

# Digitalisation Strategy Action Plan update June 2022

Leveraging digitalisation technology and digitised data to generate value for customers and stakeholders

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Note: This Digitalisation Strategy Action Plan has been published prior to receiving the 2022 Draft Determination from Ofgem, depending on the outcome this may impact our Digitalisation Strategy and this Action Plan. Our December 2022 update will reflect any changes if they are required.

# 1 About Electricity North West

Electricity North West is one of 14 electricity distribution network operators (DNOs) in Great Britain. We are responsible for maintaining and upgrading 56,000km of network and nearly thousands of substations across the region. We supply the electricity to the diverse communities in the North West of England which extends from Macclesfield all the way up to Carlisle. We are regulated by the Office of Gas and Electricity Markets (Ofgem) who provide DNOs with the license to operate and decide what's fair for us to charge our customers for each price control period.

Our current price control began in 2015 and runs to 2023. It's referred to as RIIO-ED1. In full, that stands for Revenue = Incentives + Innovation + Outputs, Electricity Distribution 1. Under this framework, the price we can charge our customers is determined until the start of the next price control, RIIO-ED2, which will run from 2023 until 2028. Work is already underway to determine RIIO-ED2, and this Digitalisation Strategy forms part of the stakeholder engagement that underpins the determination.

With the transition of the region to Net Zero underway, the period of time which the RIIO-ED2 price control covers will see significant change in the way electricity is generated, consumed and stored, driving innovation across the whole energy system both now and into the future. Notably it will increase the reliance by our consumers on the availability of electricity which, given the increasing reliance on digital systems to maximise the availability of the network, in turn increases the requirement on us to ensure availability of our systems, in conjunction with the ever increasing need to protect our systems against both more, and increasingly targeted and sophisticated, cyber-attack.

The move away from electricity being generated by large carbon and nuclear power stations connected to the National Grid has been underway for some time. Increasingly our power is being generated by renewable, but intermittent, sources connected to the distribution network. This is increasing the complexity of our network, with the need to balance generation and load not just at a national level, but at a local level too. This complexity is reflected in our need to make more of our information available to other stakeholders, so they also can help deliver this transition.

This complexity will only increase as the demand on our network increases to support low carbon technology, such as electric vehicles and heat pumps. Electricity North West has already responded to this trend. Firstly, by installing our own telecoms network during RIIO-ED1 and the previous regulatory period, to offer more control over our systems, crucially with less "latency" (the amount of time it takes to send commands over our network) in advance of the PSTN (Public Service Telephony Network) switch off in 2025. Secondly, during RIIO-ED1 we have updated our Network Management System (NMS) to become the core foundation of future control over and an increasingly automated and complicated system. On this foundation, we have now delivered our innovation, Customer Load Active Services System (CLASS - frequency management service to National Grid to help manage intermittency in the network) and are currently working to deliver another innovation, Smart Street (voltage control and electricity bill reduction for domestic customers).

Our Digitalisation Strategy for RIIO-ED2 and beyond is set to build upon this firm foundation. Significantly, we will be continuing our strategy of installing core systems fit for the future and building on these systems. Inevitably short-term stop-gap solutions deliver short-term advances, but at the expense of long-term progress, and potentially at the expense of support and reliability concerns. Our strategy is to utilise third party software platforms, encouraging the software developers of those systems to incorporate features specific to the UK DNO market into their core product, to make these available as industry platforms for all networks.

### 2 Welcome

Technology, information and data are taking on a greater significance at Electricity North West than ever before because of the need to:

- Further transform our businesses to drive efficiency and power innovation;
- Open-up our data to improve transparency and fuel innovation across the energy system;
- Support the road to Net Zero.

The growing importance of technology will also require us to bolster the cyber resilience of our network to reflect the bigger role of electricity in all our lives and an increasingly hostile "cyber" world.

Our Digitalisation Strategy and Action Plan is essential for our Business Plan by contributing to the delivery of the business plan benefits to create a more sustainable, fairer, more prosperous and more connected future for our region.

Additionally, it supports our work to implement the five recommendations of the Energy Data Taskforce and Ofgem's' Data Best Practice, including openly sharing our data and the benefits to society that brings in areas such as whole energy system innovation and creating new market opportunities. Information Technology is one of the assets, along with our people, to help us achieve that goal.

Our transition to Net Zero requires new systems and processes to operate energy networks in a more sustainable future. These new systems and process are called Distribution System Operations (DSO) and are vital to our low carbon ambitions.

Investing in digitalisation, as described in our digitalisation vision, gives Electricity North West the ability to meet customer and stakeholder demands on the network and supports the journey to Net Zero, while further improving cyber protection and opening-up our data and increasing transparency.

We have an ambitious plan that puts our customers and stakeholders at the heart of everything we do.

**Tony Smollett** 

Head of IT

# 3 Executive Summary

The essential service of electricity distribution that Electricity North West delivers needs to adapt. Net Zero targets necessitate adoption of low-carbon technologies, electric vehicles, and locally generated energy to be distributed, aligned with effective adoption of smart meters and distribution system operations. These changes will change electricity supply and demand patterns at a scale unimaginable when the network was designed and built.

To meet these new demands on our network and the resulting change in customer and stakeholder priorities and needs we have developed and published a Digitalisation Strategy. Our strategy describes the activities we will undertake in the next few years to deliver the necessary change.

This Action Plan provides a view of the activities we will undertake during this six-month period.

We have significantly revised both our governance of the Digitalisation Action Plan (DAP) and our approach to its development based on Ofgem's revised principles.

Our approach now focuses on customer and stakeholder feedback and benefits.

A key foundation for our Digitalisation Strategy is data. We have produced a Data Strategy that describes streams of activity that will be delivered in adherence with the Data Best Practices issued by Ofgem.

We have enhanced our published Action Plan to incorporate the initiatives and projects required to align our focus to the seven guiding principles. Whilst these principles are subject to consultation and feedback we believe they are not likely to undergo significant change.

The key principles are as follows:

- 1. **Prioritising stakeholder benefits** Prioritise providing benefits to the stakeholders who pay for the products and services and also benefits to the broader Public Interest.
- 2. **Delivering the vision** Ensure all products and services work towards a defined vision.
- 3. **Time to market** Take full advantage of opportunities to deliver benefits early and to iterate improvements to products and services.
- 4. **Communicating what we do** Make it easy to understand the products and services, the status of their delivery and how to access them.
- 5. **Communicating delivery status** Ensure visibility about the nature and status of actions in the Digitalisation Action Plan.
- 6. **Measuring success** There is a shared understanding of success and performance is measured.
- 7. Whole system collaboration Coordinate with the wider ecosystem of products and services.

Our Digitalisation Strategy Action Plan includes the following;

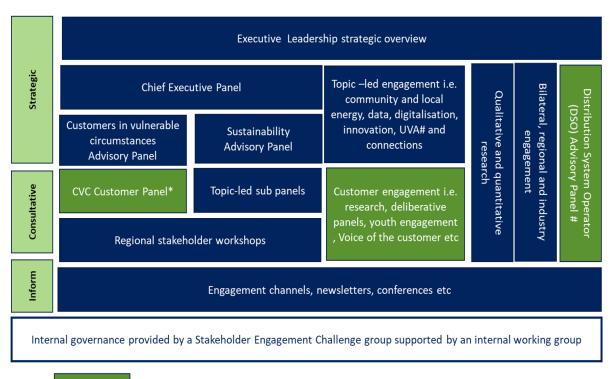
- Stakeholder engagement model
- Contribution to our Business Plan Vision
- Digitalisation Strategy on a Page
- Digitalisation actions

This document is complemented by the following strategy documents

- Annex G.10 Cyber Resilience Plan which outlines at a high-level our Operational Technology (OT) and Corporate IT Cyber Investment Plans. <u>Link</u>
- Annex G.21 Data Strategy which shows in how we will implement the Energy Data Taskforce (EDTF) recommendation and Ofgem's Data Best Practice. <u>Link</u>
- Annex G.23 Digitalisation Strategy which provides our digital vision for RIIO-ED2 and how we will deliver the vision in support of our business plan. <u>Link</u>

# 4 Stakeholder Engagement

Our strategy for managing our stakeholders is based on our wider engagement model. This is outlined in the diagram below:



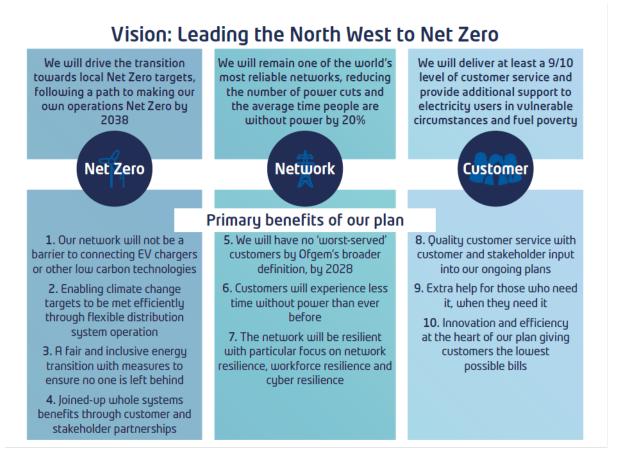
Key:

Enhancements

- CVC = Customers in vulnerable circumstances panel part of Electricity Users in Vulnerable Circumstance's Strategy
- ~Undergrounding for visual amenity
   # Included in other Strategy documents

#### 5 Contribution to our Business Plan Vision

Our Digitalisation Strategy is aligned to the objectives and action plans of the business plan as well as external influences such as Data Best Practice (DBP) and Digitalisation Strategy and Action Plan (DSAP) guidance and the Energy Data Task Force (EDTF) as well as the requirements of external customers and stakeholders.



We plan to continue to deliver network reliability and security, excellent service and efficient operations by building on our core services and exploiting new and maturing digital technologies. These are changing the way companies interact and work with their customers and stakeholders while recognising that some customer segments have digital accessibility challenges.

For our customers and stakeholders, this will mean increased availability of data and transparency through improved digital services informed by enhanced engagement, which in turn will support market innovation, energy supply chain efficiency and economic growth.

Our customers have a large part to play in shaping and delivering our digitalisation strategy. We will work together to provide improved digital services, taking particular care to avoid excluding customers without digital accessibility or with other particular needs, and open access to network and market information.

We have developed a continuous improvement process that will refine and confirm our digitalisation journey. Through the engagement undertaken with customers and stakeholders while preparing our RIIO-ED2 submission we have focused on the opportunities and projects that provide the best stakeholder outcomes. We are in a process of exploration and consideration not least as the technology evolves. We are asking ourselves questions as to how best to address the challenges being posed. We aim to be open and transparent in this process and we want and need stakeholders to help

us decide what we do recognising, that we need to remain agile in this fast-changing dynamic digital world.

The initiatives outlined in this strategy are what we could do in RIIO-ED2. We will continue to refine this as we undertake more detailed planning, cost benefit analysis and consultation as part of finalising an investment plan for RIIO-ED2 that is affordable, deliverable and optimally aligned to our stakeholders' priorities and the 10 business plan benefits (as detailed above).

#### 5.1 Our Digital Vision

Digitalisation is the process of leveraging technology that uses digitised data and information in order to transform and automate business processes and create additional value for customers and stakeholders.

The three main new capability themes that underpin our digitalisation are:

 Enablement – Providing access to data and appropriate technology in the right place at the right time to enable our people to work more safely and efficiently, to improve public safety, and better serve our customers and stakeholders.

We will deliver systems that support business change that transforms processes and permits continuous improvement. By improving processes, we improve efficiency, reduce data errors and provide working environments that are in keeping with the expectations of current and future employees, making Electricity North West a more fulfilling place to work. We will do this to improve customer experience to support the EDTF recommendations, DSO market innovation, Net Zero, energy supply chain efficiency and economic growth.

Innovation – Enabling the company and the supply chain to adapt quickly to changes in the
operating environment and to innovate by continuing to invest in flexible technology
platforms, data quality and data sharing.

We will allow and support other stakeholders innovating by sharing appropriate data and delivering the EDTF recommendations. We will do this with a view to speeding up the realisation of those benefits to our customer and stakeholders, but to do so in a manner which allows future technological change.

Insight – Information and analytics accessed in an affordable, secure and reliable manner, to
enable us, as well as third parties, to identify opportunities to innovate and continually
improve the whole energy system.

This includes collecting more data where appropriate, avoiding personal data at all times where possible, and integrating both the data we already hold and that provided by third parties (such as smart meter data, public data and data from suppliers), as well as enhancing our ability to analyse that data through the application of data science, operational modelling and electrical network modelling.

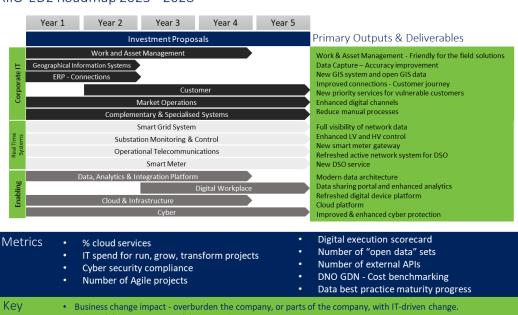
We will further improve how our digital services create value for the company, its customers and its stakeholders, either directly or through third parties. To deliver this strategy successfully we need to upskill our staff and ensure we can govern our strategy.

# 6 Our Digitalisation Strategy on a page

## Digitalisation Strategy Leading the North West to Net Zero

Drivers Heat and E	Smart Grid pumps Vs	Priority Customers Ofgem Digitalisation Principles	Cyber Threat: Cu		Cost Efficiency EDTF Recomn	Open Data DSO nendations	Data Res	Environmental Sustainability t Innovation
Business Plan Then	nes	Net Zero We will drive the transi towards local Net Zer targets, following a pat making our own operations Net Zero I 2038	ro h to	most re the nu the a	liable netwo	of the world orks, reducing wer cuts and people are	g 9/10 ser add ele vulner	Customer  iill deliver at least a blevel of customer  vice and provide  itional support to  ectricity users in  rable circumstances  and fuel poverty.
Our Digitalisat Themes	ion	Enablement     Cloud First     API First     Open Data		Inn • •	ovation Digital Delive Multi-Sourc Unlocking D	ing	• Da	it tegration Platform ata Platform nalytics

#### RIIO-ED2 Roadmap 2023 - 2028



Risks

- Deliverability Capacity to deliver our plans
- Resourcing Resourcing and workforce resilience for key skills

#### Benefits

- 1. Our network will not be a barrier to connecting EV chargers or other low carbon technologies
- 2. Enabling climate change targets to be met efficiently through flexible distribution system operation
- 3. A fair and inclusive energy transition with measures to ensure no one is left behind
- 4. Joined-up whole systems benefits through customer and stakeholder partnerships
- 5. We will have no 'worst-served' customers by Ofgem's broader definition, by 2028
- 6. Customers will experience less time without power than ever before
- 7. The network will be resilient with particular focus on network resilience, workforce resilience and cyber resilience
- 8. Quality customer service with customer and stakeholder input into our ongoing plans
- 9. Extra help for those who need it, when they need it
- 10. Innovation and efficiency at the heart of our plan giving customers the lowest possible bills

# 7 Digitalisation Actions

Here is a summary of Digitalisation actions, these actions are broken down by our investment areas and the primary principle they support.

Status	Action	Primary Principle
Governance		
To June 2022	<ul> <li>Updated our Digitalisation Action Plan, based on stakeholder engagement and feedback.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits
	<ul> <li>Reached out to our CEO Forum to get feedback on our approach.</li> </ul>	Principle 6 - Measuring success
	<ul> <li>Provided a list of actions and their status as part of our action plan</li> </ul>	Principle 5 - Communicating delivery status
	Mature the metrics we use to measure and drive the digitalisation agenda.	Principle 6 - Measuring success
	<ul> <li>Digitalisation and Data Steering Group - National Energy System Map – continue to support the working group and achieve deliverables as part of the project.</li> </ul>	Principle 7 - Whole system collaboration
	<ul> <li>Digitalisation and Data Steering Group – Member of the sub-working group on Data Triage that is looking at playbooks for how to deal with data requests</li> </ul>	Principle 7 - Whole system collaboration
	<ul> <li>Digitalisation and Data Steering Group – CIM (Common Information Model)</li> <li>Subgroup – will ensure Electricity North West provides an active member to participate in this newly formed group</li> </ul>	Principle 7 - Whole system collaboration
To December 2022	<ul> <li>We will repeat the process every six months and continually improve it with our stakeholders and customers.</li> </ul>	Principle 5 - Communicating delivery status
	<ul> <li>Improve collaboration across the energy system to create a consolidated approach regionally and nationally.</li> </ul>	Principle 7 - Whole system collaboration

Principle 1 - Prioritising Stakeholder benefits
Principle 4 - Communicating what we do
Principle 6 - Measuring success
Principle 3 – Time to market
Principle 5 - Communicating delivery status
Principle 5 - Communicating delivery status
Principle 5 - Communicating delivery status
Principle 4 - Communicating what we do
Principle 3 – Time to market
Principle 7 - Whole system collaboration
Principle 7 - Whole system collaboration

	<ul> <li>Digitalisation and Data Steering Group – CIM (Common Information Model)</li> <li>Subgroup – will ensure Electricity North West provides an active member to participate in this newly formed group</li> </ul>	Principle 7 - Whole system collaboration
Complementary and	Specialised Systems	
To June 2022	No significant activity this period	
To December 2022	<ul> <li>Enhancing integration between our applicant management system and our ERP, to improve our efficiency.</li> </ul>	Principle 2 - Delivering the vision
	<ul> <li>Enhance our digital training capability for our colleagues - providing a modern e- learning platform to support our digital transformation</li> </ul>	Principle 3 – Time to market
	<ul> <li>Enhancement and further digitalisation of our authorisations, through our e- learning portal</li> </ul>	Principle 2 – Delivering the vision
Customer		
To June 2022	<ul> <li>Audit carried out by independent accessibility auditors, to review our website to understand and work towards WCAG 2.1 accreditation. Enhancement to our website's accessibility capabilities and improving user experience by ensuring it is compliant with WCAG 2.1.</li> </ul>	Principle 4 - Communicating what we do
	<ul> <li>Enhanced our chat bot based on stakeholder feedback. Increased its visibility on our website and updated the content to support increased self-service.</li> </ul>	Principle 4 - Communicating what we do
	<ul> <li>Priority Services Register mobile app for our teams – enabling our teams to submit requests for contact, on a customer's behalf, to our customer services team.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits
	<ul> <li>Commenced definition of requirements and optioneering for improvements to our case tracking capability.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits

	<ul> <li>Deployed capability to improve feedback to customers in the aftercare from a power cut, through automated SMS.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits
	<ul> <li>Consent requirements have changed from explicit consent to statutory public interest, instead of customer checking to confirm consent we will share their details so other utilities have a record of vulnerabilities, with the aim to create a singular register in the long term.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits
	<ul> <li>Infographic component added to provide alternative text behind image to be used for screen readers who cannot see pictures.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits
	<ul> <li>Refinement and re-structuring of our Community and Local energy website section, making the information clearer to find and consume.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits
	<ul> <li>Provided pop-up promotions to ICE events, with additional content and context for the survey sessions, our ICE team host, increasing awareness of what sessions are available to stakeholders.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits
	<ul> <li>Worked with our partners to update our content on our Priority services webpages, to increase the findability and relevance of our information and support for our vulnerable customers.</li> </ul>	Principle 4 - Communicating what we do
	<ul> <li>Deployed a Smart meter ping tool Proof of Concept, to support No supply calls.         This was trialled in our Contact Centre and early indication shows a reduction in unnecessary engineer visits, because Contact Centre teams can determine whether the problem is with the electricity supply or the customer's premises.     </li> </ul>	Principle 1 - Prioritising Stakeholder benefits
To December 2022	<ul> <li>Complete Cost Benefits Analysis and business case for our Smart meter ping tool, to support No supply calls</li> </ul>	Principle 1 - Prioritising Stakeholder benefits

	<ul> <li>Further website accessibility improvements, including better contrast ratios for customers with sight requirements, correct cues for screen readers, improved subtitles on videos.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits
	<ul> <li>Continued improvement of our Community and Local Energy web content, based on stakeholder feedback.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits
	<ul> <li>Deployment of a general enquiries portal to enable greater self-service for case tracking.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits
Cyber		
To June 2022	Redacted	
To December 2022	Redacted	
Data, Analytics and Ir	ntegration Platform	
To June 2022	<ul> <li>Commenced requirements gathering for the replacement of our GIS services - improving efficiency and our data quality</li> </ul>	Principle 2 - Delivering the vision
	<ul> <li>Our Digital and Data/Integration platform product teams will spearhead our ways of working, our team is now up to full capacity and ready for RIIO-ED2.</li> </ul>	Principle 3 – Time to market
To December 2022	Implement DevOps for Data and Integration (Deferred)	Principle 3 – Time to market

Digital Workplace					
To June 2022	<ul> <li>Enhanced our hybrid working capability, through deploying a hot desk booking service for our colleagues</li> </ul>	Principle 2 - Delivering the vision			
	<ul> <li>Increasing our internal capability for digital collaboration through migration to a cloud service, this is aligned to our Cloud first strategy (to be completed end June 2022)</li> </ul>	Principle 2 - Delivering the vision			
To December 2022	No significant activity this period				
ERP - Connections					
To June 2022	No significant activity this period				
To December 2022	No significant activity this period				
Geographical Informa	ation Systems				
To June 2022	<ul> <li>Commenced requirements gathering for the replacement of our GIS services - improving efficiency and our data quality</li> </ul>	Principle 2 - Delivering the vision			
To December 2022	<ul> <li>Deploy a Proof of Concept, testing and refining the requirements for our GIS service</li> <li>Commence activities to deploy our Open Data Portal, this portal will enable stakeholders to view our asset data.</li> </ul>	Principle 2 - Delivering the vision			

Innovation					
To June 2022	<ul> <li>Commenced our innovation project BiTrader around Secondary Flexibility market viability. Contracts and partners established to build and deploy the platform, including the rules and process how trading will work.</li> </ul>	Principle 2 - Delivering the vision			
To December 2022	<ul> <li>Building the market for our BiTrader innovation project. The focus is to engage with the customers, find out their requirements and feedback on how they would like this to operate and begin early stages of design.</li> </ul>	Principle 2 - Delivering the vision			
Market Operations					
To June 2022	<ul> <li>Improving our reliability through enhancing our service for Supply Point Management. (planned by end of June 2022)</li> </ul>	Principle 1 - Prioritising Stakeholder benefits			
To December 2022	<ul> <li>Commence activities to Half hourly billing, enables more timely and accurate information, supplier to set pricing based on demand.</li> </ul>	Principle 7 - Whole system collaboration			
	<ul> <li>Delivering capability to enable customer and consumers to do "next day" supplier switching. (faster switching)</li> </ul>	Principle 7 - Whole system collaboration			
Operational Telecommunications					
To June 2022	No significant activity this period				
To December 2022	<ul> <li>Enhancing our Digital communications capability to provide communications to our hard to reach mobile signal areas, helping us improve control over our network and increasing our resilience.</li> </ul>	Principle 2 - Delivering the vision			

Smart Grid System				
To June 2022	No significant updates			
To December 2022	<ul> <li>Enhancement to our fault response, from an output learning from Storm Arwen, introducing functionality to associate customer reported incidents to network assets.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits		
	<ul> <li>The first phase of our Smart Street, introducing low voltage regulation to support the reduction in demand on the network and cost to customers.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits		
	<ul> <li>Improved fault location detection for overhead lines, improving safety and fault response.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits		
	<ul> <li>Trial of our Smart meter ping proof of concept to look to establish if a customer has power, to avoid out of hours restoration call backs for customers.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits		
Smart Meter				
To June 2022	<ul> <li>Deployed a Smart meter ping tool Proof of Concept, to support No supply calls. This was trialled in our Contact Centre and early indication shows a reduction in unnecessary engineer visits, because Contact Centre teams can determine whether the problem is with the electricity supply or the customer's premises.</li> </ul>	Principle 1 - Prioritising Stakeholder benefits		
To December 2022	Complete Cost Benefits Analysis and business case for our Smart meter ping tool, to support No supply calls	Principle 1 - Prioritising Stakeholder benefits		

Substation Monitoring and Control				
To June 2022	• Enhancements to our automated fault restoration sequences – this will reduce interruptions to supply and minutes lost for our customers			
To December 2022	<ul> <li>Further enhancements to our automated fault restoration sequences – this will reduce interruptions to supply and minutes lost for our customers</li> </ul>	Principle 1 - Prioritising Stakeholder benefits		
Work and Asset Management				
To June 2022	<ul> <li>Our Work and Asset Management continuous improvement team has also adopted Agile ways of working.</li> </ul>	Principle 3 – Time to market		
To December 2022	<ul> <li>Enhancing our process to submit information from the field for faults, capturing more information that will support improved customer engagement (Deferred)</li> </ul>	Principle 1 - Prioritising Stakeholder benefits		