



CReDO+ Beta:

Harnessing data and connected digital twins for infrastructure resilience

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CReDO+ Beta: Project Overview

Project Purpose and Leadership

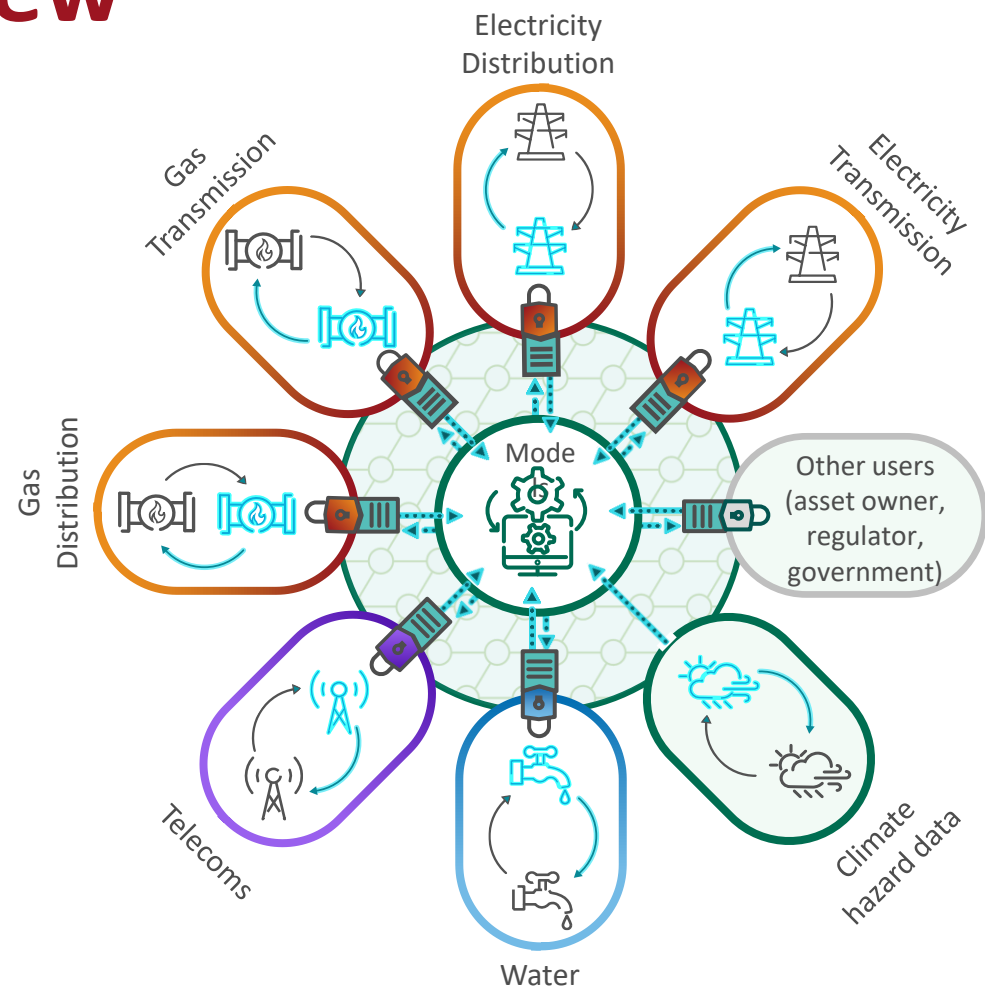
CReDo+ is led by UK Power Networks to improve infrastructure resilience against severe weather events.

Technology Utilised

The project uses connected digital twin technology and data-sharing for smarter resilience investment and planning decisions.

Customer Impact and Risk Mitigation

Over 8.3 million customers experience power cuts from extreme weather; CReDo+ aims to proactively mitigate these risks.



Why CReDO?

Extreme Weather Impact

Extreme weather causes major power outages affecting millions in the UK Power Networks region.

Increasing Climate Risks

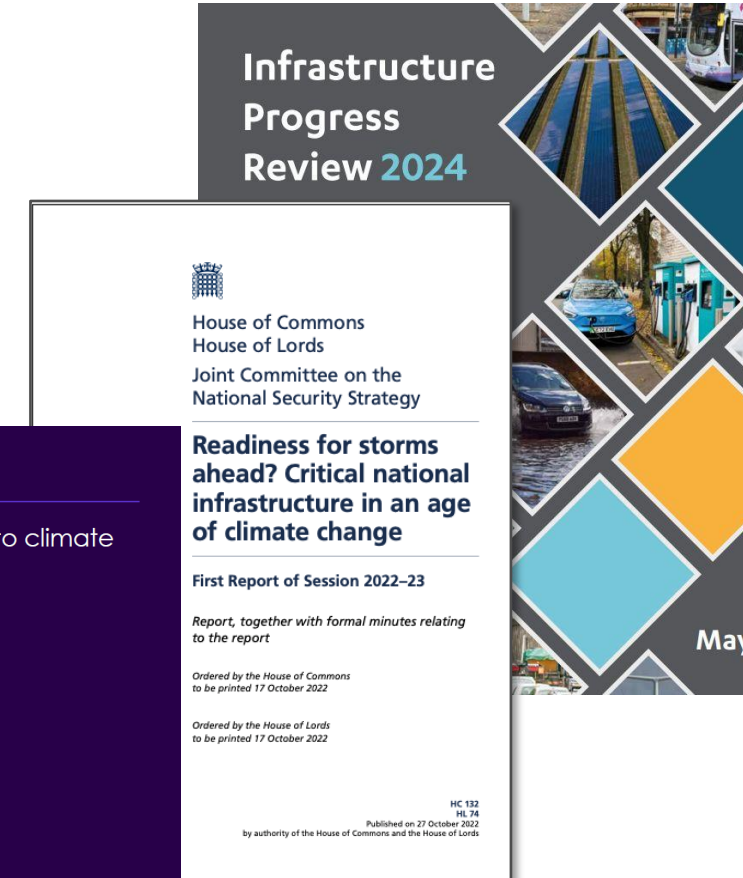
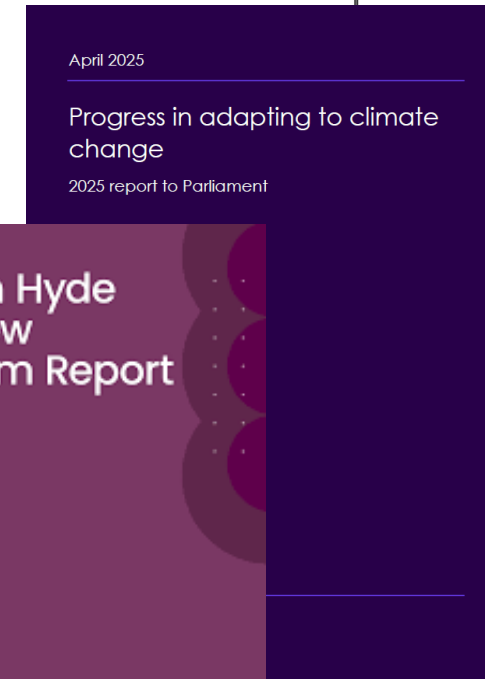
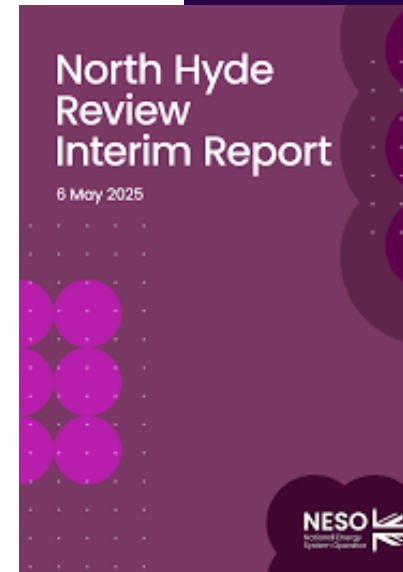
Climate change increases frequency and severity of storms and heatwaves, elevating infrastructure risks.

CReDo+ Risk Mitigation

CReDo+ provides tools to assess and mitigate cascading risks across interconnected infrastructure systems.

Infrastructure Resilience

Enhancing data sharing and risk modelling supports resilient infrastructure planning and recovery.



CReDo – Climate Resilience Demonstrator

A climate change adaptation digital twin platform

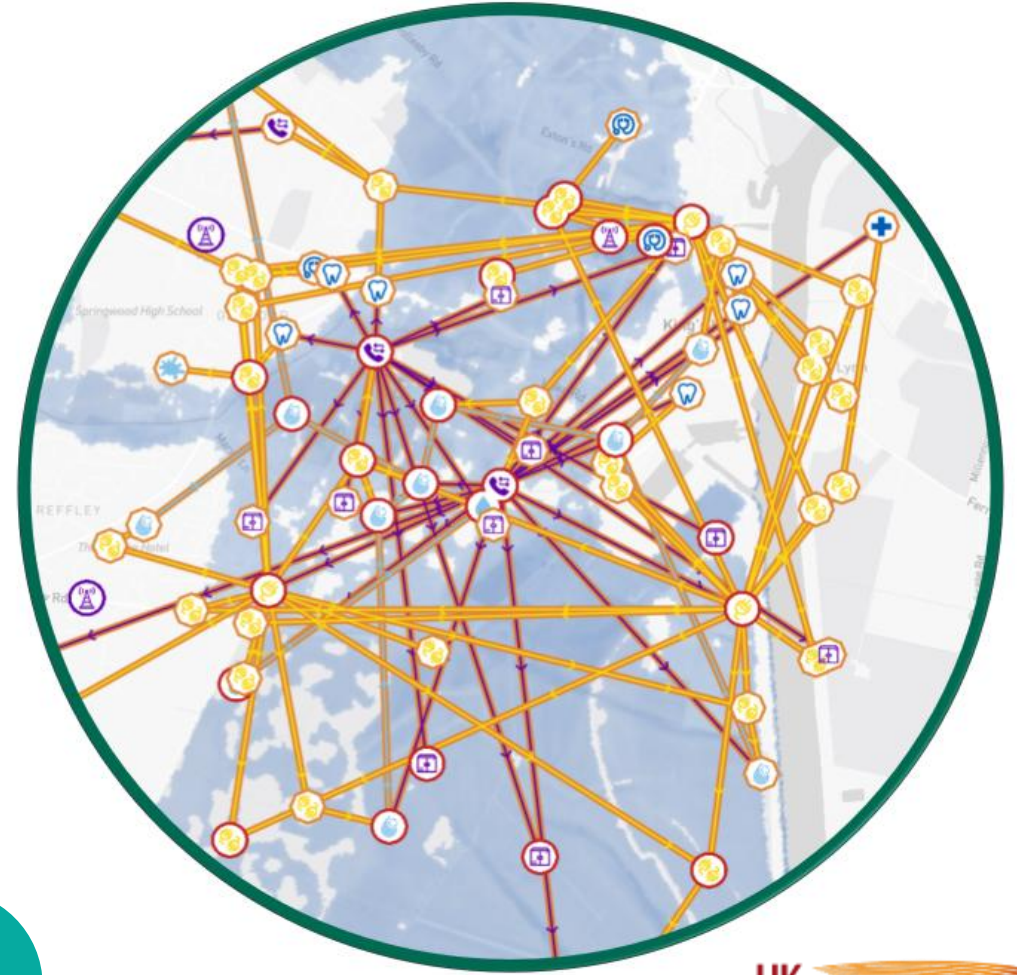
Data sharing bringing together data across energy, water, and telecoms networks

- Anglian Water's water and sewerage assets,
- BT and Openreach's communication assets and
- UK Power Networks' electricity distribution assets.

With weather data to understand

- Infrastructure interdependencies
- Asset failure, risk modelling, and system impact
- What can we do to prepare or respond?

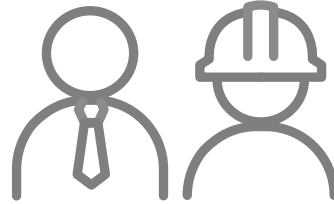
HOW DO WE INCREASE SYSTEM RESILIENCE AND ADAPT?



CReDO+: Climate Resilience Decision Optimiser

CReDO+ Mission

- Enable connected resilience decision making and efficient investment
- Understand infrastructure interdependencies and cascading risk
- So that together we can increase resilience to extreme weather and adapt to climate change
- Enable connected climate resilience investment planning and reporting
- Scale CReDO technology across energy sector
- Commercialise a sustainable digital platform that enables further use cases



Asset Operators,
Managers, and Planners



Regulators and
Government



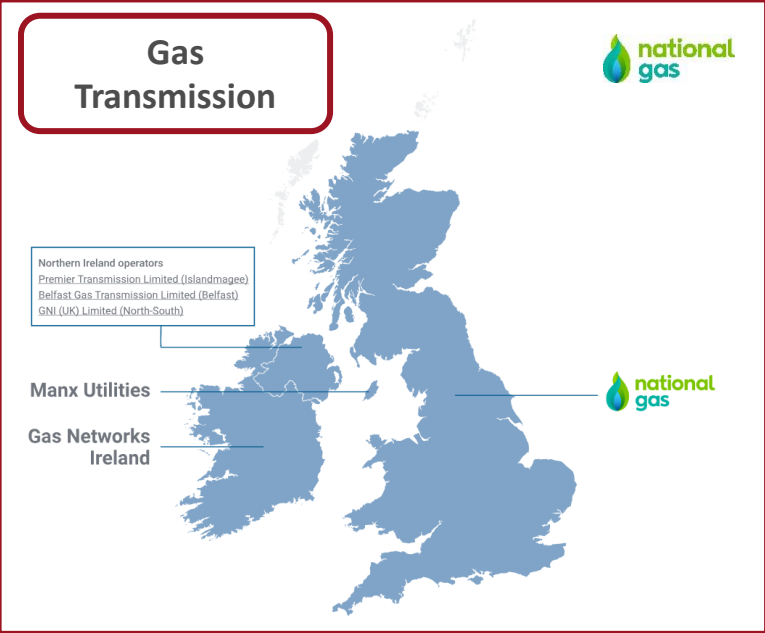
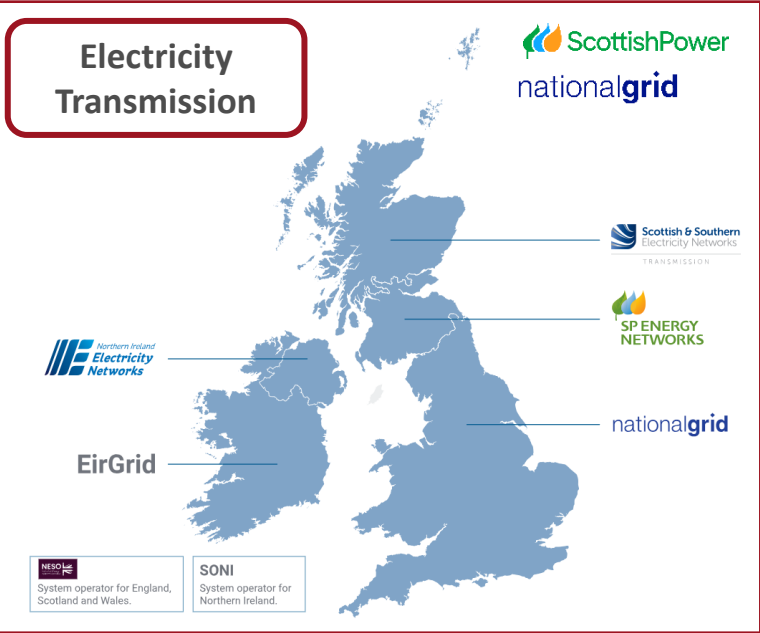
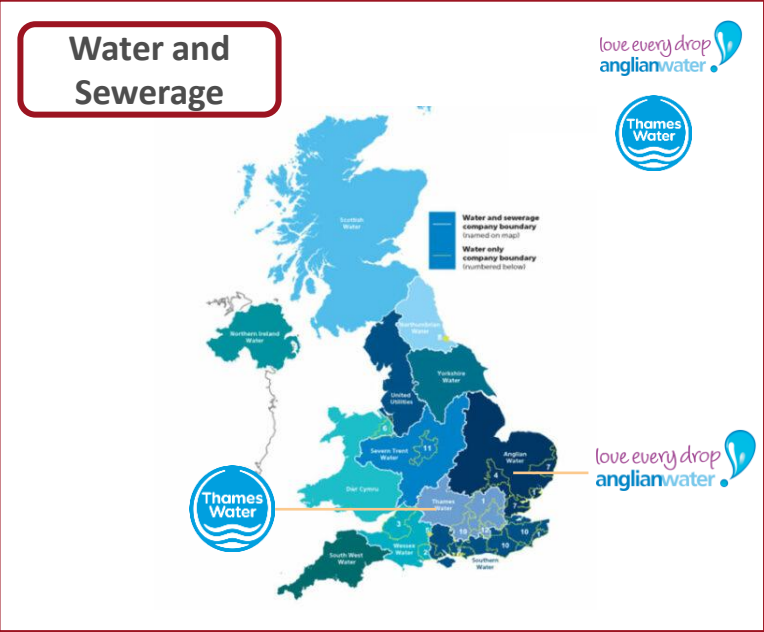
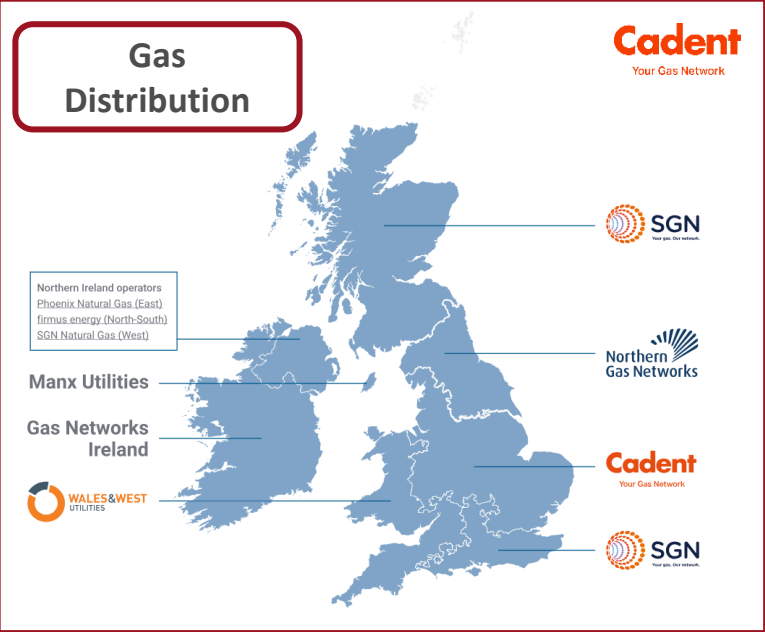
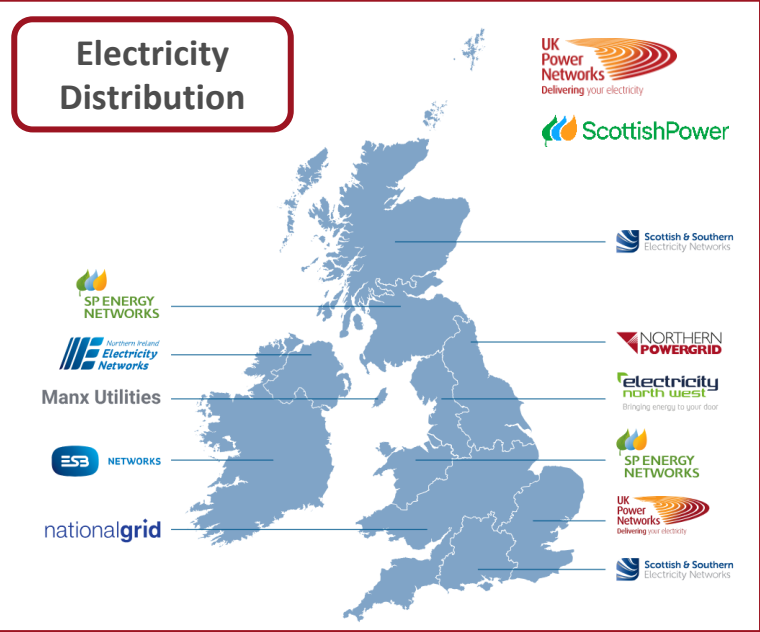
Cost Benefit Analysis and
Resilience Investment
Planning



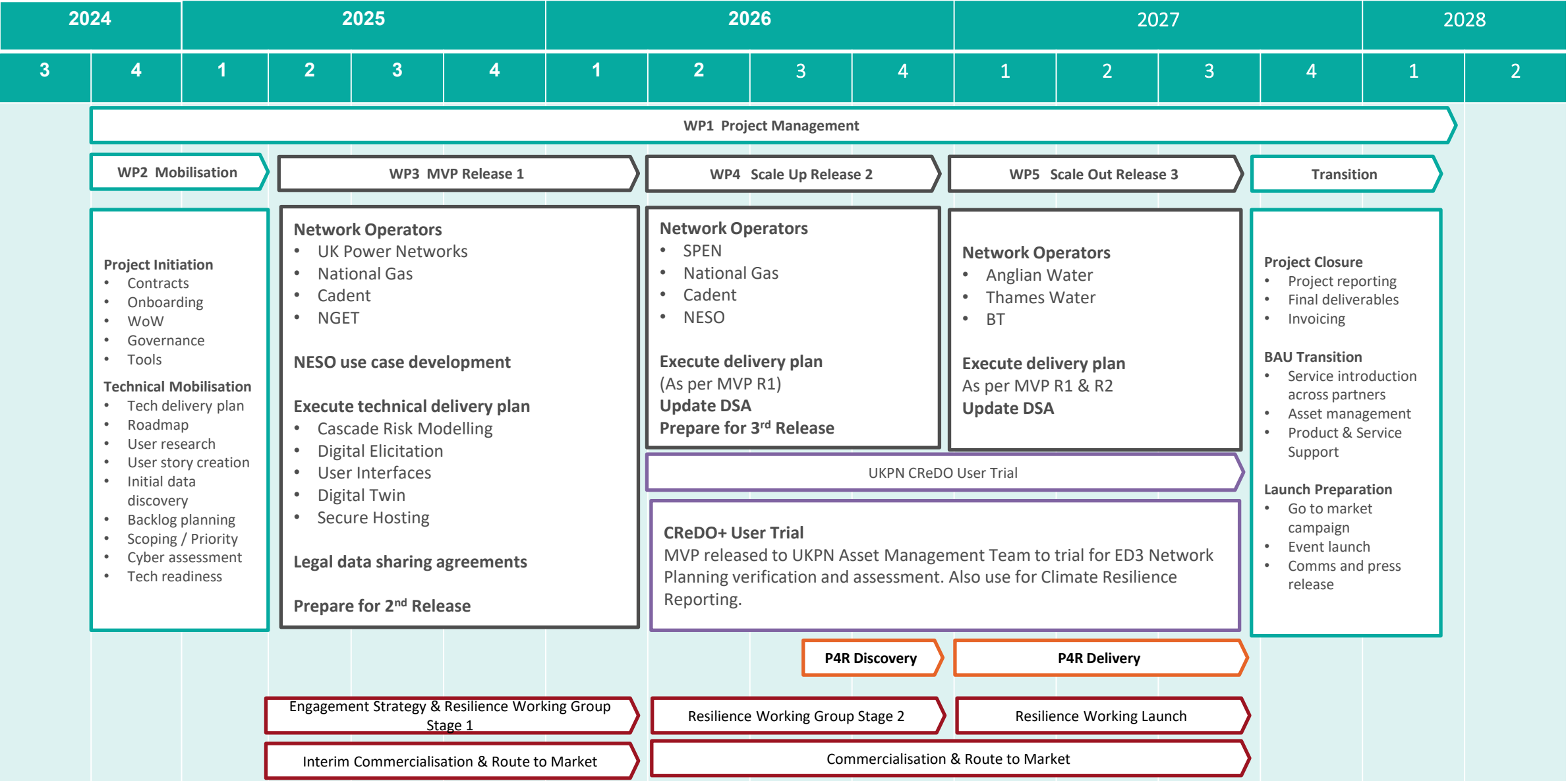
Resilience Metrics,
Regulatory and
Governmental Reporting

Participating Networks

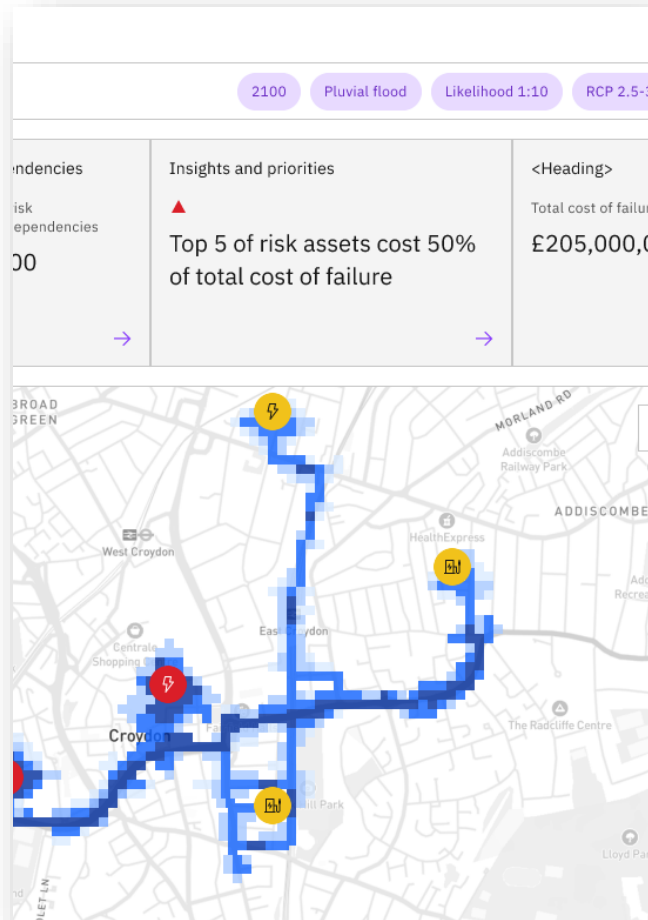
Sources
Who's my network operator? – Energy Networks Association (ENA)
Utilities - Tratos Group



High Level Plan on a Page



CReDO+ Journey to date



**For illustration purposes only*

MVP Development

Delivery is targeted for March 2026.

User Testing

Fortnightly sessions involving network operators to refine wireframes and validate use cases.

Long-term Sustainability

Research is underway to ensure a sustainable model for CReDO+ at full release.

CReDO & Business Planning

Living case study: CReDO insights leveraged in UK Power Network's business planning process.

Summary of User Research Insights



Make the **interdependencies between networks visible** and identify **critical cascading risks**



Climate risk data outputs should be **clear, relatable and transparent**



Users want to **prioritise critical assets** by likelihood of failure, consequences & impact on networks



MVP should bridge climate risk insights to **high-level planning decisions, not detailed solutions.**



CRDO insights must **align to regulatory standards**

Challenges and Opportunities

Data Availability

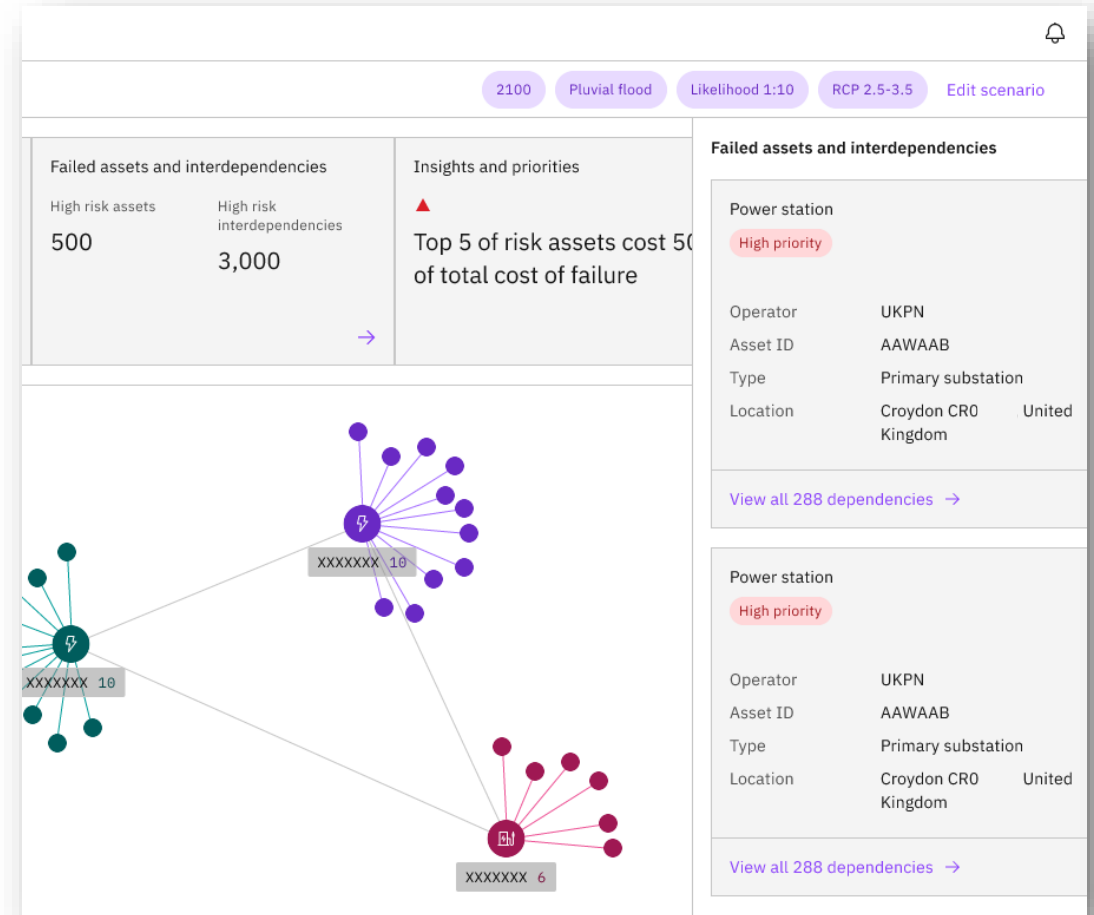
Organisations have different ways of collecting, managing and triaging their data.

Regulatory Barriers

Interdependencies across sectors is key source of value, yet difficult to align priorities.

Technical Complexity

Ambitious project with many technical components that need to fit together – agile approach is helping us to understand the complexity.



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Next Steps

MVP Release

MVP release in March 2026, with multiple releases planned to follow to scale the solution regionally and sector-wide.

User Trial and Feedback

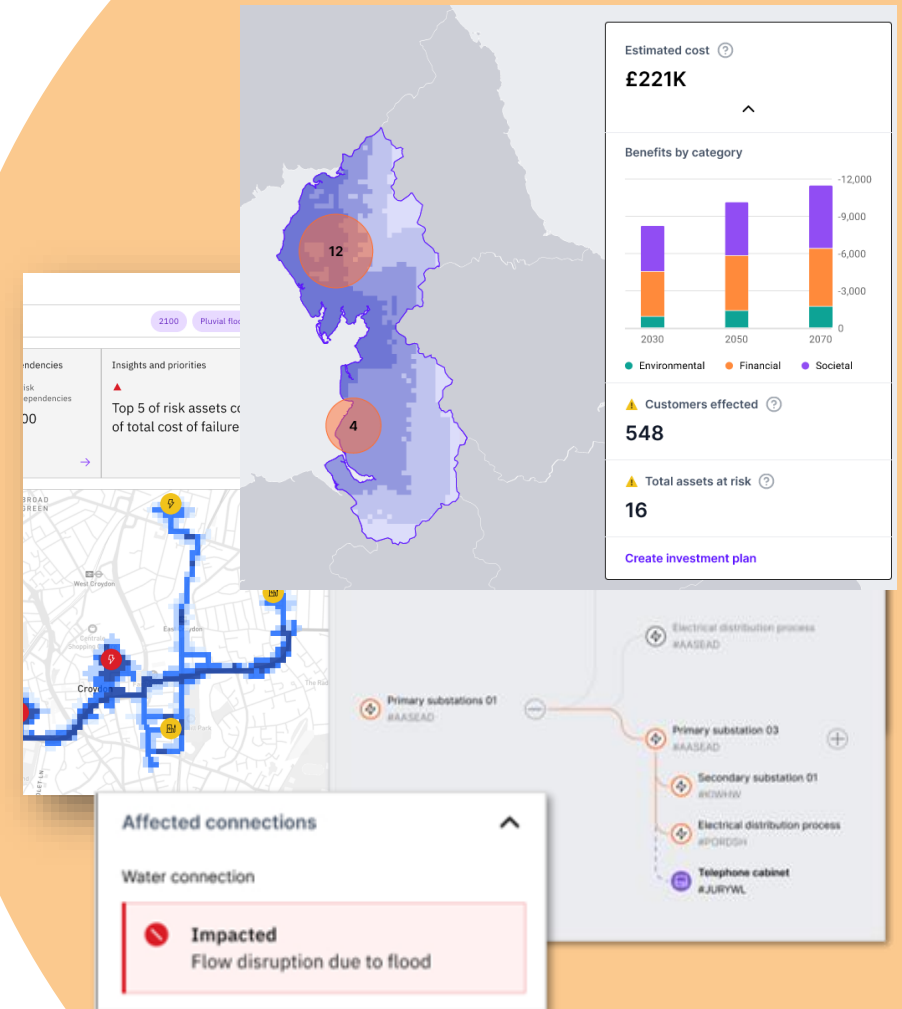
The user trial will evaluate platform capabilities and gather feedback to enhance functionality and user experience.

Cross-sector Integration

Involving users ensures the platform is practical, effective, and tailored to real-world resilience planning needs.

BAU-ready Climate Resilience Platform

CRDo+ will deliver an operational digital platform for resilience planning against extreme weather risks.



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Thank you

Follow up questions

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