately defined. Especially when it comes to the delivery of AI solutions, an end-to-end redesign of business processes is often fundamental. A critical consideration in this respect is the increased direct involvement and interaction of stakeholders within these processes.

We will aim to bring stakeholder views into our governance and process development activities, ensuring they contribute to our decision making and that they are involved in co-designing what we implement wherever possible, as opposed to being purely consulted.

Just as we are evolving our approach to developing our people, we also need to shift how we approach process definition and change, as summarised in Table 2:

TABLE 2: EVOLUTION OF PROCESS AND COLLABORATION

Past	Now	To
Fixing pain points	Understanding blockers in the end-to-end process	Proactively improving processes before blockers arise
Gathering needs via facilitated stakeholder events	Engagement through network of Digital and Data champions	Dedicated two-way engagement driven by the principles of open innovation
Possessive over IP	Centre of excellence model facilitating collaboration	Federated sharing of knowledge and solutions
Occasional informal learning from others within the sector	Targeted outreach and learning from others	Substantial and scheduled involvement beyond the sector
Addressing needs based on benefits analysis and internal reporting	Robust benefits evaluation and prioritising based on value	Social impact evaluated and externally published

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Our Approach to Delivery continued



Technology

Technology is naturally a key enabler of our proposed digital transformation activities. The pace of change in digital capabilities has been phenomenal, with the variety and completeness of the offerings in the market growing exponentially over recent years – with further growth expected. Consumer and retail demand have driven significant advancement in technological capabilities and platforms in the recent past, much of which is now being exploited in enterprise environments. It is incumbent upon UK Power Networks to ensure that appropriate, validated and value-adding technology platforms and capabilities are deployed to enable the business and customers, introducing innovations only after thorough testing and validation to ensure their reliability and effectiveness.

Given that UK Power Networks has an established but evolving technology landscape, with a number of digital capabilities already in place, we know that prior investments and the enabling investments proposed in our plans will create a solid footing for the expansion of our digital capabilities. We will focus on adding complementary capabilities to maximise the value delivered to the business to realise the outcomes that are set out in this digitalisation strategy, and the corresponding investment programmes. Our future landscape will be a blend of the enabling and business-specific digital capabilities needed in order to meet stakeholder needs.

Our portfolio of projects, both now and in the future, will continue to focus on fully exploiting contemporary digital technologies while maintaining the resilience, integrity, and security of our IT infrastructure. We are also introducing the latest tools and techniques to ensure demonstrable benefits from the most recent advances in AI, cloud automation, Internet of Things, and robotics, ensuring our ongoing commitment to innovation.

Our technology stack will be simplified and standardised wherever possible, deploying and upgrading technologies in a way that will allow evergreen updates to be applied without compromising the business solution and introducing business risk or impact. This will allow UK Power Networks to exploit the latest developments and advancements on a vendor’s roadmap, whilst reducing the overheads of managing our legacy technology estate. This will mean that we need to reduce the customisations and configurations in platforms that deviate away from the core product functionality and hamper the ability to accept regular updates.

The cloud will be a key feature of the digital platforms in our estate. We have already delivered a number of services to the business and stakeholders using cloud technologies, whether through our own Microsoft Azure-based private cloud or via software-as-a-services offering for specific line of business applications.

Vendors are increasingly adopting a cloud-first strategy with their product development, and correspondingly UK Power Networks will need to embrace these advancements in order to provide the most appropriate and high-value services to our customers.

AI capabilities will only accelerate over the next few years advancing at an unprecedented rate. To stay on top and benefit from these ground shifting advancements we need to embrace AI in a secure and robust manner.

Our ability to fully exploit the most recent advances in digital technologies requires us to advance and evolve, particularly with respect to establishing the agility and flexibility necessary to facilitate agile development and deployment methods, moving away from traditional incremental development, to continuous evolution and improvement. This transition is articulated in Table 3:

TABLE 3: EVOLUTION OF TECHNOLOGY

Past	Now	To
Process and governance led	Stakeholder led	Proactively supporting stakeholders
Focused on technology	Focused on building a consistent digital spine	Focused on integrated digital services and solutions
Driven by hype	Driven by business value	Driven by societal impact
Periodic updates with high disruption	Periodic updates with minimal disruption	Evergreen
Waterfall delivery	Agile in areas of largest change	Mainly agile development and delivery
Dependant on external IT resource	Increased investment in internal skills though training and recruitment	Internal digital capabilities supplemented by third party specialists
Traditional big integral system approach	Focus on moving to scalable core technologies (digital spine)	Modular and scalable architecture

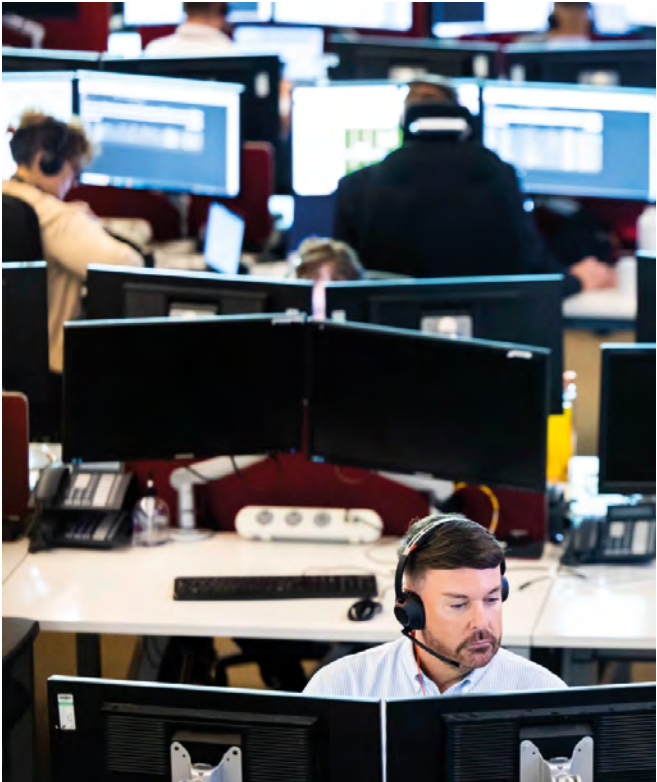
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Our Approach to Delivery continued



Data & Information

Experience has demonstrated to us that talking about data in broad terms can often result in a lack of clarity with respect to what is wanted and needed. We know that our stakeholders’ appetite for data is increasing, and we want to help make sure that we give them as much as we can, as fast as we can, in the format they need to achieve their outcomes. This includes key datasets including network asset information and near real-time operational data.



However, we also need to balance this with two important considerations:

- 1. That we are custodians of data relating to critical national infrastructure.
- 2. That we have in our possession personal and sometimes sensitive information relating to both customers and employees, which we must ensure is appropriately utilised in a secure and highly controlled manner.

Ultimately, we have a statutory duty of care which we cannot allow to be compromised. We will therefore be rigorous in applying effective processes, tools, and techniques to evaluate our data, identifying associated limitations of use and publication.

As we advance our digital capabilities, the data we create, collect, and capture will continue to evolve. We must integrate this data to enhance our current operations and services, while also enabling new ones that have yet to be envisioned. As RIIO-ED2 progresses, our focus remains on optimising these developments to ensure a smooth transition into the goals and requirements of RIIO-ED3.

We are also focussing on providing teams with the right skills and Data Literacy to best exploit the data and tools available, while considering how we can make data easier to use for external stakeholders of varying skill.

Based on learnings from our stakeholder engagement, we have a clear understanding of the data our stakeholders require and value most. However, this is a constantly changing landscape and we will continue to share more data openly based on prevailing needs and new use cases; to de-risk this we provide as much information as possible within the corresponding metadata of all published datasets. This indicates the veracity of the data and any known issues or constraints to the end consumer, as well as how we have assessed and mitigated the risk of sharing the data.

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TABLE 4: EVOLUTION OF DATA & INFORMATION

Past	Now	To
Closed data	Focus on addressing the most critical data needs across our user base	Open data as standard
Centralised insights	Insights accessible to all via a combination of self-serve and data requests	Self-service through broad data literacy
Quality subject to specific use cases	Library of common data rules applied to critical data elements	Quality based on defined standards
Information silos	Single cloud datastore	Evergreen

Our Approach to Delivery continued

Accessibility

Improving accessibility acknowledges the importance of opening and making intelligible key datasets available to both internal and external stakeholders. To achieve this, we have modernised our Open Data Portal and internal data platform, exploring further functionality including AI to simplify how users gain insights. We are utilising improved data architecture to improve the performance and access management of our data, working to develop a unified network model to support planning and design, modelling and analytical use cases. We are also implementing an automated data catalogue to make it easier to discover data and keep our records up to date, which will also help to improve how we share our data and metadata externally.

We have made adjustments to our already mature data sharing assessment processes, expanding on the risks we consider prior to publication as we learn from the typical obstacles to data sharing and how to overcome them effectively. We will also contribute to the proposed Data Sharing initiative, and drive collaborative services such as common data portals or energy system mapping solutions. We continue to lead the application of industry-standard, technology-agnostic approaches, adopting standards aimed at delivering common digital and open data services and solutions. This includes exceeding the Dublin Core metadata requirements in Data Best Practice, and extending the application of IEC 61968 Common Information Model (CIM) standards, anticipating that this will become the de facto standard mechanism for the sharing of normalised network data.

Capability

Internally we have been working to decentralise data related decision making, enabling us to respond faster to data requests, delivering better service and to improve agility in this increasingly digitalised space. We have invested in tooling and training already, driving increased use of our data platform, AI and visualisation tools as well as developing a skills matrix for assessing capabilities of our technical teams.

A good culture around data is critical to driving the right behaviours in data management and making the most of our data. We will be working with a third party specialist to run a full campaign around data literacy, targeting pilots in high-demand teams like Finance and the DSO, expanding to the wider organisation after the pilot. It will focus first on upskilling teams, making them aware of data biases, common quality challenges and how to use data most effectively.

Reliability

Over the last few years we have defined a data ownership framework and we are continually improving our data management practices to define clear policies and standards over how our data is managed. In particular, our data quality improvement processes are now mature and used regularly by the business to highlight issues, which we investigate centrally, capturing risks and coordinating actions in data improvement plans. We will move strategically to more proactive quality monitoring through our new data management tool, allowing data stewards to use a library of algorithms to monitor their data as well as create their own algorithms, moving away from standalone quality dashboards.

We have created a Data Best Practice maturity matrix, ratified with regulatory stakeholders and routinely assess ourselves against the principles to identify opportunities for improvement. Moreover, we are targeting an enhanced Cyber Assessment Framework (CAF) profile to improve the resilience of our data. We will continue to share our approach through cross-sector working groups for metadata and data triage, paying particular attention to how we can align on definitions and data structures.

Overall, we aim to continue to exceed the Data Best Practice principle requirements to make sure our stakeholders can have confidence in our data, advancing our capabilities and targeting increased agility, innovation and effectiveness in the delivery of our data services.

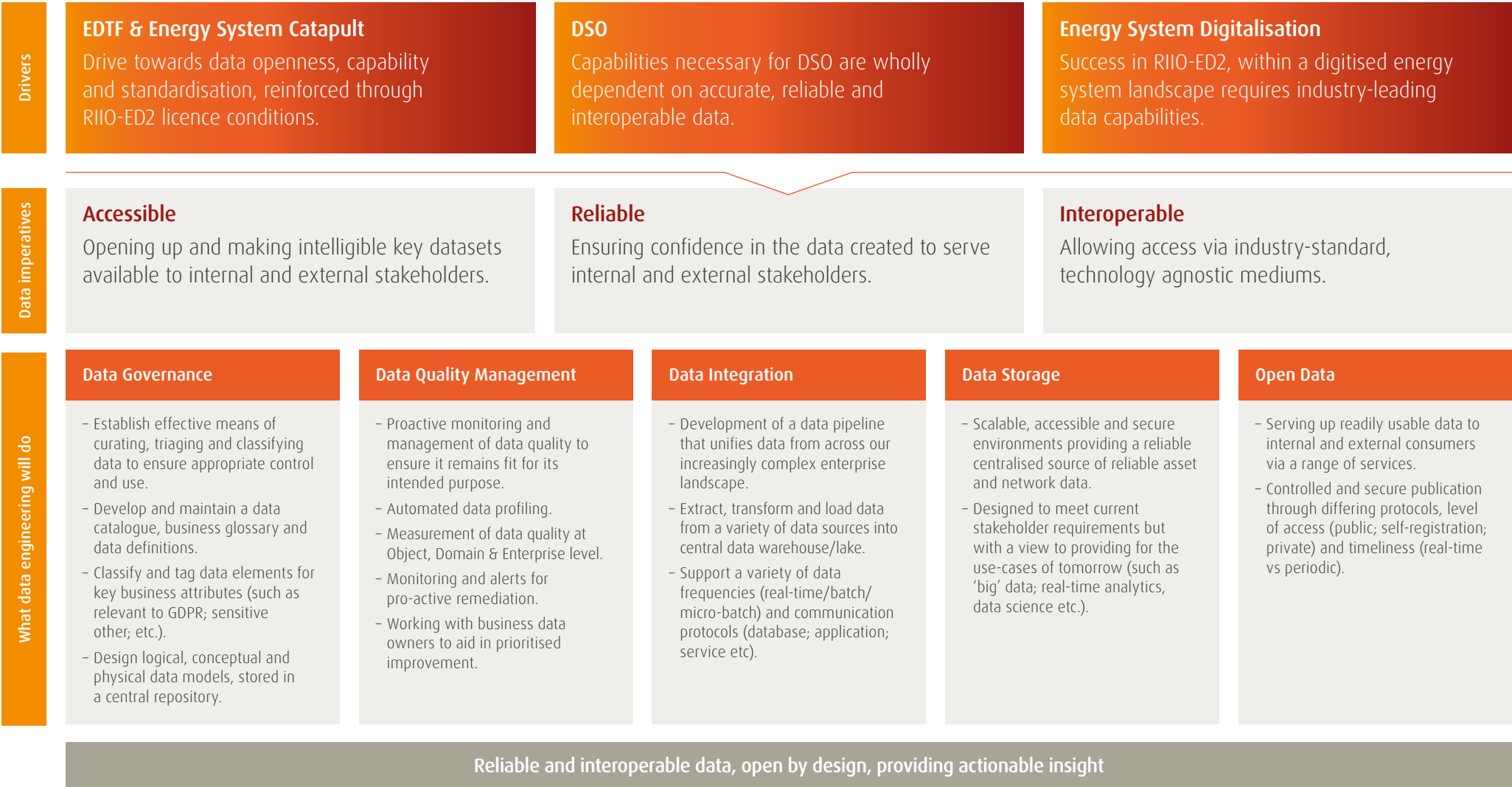
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Our Approach to Delivery continued

FIGURE 2: DATA & ANALYTICS

We plan to deliver tangible outputs to meet EDTF expectations and lead in collaboration efforts across the sector. We intend to set the future direction for Open Energy Data, cementing its place at the core of our Digital Strategy. To achieve this ambition, we have established a new Data Management capability tasked with delivering against the three core imperatives of Reliability, Accessibility and Interoperability.



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Delivering enhanced Services and Experiences for our Stakeholders

Gathering, collating and validating needs of our stakeholders

From the outset of the development of our digitalisation strategy, we have aimed to gain a comprehensive understanding of the needs of our various stakeholders through proactive consultation across key groups, using insights to inform the shaping and prioritisation of our digital action plans.

Our thoughts on the shape and direction of this continue to be aligned with the structure presented within our Digital Portfolio Framework, which has been iterated and refined as we have worked to ensure our consultation and engagement activity is reflected in this strategy.

The way in which we engage takes on various forms to ensure we maximise coverage and penetration in recognition of the fact that there is not a one-size fits all approach. For example, across various projects we co-design, develop and test our products and services, applying a build – measure – learn – enhance approach.

Doing this ensures our products and services meet our customer and stakeholder needs. Equally, we hold a range of engagement forums which target direct dialogue and debate with stakeholders on a range of topics, seeking their views, input and challenge to inform, evaluate and drive our thinking and action.

Broadly speaking, we engage stakeholders and apply these methods in three areas:

1 Within the energy industry

We have aligned our efforts with Ofgem and DESNZ expectations for significant digital progress by Distribution Network Operators, actively participated in collaborative initiatives such as the Energy Data and Digitalization Taskforce, and integrated the resulting data best practices.

Additionally, we have responded to the new license conditions within RIIO-ED2 and implemented our vision for the DSO, alongside the necessary digital investments required to support these ambitions and future regulatory developments.

When we share these experiences with our stakeholders, we always offer specific context for these relatively conceptual discussions, for example exploring needs related to promoting operational network visibility and data availability to the market, or providing accurate, machine-readable, and comprehensive network information. The feedback that follows from our stakeholders then feeds directly into our development efforts, in which we constantly strive to make digital discussions more concrete and practical. This in turn directly shapes our digitalisation plans.

2 Throughout the wider utilities sector

We have much to share and more to learn from our peers in the wider energy sector.

We have attempted to gather from wider stakeholders what might be needed from us and also, what they can help us with, for example engaging with and learning from new and established energy players such as retail suppliers, aggregators and energy technology companies.

We have also addressed more holistically, the shared digital use cases we have in common with other utilities to support greater efficiency, better service and overall lower costs to customers. For example, via our involvement in forums such as the Geospatial Commission’s National Underground Assets Register (NUAR) project, Greater London Authority (GLA) Infrastructure Mapping and the London Data Commission.

3 Beyond sector boundaries

We are on a continuous journey to apply what we learn from exploring the wider role of digital in our lives.

We have openly shared our thinking using open social media to develop connections that will hopefully evolve into collaborative efforts, with specific focus on financial services, health and care and local government. We have done this in a focused way that links directly to the topics we either directly have in common (for example, the similarities between open finance and open energy), or where we have shared customers with common needs (most pertinently, decarbonising heat and electric vehicle adoption).

We are also long-standing members of the Institute of Civil Engineers Infrastructure Client Group’s (ICG) Digital Transformation Task Group (DTTG). Our participation has afforded us the opportunity to learn from, collaborate with and formally benchmark ourselves against a broad range of infrastructure owner/operators from across the UK. We have also been able to contribute to the shaping of national initiatives such as the development of the National Digital Strategy.

Crucially, the knowledge gained from these engagements has contributed to developing our understanding of stakeholders’ requirements and the issues they face, informing our approach, and providing us with a vehicle to subsequently validate to what extent the actions undertaken deliver the intended impact. For more detail on how we have considered the needs, motivation and behaviour of different stakeholders, see the Digital Personas in Appendix A.

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Delivering enhanced Services and Experiences for our Stakeholders continued



Targeting our engagement

UK Power Networks aims to be the leader in digitalisation engagement in the sector. This does not mean showing that we have the latest, shiny technologies. It means enabling effective and meaningful discussions throughout our stakeholder community, informing actions that drive performance and realisation of value from digital.

Our user personas – representations of key stakeholder groups – have been instrumental in this respect, helping us target our engagement at specific user communities, utilise the outputs of those engagements to inform stakeholder requirements, use cases, and value propositions, which we then translate into enabling projects and deliverables within specific targeted outcomes.

In adopting this approach, we have increased our engagement and collaboration within and beyond the energy industry. Core to this has been extensive participation in a number of working groups and research forums including the ICG’s Digital Transformation Task Group, the ENA Digitalisation & Data Steering Group and the Connected Places Catapult’s National Digital Twin Demonstrator project – CReDo. Additionally, we are building on this through the Strategic Innovation Fund project for CReDo+, which further enhances our efforts in this area.

The assimilation of some of the insights we have gained through this approach are summarised in Table 5 below:

TABLE 5: SUMMARY OF ENGAGEMENT CHANNELS & LEARNINGS

Engagement	Stakeholder groups	Approaches	Learnings
Internally and amongst industry peers	– UK Power Networks’ employees – Commissioned independent customer research outputs – ENA Digitalisation & Data Steering Group – International Utility Working Group	– Advanced processing and statistical analysis of inbound customer contacts – 400+ hours of internal business workshops – Participation in collaborative research and project delivery (e.g. National Energy System Map, Data Triage Pilot)	– Change – We have a wealth of data which enables us to make tangible, sustained improvements in customer service – Users – Our customers and colleagues have a strong desire for digital improvements
Within the wider energy system	– DSO forum – Connections forum – Multiple industry steering groups	– DSO and Connections workshops focusing on needs and data – Co-development and peer review via cross-sector working groups e.g. ICG DTTG, Energy Networks Association	– Change – There are communities out there willing to collaborate to help us ensure we can publish our data faster – Users – Interoperability is key – Users – Publishing a number of specific data fields would truly help accelerate ‘open energy’
Beyond and across energy sector boundaries	– Targeted global communities of technology experts – Local authorities – Financial services – Water utilities – Healthcare sector – ICG DTTG	– Publication of targeted articles – Facilitated workshops – Structured research – Targeted LinkedIn technology options polling – Collaborative digital strategy development and contribution to ground-breaking initiatives such as the National Digital Twin programme	– Process – Our thinking is aligned with other sectors already associated with digital innovation – Governance – Data interoperability and access are common across sectors – Users – Metadata is incredibly important in informing correct and appropriate use of data and needs to be a key focus area

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Delivering enhanced Services and Experiences for our Stakeholders continued

A key aspect of the engagement approach we have applied is that we have worked to ensure that we remain aligned to our front-line business services and the research they have undertaken in the development of their own plans and strategies. We have also experienced that directly asking stakeholders what digital and data services they need rarely drives a meaningful and insightful discussion – some simply don’t know what they want or need; others have very niche and specific requirements and others have very broad, undefined, and nebulous needs.

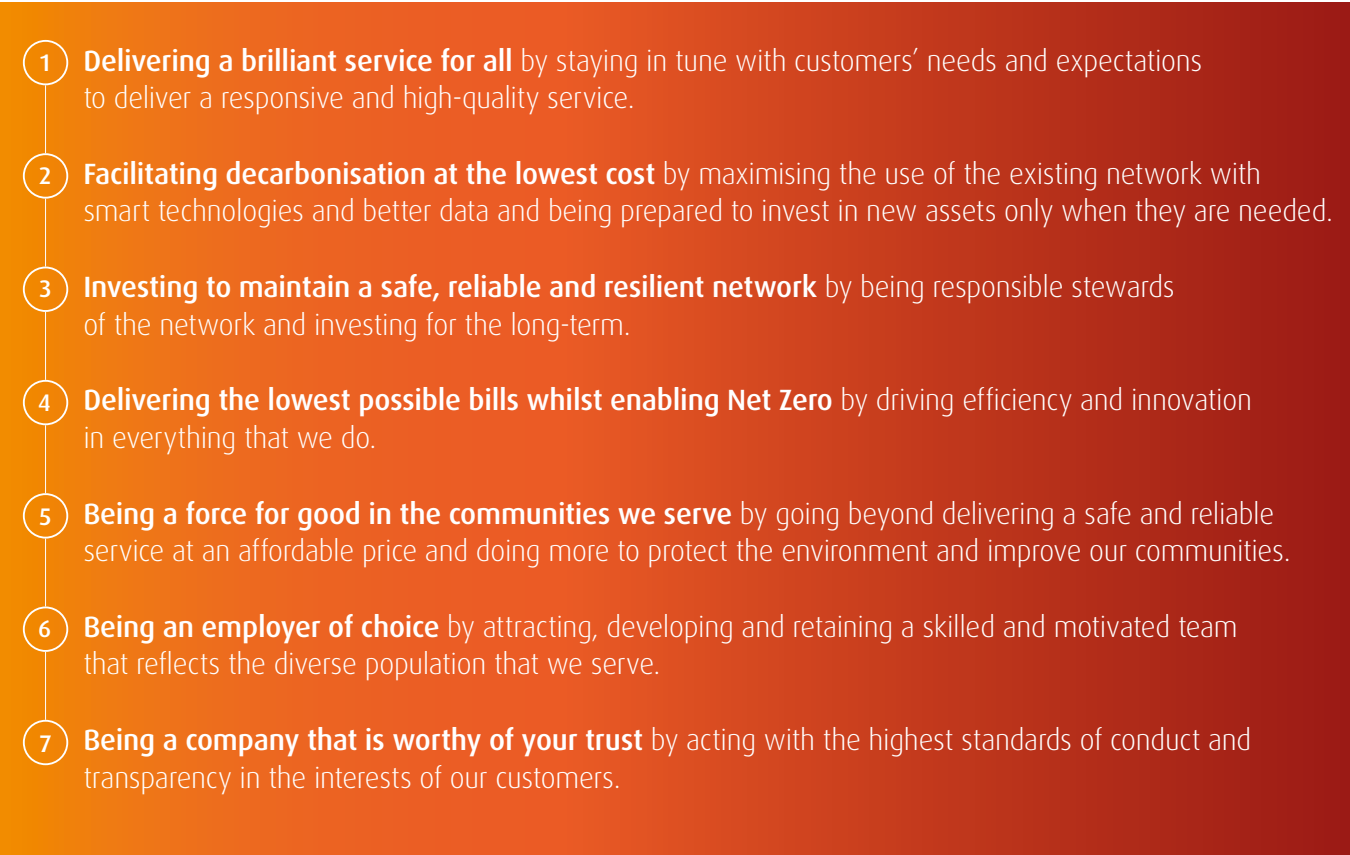
To overcome this, we have targeted the questions we ask on what outcomes our stakeholders are targeting rather than what data or digital services they need to achieve them. Importantly, these conversations have taken place as part of our wider stakeholder engagement activities, achieved by providing those leading in the development of the various elements of our business plans with a series of questions to include in their own engagement activities.

How we will deliver for our stakeholders

Feedback from stakeholders has highlighted a need to provide greater clarity on how our digitalisation portfolio links to outcomes for our stakeholders. To address this, we set out our Digital Portfolio framework (Figure 1) with a focus on “Customer Facing Solutions”, “Employee Solutions”, “Asset and Operations” and “Smart Networks”. Across these four portfolios we have developed a robust process to deliver enhanced Services and Experiences for our Stakeholders:

Expanding on that, we have articulated a comprehensive set of targeted outcomes, aligning them with the seven keys to success defined in our RIIIO-ED2 business plan (Figure 3).

FIGURE 3: OUR SEVEN KEYS TO SUCCESS



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Delivering enhanced Services and Experiences for our Stakeholders continued



By aligning to these keys, we are demonstrating how digitalisation supports customers directly and indirectly:

Customer Facing Solutions

Delivering a brilliant service for all

Our Customer Service strategy is heavily dependent on digitally enabled capabilities. An example of this is our Priority Services Register (PSR) that plays a vital role in ensuring we have visibility and an understanding of vulnerable customers or those with specific needs that require a targeted and prioritised response.

We have used AI in the form of machine learning to identify vulnerable customers across our networks and have committed to establishing automated PSR datalinks with other utility companies so that customers will be automatically registered to receive enhanced service from us, alongside other essential service providers. This requires investment in our Customer Relationship Management (CRM) platform and contemporary data services like Application Programming Interfaces (APIs).

Similarly, targeted digitally enabled customer solutions such as chat-bots and video updates delivers ease and convenience to our customers seeking new connections. It allows them to access our services via a choice of channels, facilitating self-service through the provision of direct access to information on the capacity and location of our network assets. It ensures they remain informed along every step of their journey with us. By utilising machine learning, AI and robotic process automation techniques we will provide a more seamless and relevant experience. Application of advanced analytical techniques and integrating third party data with our own will also allow us to understand the intersectionality of factors that contribute to vulnerability. This further informs the provision of the most appropriate, targeted support.

Being a company that is worthy of your trust

We are committed to being the UK’s leading network and system operator in data provision through a best-in-class service that opens data according to user priorities and adds value to customers.

Our customers and stakeholders have told us that they want open, accessible and accurate information. They want as much of it as possible, proactively shared in formats they can readily utilise. Our plan is to continue expanding the Open Data Portal, adding additional data streams and features based on ongoing user feedback. We have focused on enhancing the quality and transparency of our open data and will continue to raise our data publication standards to meet the evolving needs of stakeholders.

In doing this, we will maintain robust data governance that ensures we do not undermine customer data privacy or expose information that may compromise critical national infrastructure or sensitive sites. We will work together in the development of standardised digital services through forums like the Energy Networks Association’s Digitalisation & Data Steering Group. This will help meet the demands of opening up energy data to facilitate the smart grid and open innovation in a safe, controlled manner. The corresponding benefits to the end customer are choice of service, further opening of energy markets and decarbonisation at lowest cost.

Employee Solutions

Being an employer of choice

One of the key pillars of our digitalisation strategy is people and process, which is critical in the provision of the contemporary digital capabilities that will ensure we are able to deliver a highly reliable network and excellence in customer service.

Being recognised as an employer of choice demands the provision of a workplace experience that is equal to that which our staff have in their personal lives. Like our customers, their expectations are heightened by the standards of service, accessibility and convenience they receive elsewhere. This naturally demands the provision of digitally enabled tools and processes which allows them to focus on their core role in providing excellent service to our customers and maintaining the integrity of the electricity network. We are achieving this both by enabling an outstanding digital experience, e.g. through the roll out of a new work manager solution for our field staff or by making new technology accessible quickly, e.g. the roll out the Microsoft 365 Copilot AI assistant across our back office staff.

Advances in the digital competence and literacy of our entire workforce are required to ensure they can maximise the potential of digital and data enabled systems. We will invest in upskilling our staff. This will be supplemented by targeted recruitment in key skill areas whilst establishing a Digital Skills Academy to provide DSO with digital future skills that will ensure we have an internal capability that allows us to lead the way through the digitalisation of the energy system.

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Delivering enhanced Services and Experiences for our Stakeholders continued



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Asset and Operations

Investing to maintain a safe, reliable and resilient network

The provision of a safe, reliable and resilient network sits at the heart of what we do. This is already a key priority for our customers, with their reliance on electricity set to increase as a result of electric vehicle and heat pump uptake. Decentralisation means the energy ecosystem is becoming increasingly complex to manage.

We recognise the need to continually advance our capabilities in maintaining system resilience, particularly in the context of whole-system and the increasing interdependence between infrastructure systems. With this in mind, we will continue to collaborate in the development of innovative and lower cost solutions to technical issues arising from greater levels of interoperability, expanding the use of digital and data resources to maintain the supply of electricity to our customers. By applying increasingly advanced data analytics techniques alongside the utilisation of digitally enabled automation to control and operate our network, we will enhance our forecasting capabilities and improve response to unexpected and extreme events.

With an increasing amount of data available to us, such as from smart meters, advanced data capture, modelling, and decision-making capabilities are becoming increasingly more powerful and beneficial. Our Low Voltage Utilisation model now can predict the utilisation of our most critical assets to an accuracy of over 85%, giving us visibility of even the remotest corners of our assets. Our Planning tool utilises this and many other data sources to allow prioritisation of interventions well ahead of constraints arising.

Smart Networks – DSO

Facilitating decarbonisation at the lowest cost

Our ambitious commitment to facilitate decarbonisation of the energy system at lowest cost to consumers is dependent on our ability to use digitally enabled capabilities to maximise utilisation of the existing network.

One such initiative is the use of advanced digital technologies to accelerate the rollout of flexible connections across our network that unlocks latent capacity in the constrained parts of the network, removing barriers to the connection of renewable generation and low carbon technologies. The optimal management of our network with high penetration of Distributed Energy Resources necessitates greater visibility of our network and the ability to understand and forecast long, medium and short-term consumer behaviours and demand.

We made it easier for DER customers to make informed decisions about connecting to and operating on our network. These customers wanted more transparency of connection queues and to understand the impact of curtailment. This led us to rethink and radically enhance the information available to DER customers, including the publishing of enhanced data on headroom, power flow and historical curtailment, plus visibility of the latest status of all connections applications by Grid Supply Point. This especially supports the due diligence investigations required by investors. To help customers decide where to apply, the DSO makes a detailed report explaining what their curtailment offer means in practice, available to every customer. These data offerings are available via API by default. This means customers' systems can consume the data instantly to inform their operational actions.

By extending the use of sensors in our substations, alongside the deployment of smart meters, and applying AI techniques on the resultant data, we will be able to obtain a granular and accurate view of our low voltage networks. The insight gained informs the application of lower cost digital solutions

to traditional physical challenges, allowing us to run the network at higher utilisation, deferring reinforcement whilst providing maximum opportunity to connect and helping to maintain the lowest possible bills for customers.

Delivering the lowest possible bills whilst enabling Net Zero

Our ability to deliver extensive savings as part of our RIIO-ED2 business plan has been significantly enabled by the development and deployment of innovative digital and data-driven solutions and services across our business.

We are well-positioned to continue building on these advancements over the next price control period. Similarly, this is also the case for the £410m of deferred load related investment targeted through development of our DSO capabilities.

An example of this is our commitment to minimise costs to our customers by taking a flexibility first approach, market testing network needs, procured through a range of long-term and short-term markets and products, via a dedicated platform. Central to this platform is the integration of network, customer and market data. As we shift towards a decarbonised and more dynamic energy system, the relationships between customers, the DSO and the wider energy system become increasingly interdependent, with actions taken by one segment affecting several others. Experience from other industries shows that end-to-end data visibility is a key enabler for well-functioning markets, supporting coordinated actions and continuous improvement. In this context, we have set out our commitment to be GB's leading DSO in data provision. In 2023/24 we published 31 additional datasets to respond to customer needs we identified through engagement. This is more than double the 14 released in 2022/23. We provide a total of 189 datasets via the Local Area Energy Planning Open Data page.

Delivering enhanced Services and Experiences for our Stakeholders continued

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Smart Networks – DSO continued

Being a force for good in the communities we serve

Data has an important role to play in bringing together local communities to deliver on their climate emergency plans. This is reflected in calls of support from local authorities who have identified a lack of data as a blocker to delivering actionable decarbonisation plans. Local authorities need a wide range of data to develop Local Area Energy Plans that are certain enough that we can confidently propose network investment changes to Ofgem. Local authorities do not typically have easy access to the skills, data, resources and expertise to carry out complex modelling and planning, so they rely on ready-to-use insight and support to interpret the data. We have made it easier for local authorities to create credible, robust and investable energy plans by providing a tailor-made, free online energy planning tool called Your Local Net Zero Hub. This allows users to quickly model and cost a range of low carbon technology rollout strategies.

The platform has transformed previously static local plans into dynamic digital resources, giving local authorities control of their own data and a shared workspace for collaboration. It has already helped local authorities to maximise grant funding. For example, the decision to place EV chargers on the left or right side of the street can have radically different cost implications if the network cable is on the other side. The tool provides a wide range of whole system information with geospatial mapping, data visualisation and analytical and optioneering tools, along with live chat support. This is backed by easy access to over 160 detailed datasets on GB's first and only dedicated Local Area Energy Planning Open Data page, with datasets prioritised by local authorities and organised into themes to support decarbonisation planning, e.g. Social Benefit and Just Transition.

Underpinned by technology The DSO had a huge impact on our customers:

Secured £199m

of benefits in 2023/24 through flexibility services and flexible connections

Accelerated 5.5GW

of connections in areas with transmission network constraints by five years

Supported local authorities

with free energy planning tool

Delivered step change

in curtailment transparency, supporting customers looking to connect

Awarded over 1.5GW

of flexibility contracts, including to 14 new providers

Launched the first day-ahead procurement

of DSO flexibility, enabling wider market access

Improved network access

for generators on flexible connections from 91% to 99%



How we measure success

In considering success in the form of delivery of benefits and outcomes, we need to adopt both an internal and external perspective -i.e. what it means for UK Power Networks and its employees, and what it means for our customers and stakeholders. The corresponding measures of success therefore have the potential to be varied and it is necessary to ensure that we involve those we intend to benefit in both defining and validating these measures.

With this in mind, impacted stakeholders from within and outside of the organisation will be directly engaged to contribute to both the planning and development of our digitalisation plans. Furthermore, we will seek their input into the definition and ratification of the associated targeted outcomes and how success will be measured, conforming to a common framework to drive alignment to established corporate objectives, targets and commitments.

Progress in delivering the defined outcomes will be shared via six-monthly Digitalisation Strategy Action Plan updates, including validation of resultant benefits from the targeted end-user community.

Prioritising what matters most to our customers and stakeholders – Digital Governance

To deliver all aspects of our digital strategic framework, we must successfully collate disparate needs and use them to inform the development of products and services which provide value to the end user. This is a complex undertaking but something on which we pride ourselves at UK Power Networks. A fundamental aspect of making sure this happens in a sustainable, repeatable way is our approach to governance.



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Our governance framework ensures the definition and subsequent realisation of tangible value, underpinned by our core technology principles:

1. **Uphold governance** where decisions on digitalisation strategy will not be made without alignment to the business and generation of maximum benefits.
2. **Always seek to simplify, standardise, and automate business processes**, where possible creating self-serve functionality. We will consolidate our application portfolio.
3. **Align our planned activities to defined needs**, with stated outcomes, clear prioritisation, and accountable owners, so that we can be confident that we invest in the right areas, in the right manner at the appropriate time.
4. **Facilitate better and faster decision making**, where this is a function of getting the right information to the right people, at the right time.
5. **Mandate that all systems adhere to data mastery** – we will encourage use of pre-delivered integration content, with APIs as the first choice for integration.
6. **Follow a buy over build principle and adopt cloud-based services** where appropriate and cost effective, within a preferred partner ecosystem and with a standardised integration and support model.
7. **Treat data and information as an asset**, driving standardisation and reducing duplication to deliver value.
8. **Define the standards and guardrails** and develop quick start patterns for seeding digital innovation that will work at scale.

It takes a combination of specialist technical skill and creative thinking to ensure that any proposed solution addresses the identified need without compromising existing services, whilst presenting best whole-life value. Above all, unambiguous, focused, and sustained leadership and accountability are required to ensure this is achieved.

In assessing the full range of requirements and aspirations surfaced through our engagement activities, it would be very easy to solely target the delivery of long-term, multi-million-pound transformation programmes with broad, all-encompassing scope. Our experience and research tell us that this is not always necessary or effective with increased potential to result in increased costs and delayed value realisation. Our governance approach therefore aims to ensure that our plans align to defined needs and stated outcomes, with clear prioritisation that is informed by accountable owners.

Our Digital Business Partnering team spearheads this process, to ensure we start with a clear and concise description of what the proposal is, why it is needed, the targeted outcomes and resultant benefits. By feeding this through our "Digital Triage" governance process, we can evaluate the viability of the project, avoid duplication with existing or planned initiatives and ensure that our internal architecture and delivery teams have a holistic understanding of the desired outcomes rather than just being asked to provide a specific technology or functionality.

By starting with this level of clarity, we are more likely to succeed through concept development, planning, design, and implementation.

Prioritising what matters most to our customers and stakeholders – Digital Governance continued

How we align projects to our vision and outcomes

When discussing our digitalisation framework, we continually aim to ensure everything we do aligns and contributes to the fulfilment of our overarching corporate vision.

We recognise that when it comes to digitalisation this is essential for success. There are far too many examples, both inside and outside the sector, where highly ambitious projects have underdelivered and failed to provide value. Our approach to developing robust projects and programmes is therefore centred on ensuring that we maintain a clear line-of-sight between insights, actions and outcomes linked to our corporate objectives.

Appendix B provides an illustration of how this is achieved, mapping measurable and quantifiable outcomes to our objectives.

Starting with the baseline requirement(s) and/or desired outcome(s) we:

1. Map them to the relevant elements of our corporate objectives
2. Identify the business areas aligned to that (e.g. customer, asset)
3. Scope an action-oriented approach
4. Develop metrics to quantify the impact
5. Determine interdependency of actions and metrics
6. Quantify the overall benefit to the corporate goal

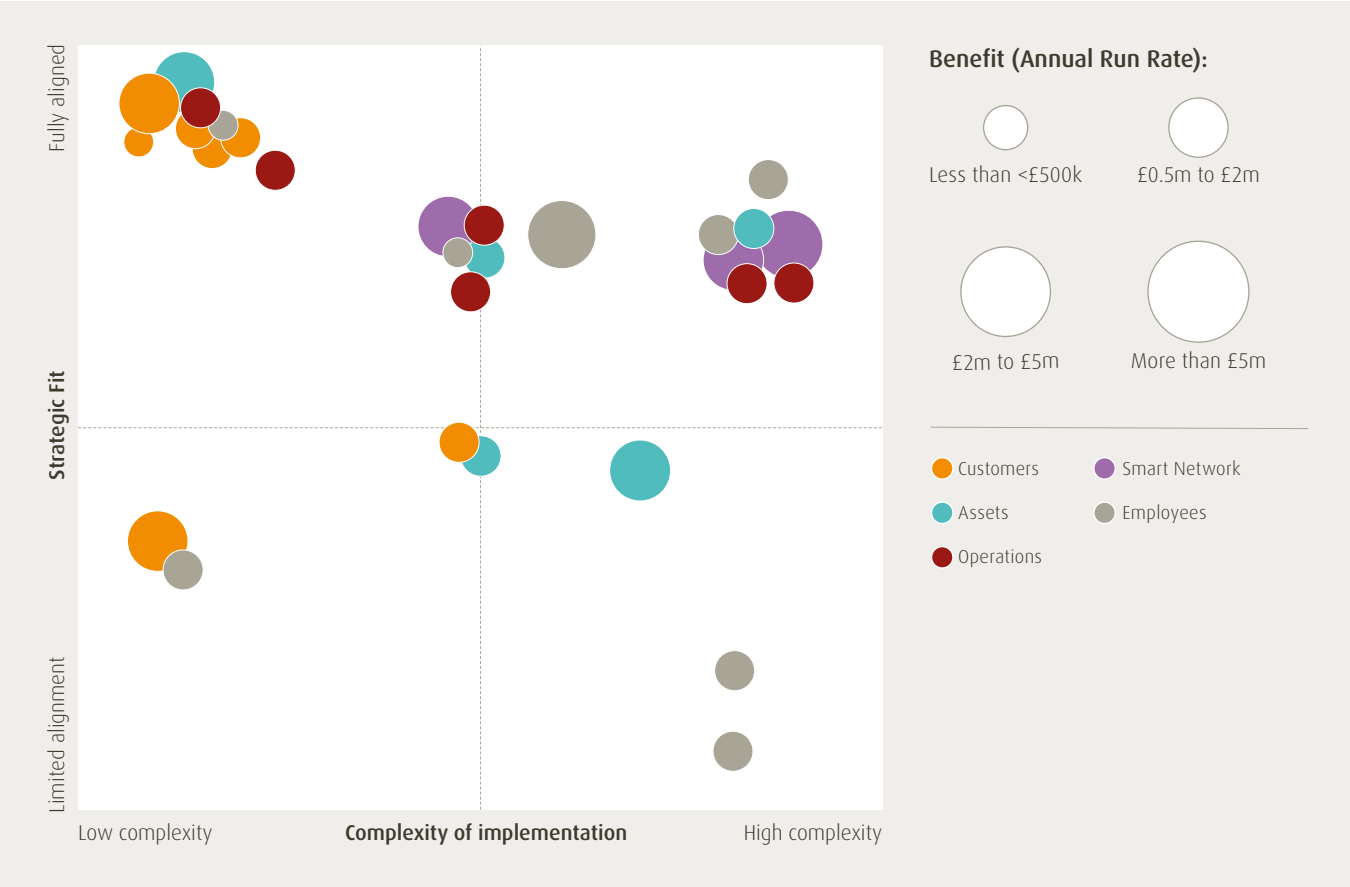
Adopting this approach allows us to significantly reduce the risk of undertaking poorly justified projects whilst also improving our ability to track the success of delivery. Furthermore, this mapping enables us to appropriately target engagement of the wider internal stakeholder community, ensuring they understand what is being done, how and why it impacts and potentially benefits them.

How we prioritise our project portfolios

When looking to prioritise investments and initiatives, we believe that it's best to keep things simple and transparent. The reason for this is to help manage expectations with respect to what will be delivered and when, and to ensure that we remain on budget and do not overload finite human and technical internal resources.

The methodology used considers the three dimensions of 'Benefits', 'Strategic Fit' and 'Complexity of Implementation' as illustrated in Figure 4:

FIGURE 4: PROJECT PRIORITISATION MATRIX – ILLUSTRATIVE EXAMPLE



On the vertical axis we have our strategic fit measure. This is a composite metric based upon a project's alignment to our corporate vision which acts as our baseline for strategic fit, helping us to ensure that we are continuing to maintain focus on the right things and alignment to the corporate vision. The horizontal axis provides a view of project complexity, and is again, a composite metric determined through average scoring informed by five questions covering aspects such as implementation method, impact on culture, and ways of working. Scale of benefits are then represented by the size of each project bubble. We are prioritising projects of high "strategic fit", low "complexity of implementation" and high "benefit".

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Prioritising what matters most to our customers and stakeholders – Digital Governance continued

This prioritisation approach works particularly well when there are competing demands for resources and the value needs to be scrutinised. However, it cannot be considered to give an absolute answer on priority as other factors such as interdependency need to come into effect. Equally, there are often important resilience or compliance related projects which may have high complexity and low tangible benefits. Such projects will naturally need to be considered in tandem with this methodology, facilitated by our governance approach.

Digital Triage Process

To further streamline our approach, we have introduced a Digital Triage Process as a single, early stage assessment, alignment and governance forum for all digital and technology initiatives across UK Power Networks. This forum ensures early visibility of requests, reducing duplication, and enabling better coordination across architecture, data, cyber, operations, and commercial teams.

We have executive-level accountability

Accountable leadership is so important – our digital leaders need to be focused on setting direction, visible in the breaking down of silos, and sensitive to the disruption digital transformation can cause, helping our people along the way.

Our Director of Finance, Customer Service & Technology is ultimately accountable for the delivery of our digital strategy and associated action plans, aligning them with business strategy, innovation and services to enable delivery of organisational outcomes and objectives.

Much more than project governance

The scope of digital governance requires an organisation-wide perspective, encompassing the identification of valuable initiatives, to their translation into implementation plans that address strategic priorities. This involves evaluation of stakeholders' needs, prioritisation, architecture, business change, project control, and measurement of impact.

We have an integrated governance forum to oversee strategic delivery of digitalisation initiatives, with individual digital portfolios coordinated by specialised project forums. This seeks to better integrate digitalisation with our business-as-usual processes. A group of senior business leaders responsible for the areas of people, process, technology and data will attend, with participation from a broader community of business subject matter experts where required. The scope of this integrated governance approach will continue to be coordination, enablement and control of our digital portfolio, interfacing with other governance functions throughout the business as appropriate.

To provide overarching executive-level ownership and oversight, reflecting the organisation-wide impact of digital, regular updates are provided to the Executive Management Team. This enables detailed engagement with the digitalisation strategy from across the business, allowing us to avoid the risk of creating silos and shadows (areas of hidden digital expertise). This is also the main mechanism for providing the opportunity to review prioritisation and progress against our digital portfolio framework and advise course correction when required.

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Tackling Digital Exclusion

Our RIIO-ED2 digitalisation strategy remains centred around digital inclusion, with a commitment to ensuring that digitalisation does not exclude customers, stakeholders, or employees. This platform is designed to better serve both digital and non-digital users, enhancing access and engagement across all groups, and will continue to evolve as we progress into RIIO-ED3. We have three key focus areas factored into our plan, aligned with our digitalisation strategy: people and process, technology, and data and information. These are:



Maintain and enhance our existing channels

Digitalisation is not about removing or replacing existing channels. We will be offering enhanced channels for customers, stakeholders, and employees who are digitally capable to work better and more efficiently, whilst maintaining the existing channels for those who can't. Digitalisation is about improving accessibility through building new options, not reducing them.



Ensure that new technology supports digital and non-digital users

Each technology we deliver needs to support all users, irrespective of their level of digital competence. Our governance will ensure that any solutions we develop will not be to the detriment of non-digital users. Our proposed investments for customers improve accessibility, bring greater visibility and ease to engaging with UK Power Networks. Importantly, we will endeavour to provide alternative non-digital channels where necessary.



Build digital platforms to better manage and engage with vulnerable customers

We intend to use digitalisation as a catalyst for better management and engagement of vulnerable customers. We have developed a PSR that enables us to control, tailor and target the largest number of customers. We will be enhancing our extra care system. We will enhance our data sharing with utilities building upon our existing data flows and we will expand automated data links with other utility companies so that customers will only have to register to the PSR once. Importantly, for our customers registered on the PSR, they will not need to digitally engage with the register – the digital processes will operate in the background.

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We will ensure that customer-facing technologies are tested with customer panels and end-users, as well as working with expert organisations to establish best practice for accessibility. By working along the principle of inclusion by design, we will consider how all potential users could interface with any outputs.

In 2024, we conducted an accessibility audit to assess our compliance with Web Content Accessibility Guidelines (WCAG) 2.1 AA standards followed by a redesign of our webpage. We put especial emphasis on improving and implementing enhancements on our core journeys including power cuts and PSR. You can find our accessibility statement for the UK Power Networks webpage here where we are fully transparent on the progress we have made and areas that we can still improve upon. Moving forward, we will conduct these audits annually to update the website to WCAG 2.2 AA standards. We maintain regular contact with our accessibility supplier to stay ahead by highlighting updates to standards and key areas for improvement.

We cannot allow the strong trends toward digital transformation outlined to obscure the fact that there are still many customers, stakeholders and even employees who are unable to access and effectively utilise digital services and solutions. We therefore have a duty to remain cognisant of the potential for digital exclusion in all the solutions that we develop and implement.

We are cognisant that this is a period of great change in the energy sector. As we transition towards Net Zero, the energy system is becoming smarter and more flexible and the way in which customers engage with new technologies and interact with the system is changing. As a socially responsible corporate citizen, we have a fundamental role to ensure that no one is left behind in this transition, particularly vulnerable customers. As part of our principle of addressing vulnerability by design, we are taking all steps necessary to ensure that customers in vulnerable situations are actively considered and included in the evolving processes and service journeys.

Building on the learnings from RIIO-ED2 so far, we will continue to evolve and expand how we enable customers to contact us, ensuring they can access our services in a way that best suits their personal needs and circumstances, and will carry this forward into RIIO-ED3.

Digitalisation Action Plan

Our digital action plan is built up from the combination of customer preferences, delivery knowhow and analysis. It is underpinned by our drive to provide leading services, solutions and capabilities to our customers and employees. Our plan is purposeful and led by the objective of addressing real stakeholder needs.

All projects and initiatives detailed within the plan are mapped to one of the seven components of our Digital Portfolio Framework (Figure 1). This helps to ensure that everything we invest in and implement contributes to the fulfilment of this strategy and delivers direct and indirect benefits for customers.

The latest iteration of our Digitalisation Action Plan was published at the end of 2024 setting out the specific activities, outcomes and benefits associated with this strategy for the next two years.

UK Power Networks Digitalisation Strategy & Action Plan – UK Power Networks DSAP

We will, as we have been over the last years, provide updates on a six-monthly basis, reporting on progress, realisation of benefits and delivery of outcomes. A key aspect in this respect will be seeking stakeholder input into the definition of anticipated benefits and outcomes, subsequently obtaining and sharing their views and opinions on whether we have been successful in their achievement.

We reiterate our absolute commitment to the advancement of digitalisation through the delivery of ambitious whilst realistic action plans. We look forward to working for and with you in delivering the energy system of the future.

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Appendix A – Our Digital Personas

By drawing and building upon the experience of our colleagues who engage and serve our stakeholders and customers on a daily basis, supplemented by existing research and further targeted external engagement, we defined personas that represent our different internal and external stakeholders. These are the groupings and definitions of the broad spectrum of people and organisations that access and use our information and services.

The definition of these personas helped us to better consider and understand the key traits of the digital stakeholder landscape – building an understanding of their needs, motivations, and behaviours – which was instrumental in attaining a deeper understanding of our stakeholders’ requirements and providing a clear direction for the products and services that we will deliver. One such example of this is our Open Data Portal where we have expanded and evolved the services provided, tailoring the outputs and insights to meet the needs of specific user communities, such as local authorities or DER developers.

We continue to revisit our understanding of these personas to inform our strategic activities.

The result of this is 13 individual personas covering our full range of digital stakeholders ranging from disengaged domestic customers through to commercial data service providers and local authorities:

1. **Disengaged energy consumer (domestic or commercial)** covering a range of people who are not directly interested in our data and digital services. They may not know the difference between supply and distribution, and are unlikely to engage with us, except in the case of a fault (their biggest pain point) or to ask who their supplier is. They view energy as a basic commodity and are principally concerned about price and continuity of supply. They may be sensitive to data privacy. Engagement with these groups needs to be extremely targeted and informative, but not technical and complex.

2. **Energy conscious domestic consumers & prosumers** will constantly look to develop their understanding of the electricity system. They are informed, active and energy literate. Once they install a smart meter, they are likely to desire a more personalised service, especially in relation to faults. In this regard, they will expect a dynamic, continuous, and accessible customer journey, tying together all interaction with us across all aspects of the business. As they install more smart devices and LCTs, and switch to innovative tariffs, they will look to us to ensure they can get the data they need to enable this. This may range from the headroom available in their area, an understanding of connected DER, network flows and planned reinforcement works. They will be keen to understand how smart meter data is used, what additional functionality it brings and how it is protected.

3. **Academics and research establishments** are likely to be interested in almost any data we can give them. Their goal is to achieve new and better research outputs; most likely forward-looking models of how to plan the network and develop new functionalities. Availability and reliability of data is their primary concern, ideally accessible in a self-service form but with the ability to interact with us to validate assumptions. This forms a key part of their work, and their ability to be successful.
4. **Connected DER (generation or demand)** customers are interested in the configuration and performance of the network around them – i.e. static and dynamic asset data. Their biggest pain points would be outages, curtailment and not being able to have a dynamic, continuous, and accessible customer journey. Data and the insight it can provide has significant monetary value to them, placing emphasis on the fact that any data they can access must be correct. They are also likely to be interested in data relating to planned reinforcement interventions, allowing them to optimise any upgrade and work schedules they have.

5. **Prospective connection customer (generation or demand), developers and LCT providers** require any data that helps inform the potential to connect at any given location – network location, configuration and spare capacity are key to informing the affordability of a connection. Their needs are quite similar to that of the Connected DER customers, except they will be more interested in historic network data which provides insight into the performance of the network and corresponding fault data. Their biggest pain point is the reliability and availability of the network data used in the connection application process, which as above has significant monetary value for them.

6. **Electricity suppliers** are interested in customer data, especially vulnerable customers. Looking forward, dynamic asset data will be of most interest as they plan and implement new, dynamic tariffs. Their biggest pain point would be competition with new independent providers.

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Appendix A – Our Digital Personas continued



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7. **Regulators** have a dual interest in our data. Their direct interest relates to that which is provided for periodic regulatory and statutory reporting, along with the asset and network data which informs our future investment plans and interventions (e.g., asset health data). Veracity and reliability are, as such, a key concern. Indirectly, they are interested in how our data is opened up to external stakeholders, its discoverability, accessibility and usability, and of course the outcomes and benefits that provides.

8. **Aggregators & flexibility providers** are by their nature active participants in the DSO flexibility markets and highly dependent on our data and digital services. They are likely to proactively engage with us and request data that will allow them to optimise their own business models. This requires a variety of datasets, but their interest is primarily in static and dynamic asset data. Aggregators and flex providers will be the key consumers of market data related to UK Power Networks’ flexibility markets.

9. **Supply chain** members are interested in any operational and network data and associated services which aid in informing and optimising the services and/or products they provide to us. Providing access to our data also allows them to innovate and develop new services, solutions, and technologies, allowing more targeted and intelligent investment and overall service improvement. Their biggest pain point is not knowing what we need ahead of time – providing foresight allows them to optimise their service delivery, providing subsequent value and benefits to UK Power Networks and our customers.
10. **IDNOs** may be our competitors but they need to use our data to offer and operate their own services, such as designing, building, and maintaining supply to their networks. They are interested in static dynamic and operational data, all of which helps to inform how they can offer the best services to their potential and existing customers. Their biggest pain point is similar to our prospective connection customers in that they want to be able to connect to our network at the cheapest price. They, like others, would like self-service access to our data.

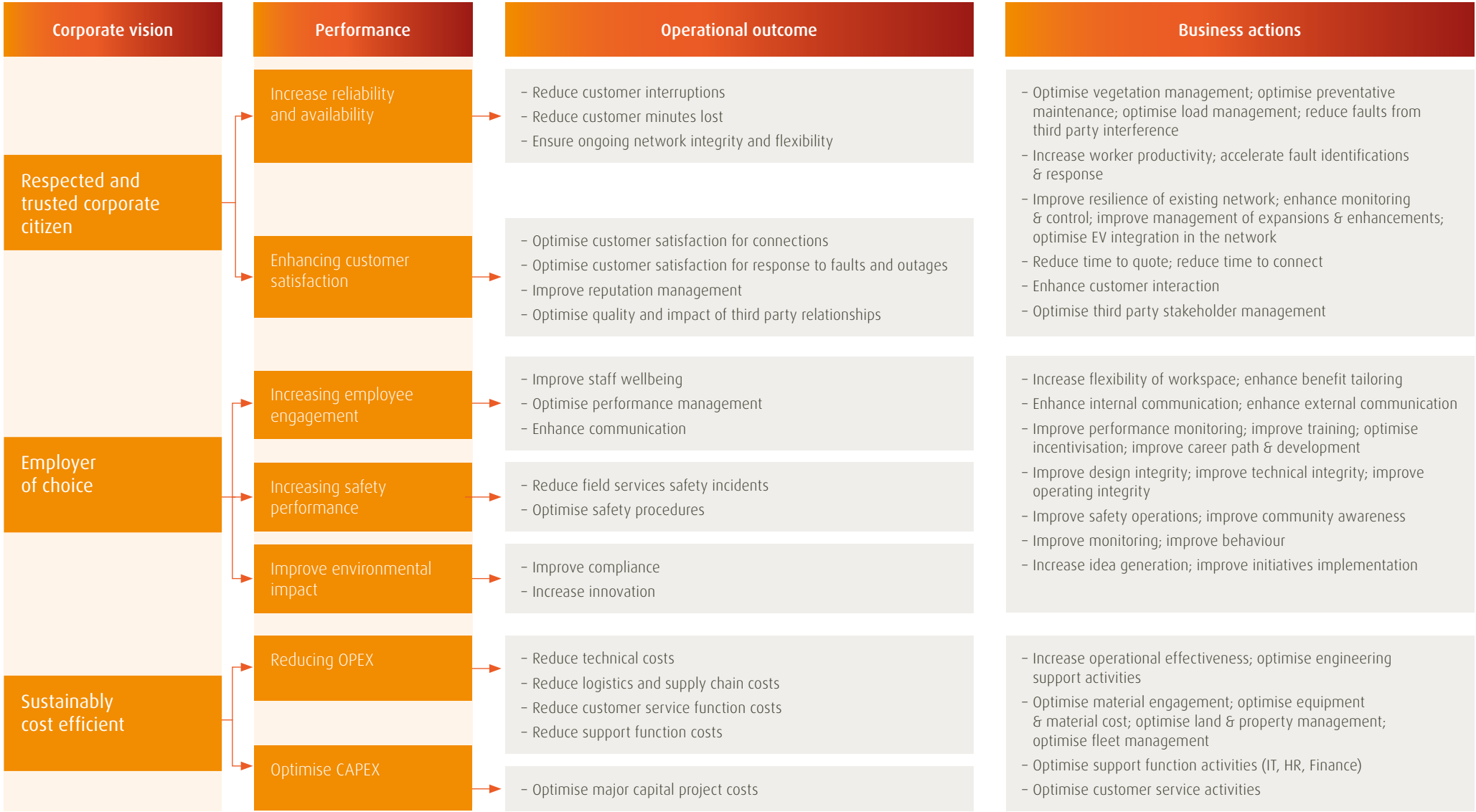
11. **Other electricity and gas networks** naturally have needs that are very similar to our own. They will benefit from understanding our network, its location, performance, and capacity, especially for those with network that neighbours and/or is interconnected with our own (e.g. transmission). Co-location and interactivity of assets is also of particular interest from a network risk and reliability perspective. There is also a possible strategic benefit for them in understanding how we are developing the network, helping to inform the development of their own strategies. Being from the same industry, they would benefit from self-service access to our data, but standardisation and interoperability is of greatest interest and benefit.

12. **Non-energy networks & infrastructure owners** are most interested in our static asset data and specifically what we have and where. This is key to them both in terms of proximity, interoperability and dependence on our network and assets, and also in informing the design and construction of their own assets. They are also interested in operational data in the interest of co-ordinating work to minimise disruption and costs, and faults data to provide insight into how our network performance has impacted their services.
13. **Third party data service providers** are different from any of the other user groups as they represent the entrepreneur and innovation users. Acting as collators of data from across multiple organisations and potentially sectors, they provide data aggregation and dissemination services without necessarily having a specific use case in mind. They are future services facilitators and business model creators. They are interested in any and all data.

We are mindful that is it necessary to think about the totality of users we serve, even when they do not know what they need from us and these personas allow us to identify the likely interactions, or lack thereof, that customers are likely to have with us. This in turn helps us ensure that as we design products and services, we are fully inclusive of groups who may not want to engage with us, but that it is straightforward for those groups to find us when they need to. The feedback received has informed refinement of these definitions to the extent that we are confident that we have a well-rounded definition of our stakeholders, ensuring the personas are aligned with user needs identified through engagement with our user communities.

Appendix B – Mapping our Company Vision to Digitalisation Outcomes

FIGURE 5: LINE OF SIGHT BETWEEN DIGITALISATION PROJECTS, BUSINESS ACTIONS & CORPORATE VISION



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Key contacts

General enquiries

0800 029 4285

Emergencies or power cuts (24 hours a day)

Free power cut helpline 3-digit number:

105 or 0800 31 63 105

Please note this number is free to call from
mobile phones

Text message updates during a power cut
To keep updated during a power cut Search,
Track and Report Power Cuts on our dedicated
website:

www.ukpowernetworks.co.uk/power-cut

Text Relay

We offer a 24-hour Text Relay service for
customers who are deaf, hard of hearing
or have any other communication difficulties.
For more information, visit:

www.ukpowernetworks.co.uk

Connection services

0800 029 4280

Media enquiries

0330 159 1712



A full list of our contact details can be found at:
www.ukpowernetworks.co.uk