ED3 INNOVATION STRATEGY

ED3-S09

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1. EXECUTIVE SUMMARY

Our ED3 ambition for Innovation is to deliver a return on investment from our existing innovation portfolio of 1:4 by the end of ED3, enabling c.£400m of customer value. Throughout ED3 we will build on this momentum and increase the return on investment from our future portfolio to 1:5, a 25% increase, enabling £750m by the end of ED4.

Our ED3 innovation strategy will turn ideas into everyday network improvements faster, cutting costs, strengthening resilience and delivering significant benefits for consumers. Innovation is embedded in our culture to support delivering a network that is electrified, resilient and affordable.

Our ED3 Ambition

Delivering this ambition requires a step change in the scale, pace and impact of innovation deployment across our network. Innovation is increasingly part of our business-as-usual (BAU) culture, already embedded within the business strategies for ED3, and a key contributor to the effective and efficient delivery of all aspects of our business plan. This culture of innovation accelerates deployment, with every project supported by a business sponsor and a confirmed route to implementation. Increasingly, digitalisation is a key component of innovation, so to drive this culture, we have updated our project initiation processes to cover BAU digital target architecture, fit and changes to the wider ecosystem and operating model at the outset, ensuring simpler innovation adoption to BAU. Deployment business cases are built into our BAU budgets for innovations identified to be deployed. We will build on our strong ED2 foundation, strengthen our innovation ecosystem and accelerate the deployment of solutions that deliver measurable customer and stakeholder benefits.

In ED3, we will strengthen delivery through clear governance, robust benefits management and a relentless focus on deployment. Every opportunity will follow a structured pathway that identifies the right partners, the right funding mechanism and the right route to implementation from the outset. Benefits realisation will be embedded throughout the project lifecycle, with progress measured against our four benefit outcomes of affordability, reliability, resilience, and environmental and societal value.

As our innovation culture continues to mature, innovation is becoming increasingly embedded within business planning, delivery strategies and investment decision-making, creating a seamless pathway from innovation to BAU. Innovation will not be treated as a separate activity or specialist function. Instead, it will be integrated into how we plan, build, operate and improve the network. Key business strategies and investment plans will be challenged to ensure innovative options have been fully considered, with appropriate senior level BAU sponsorship established from project inception to accelerate adoption and realise benefits sooner (see Appendix D: OUR ED3 INNOVATION DEPLOYMENTS).

Our proposed £37.5 million NIA is critical to delivering our ED3 innovation ambition, supporting an innovation portfolio worth £150 million across NIA, SIF and BAU investment. Following significant progress in ED2, including record levels of deployment and a growing pipeline of future projects, reducing NIA support to the baseline level indicated by Ofgem would risk slowing momentum and limiting the benefits delivered to customers. NIA provides the funding certainty needed to maintain a strong innovation portfolio, develop a diverse supply chain and scale solutions that deliver measurable value for customers.

Delivering value for customers

We measure success by the outcomes that innovation delivers for our customers by embedding them into BAU, not the number of projects we complete. Our ED3 Innovation Strategy focuses on delivering four outcomes:

- **A more affordable energy system** through lower network costs, improved efficiency and more effective use of network capacity.
- **Maintaining reliability in a changing world** through improved network performance, asset management, reduced interruptions and improved fault response.
- **Increasing resilience in an increasingly electrified society** through stronger climate adaptation, enhanced network resilience from growing outside threats and improved support for customers during interruptions.
- **Delivering environmental and societal value** through decarbonisation, reduced environmental impact and wider benefits for communities and vulnerable customers.

These outcomes provide the framework against which we will assess innovation investments, prioritise opportunities and measure success.

Building on our ED2 success

Throughout RIIO-ED2, we strengthened our ability to turn innovation into real-world outcomes, embedding successful solutions into BAU activities and enabling benefits at scale. Measured against our four outcomes, our ED2 innovation portfolio when fully deployed will enable c.£400m of benefits by the end of ED3. These achievements, summarised in Figure 1.1, provide a strong platform for increasing the value delivered through innovation during ED3.

Innovation activity has increased significantly during ED2. We developed a high-value NIA portfolio that made effective use of our innovation funding, alongside one of the largest SIF portfolios in the sector and a growing programme of BAU innovation and deployment activity. Together, these investments have created a balanced portfolio aligned to strategic priorities and customer needs (Figure 1.1).

ED2 has delivered more than individual projects. We have deployed around 30 innovations into BAU, collaborated with over 200 partners, and established the capabilities, evidence base, partnerships and deployment pathways needed to

accelerate innovation throughout ED3. While a small proportion of ED2 NIA funding remains available for allocation, we have already built a strong pipeline of opportunities progressing from exploration through development, demonstration and deployment.

As a result, ED3 starts from a position of proven delivery, established capability and a mature portfolio of projects and a pipeline of opportunities ready to generate further customer, network and societal value.

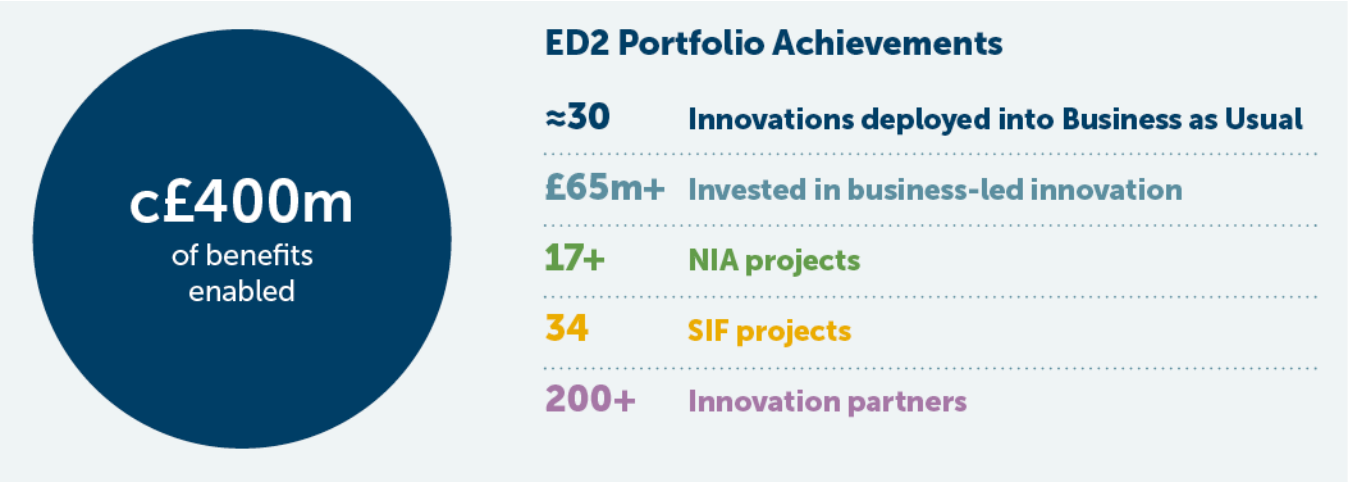


Figure 1.1. Our Innovation achievements in ED2.

How we will deliver more value in ED3

We are requesting £37.5 million of Network Innovation Allowance (NIA) for ED3—£7.5 million annually from 2028/29 to 2032/33. We will use this funding to develop and test solutions that are not yet ready for routine deployment, alongside Strategic Innovation Fund (SIF) demonstrations and business-as-usual (BAU) investment in proven innovative solutions.

This investment will support an innovation portfolio worth £150 million across NIA, SIF and BAU investment.

Our engagements with stakeholders, customers, local authorities, charities and innovators have prioritised lower costs, stronger resilience, clearer network information and faster adoption of successful trials.

Our six investment themes translate these needs into a portfolio spanning automation, digital visibility, network optimisation, community resilience, climate adaptation and construction.

Table 1.1. Summary of innovation initiatives in ED3

		(£m)			
Strategic Innovation Theme	**Examples of anticipated activity**	**NIA**	**SIF**	**BAU**	**TOTAL**
Smart machines & automated systems	Robotics, drones, LiDAR, remote sensing, automated inspection and potentially automated cable jointing and machine-assisted construction.	[redacted]	[redacted]	[redacted]	[redacted]
Digital backbone & system visibility	Integrated planning tools, open-data platforms, interoperable datasets, digital representations of network assets and network models.	[redacted]	[redacted]	[redacted]	[redacted]
Network intelligence & optimisation	AI, predictive modelling, forecasting, automated optioneering and proactive asset intervention.	[redacted]	[redacted]	[redacted]	[redacted]
Resilient communities and energy security	Islanding, vulnerability forecasting, vehicle-to-grid, community batteries, community energy hubs and local balancing.	[redacted]	[redacted]	[redacted]	[redacted]
Adaptive networks &climate intelligence	Climate-informed asset models, adaptation strategies, advanced warning systems and nature-based solutions.	[redacted]	[redacted]	[redacted]	[redacted]
Advanced construction and infrastructure delivery	Low/no-dig techniques, modular assets, off-site construction, automated jointing, advanced drilling and digital substations.	[redacted]	[redacted]	[redacted]	[redacted]
	TOTAL	[redacted]	[redacted]	[redacted]	[redacted]

Our project pipeline and deployment pathway ensures the correct funding route is identified for each opportunity. Proven solutions will move directly into BAU delivery. NIA will develop, test and demonstrate targeted solutions. SIF will address transformational challenges that require collaboration and offer significant whole-system value.

Together, our six innovation themes create a balanced and proportionate framework for directing investment towards the challenges and opportunities that matter most to customers, communities and the wider energy system. This enables us to maintain a diverse portfolio, from improving safety, productivity and operational performance, to accelerating decarbonisation, strengthening resilience, supporting economic growth and delivering an affordable and inclusive energy transition

Our ED3 outputs

Our outputs (Table 1.2) will strengthen our innovation pipeline, attract the right partners, accelerate deployment and maximise value for customers.

Table 1.2. Our ED3 outputs and metrics

Our ED3 Outputs and Metrics
Output 1: Host at least one open Network Appreciation Day each year during the ED3 period and publish report within 30 working days.
Output 2: We will provide initial feedback on all innovation funding proposals within 10 working days and include in our Annual Focus Report a summary of proposal volumes, outcomes and emerging themes.
Output 3: We will publish a Deployment and Implementation Pathway for all relevant ED3 innovation projects, at least 12 months before project completion.
Output 4: We will target a spend-to-benefit ratio of approximately 1:4 by the end of ED3 from **our** existing innovation portfolio. During ED3 we will lay the foundations to **increase** the return of our **future innovation portfolio** to1:5, a 25% increase.
Output 5: We will publish an annual update on the deployment of innovation projects developed before and during ED3, including the benefits realised.

How we will deliver and deploy more efficiently

Delivering value from innovation requires more than funding projects. In ED3, we will strengthen delivery through clear governance, robust benefits management and a relentless focus on deployment. The Innovation Steering Group, led by a member of our Distribution Executive Committee, will provide strategic leadership and portfolio oversight, while the Innovation Governance Board will evaluate and prioritise opportunities and projects. Together, these forums will ensure investment remains aligned with stakeholder priorities, supports our wider ED3 strategy and addresses relevant industry challenges. Every opportunity will follow a structured pathway that identifies the right partners, the right funding mechanism and the right route to implementation from the outset. Benefits realisation will be embedded throughout the project lifecycle, with progress measured against our four benefit outcomes: affordability, reliability, resilience, and environmental and societal value. To support the delivery of this strategy, we will focus on ensuring we have:

- **The Right Partners** We will expand and diversify our innovation ecosystem, making it easier for organisations of all sizes to work with us. Through a clear pipeline of challenges, accessible funding and targeted engagement, we will build the innovation supply chain needed to solve future network challenges and accelerate the development of high-value solutions.
- **The Right Projects** We will focus investment on the opportunities that deliver the greatest customer and stakeholder value. Guided by the Energy Network Innovation Taskforce Missions and informed by extensive stakeholder engagement, our six ED3 Innovation Themes provide a clear framework for targeting innovation towards the outcomes that matter most.
- **The Right Outcomes** We will shorten the path from innovation to deployment. Every project will start with a defined route to implementation, strong business sponsorship and clear success measures. By embedding deployment planning from the outset, we will accelerate adoption, scale successful solutions faster and realise benefits sooner.

We will continue to strengthen our innovation culture by embedding innovative thinking into business planning, investment decisions and delivery strategies. Business strategies and investment plans will be challenged to ensure innovative options are fully considered alongside traditional approaches, with senior BAU sponsorship established from project inception to accelerate adoption and realise benefits sooner.

Through stronger deployment planning, independent challenge and continuous stakeholder engagement, we will shorten the path from idea to implementation.

Our ED3 commitments supported by this strategy

Table 1.3. ED3 commitments and metrics

	ED3 Commitment	Metric
Creating a smarter network		
We will maximise the customer value from innovation	**We will deliver £4 of customer value for every £1 invested through our innovation portfolio by the end of ED3**	Deliver £4 of customer value for every £1 invested through our innovation portfolio by the end of ED3. From 2028, we will publish an annual update on the deployment of innovation projects developed before and during ED3, including the benefits realised.

NOTE: Unless otherwise specified NIA project values are listed throughout this document in 2025/26 price base. All other funding (SIF and BAU) is nominal depending on the timing of the project initiation. All benefits are in nominal terms.

Purpose of this Strategy

This document sets out our ED3 Innovation Strategy, how we will translate innovation investment into measurable customer and stakeholder benefits throughout ED3 and beyond. It explains how we will build on our ED2 successes, strengthen our approach to innovation delivery and deployment, and focus investment on the opportunities that matter most to customers, communities and the wider energy system. Stakeholder insight has shaped every aspect of this strategy, ensuring our portfolio reflects future needs and delivers meaningful outcomes at scale.

2. STAKEHOLDER ENGAGEMENTS AND DRIVERS FOR CHANGE

Shaped by stakeholder feedback, our ED3 Innovation Strategy focuses innovation on priority challenges and makes it easier to participate, collaborate and deliver measurable benefits.

2.1. STAKEHOLDERS HAVE SHAPED OUR PLANS

Throughout ED2 we have engaged extensively with stakeholders and more than 200 individual partner organisations, to develop ideas, shape projects and share learnings from our projects. This is an essential element of delivering a successful innovation portfolio.

Alongside this, we undertook targeted engagement with the innovation community to gain further insights into how innovation in ED3 can help us deliver our four strategic outcomes and how we can improve the overall delivery of our innovation portfolio. Stakeholder engagement strongly validated our strategic direction and helped identify where innovation can deliver the greatest value for customers, communities and the wider energy system.

We have engaged diverse stakeholder groups with varying interests and priorities:

- **Customers and communities**: Customers, consumer representatives, community groups and charities
- **Public and regulatory bodies:** Regulators, policy makers, local authorities and the Independent Stakeholder Group
- **Innovation ecosystem:** Innovators and small and medium sized enterprises, technology providers, academics, OEMs and delivery partners
- **Energy system and industry:** Network operators, utilities, infrastructure organisations and market participants
- **Our business:** Operational teams, subject matter experts, change programmes and senior business sponsors

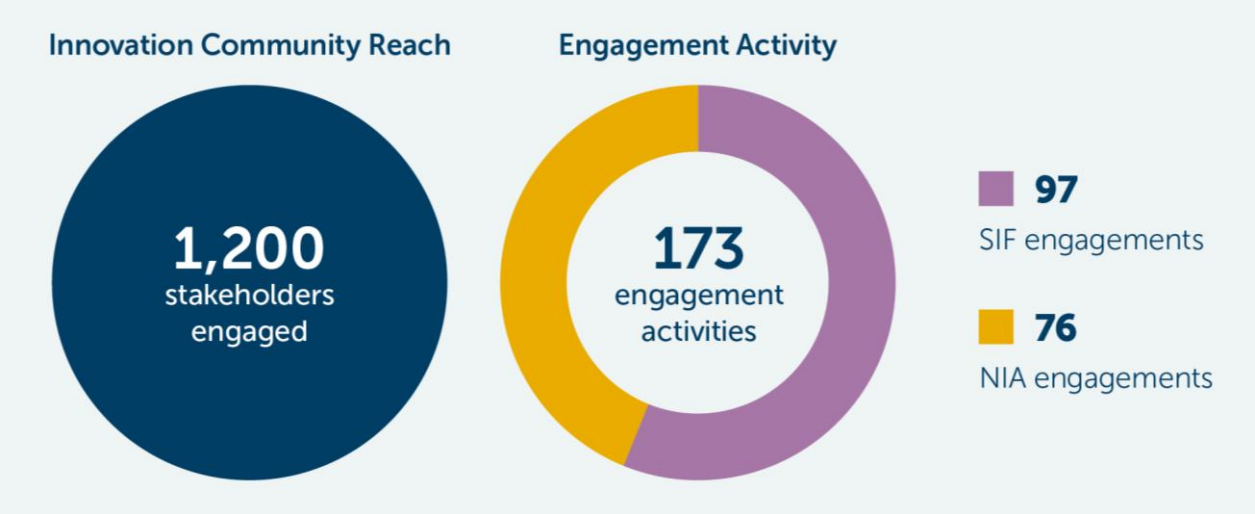


Figure 2.1. Innovation engagement at a glance

2.2. A structured, forward-looking process

We used a four-stage process, outlined in Figure 2.1, to move from evidence and insight to confirmed priorities and delivery plans. The Now, Near and Next framework ensured that we considered immediate needs, changes expected within three to five years and longer-term trends over five to ten years.



Figure 2.2. Four stages of our stakeholder engagement programme

2.3. What stakeholders prioritised

The voices of our stakeholders were clear. Stakeholders prioritised outcomes that reduce costs, improve resilience, accelerate connections and widen access to benefits. They also emphasised the importance of deploying proven innovations more quickly, improving customer and community outcomes, and ensuring the benefits of innovation are delivered. See Appendix A: STAKEHOLDER FEEDBACK for more detailed information on stakeholder feedback.

Three consistent messages cut across every theme:

- **Plan ahead**: Anticipate changing customer and system needs across the Now, Near and Next horizons.
- **Deliver measurable outcomes**: Focus investment on opportunities with clear benefits.
- **Deploy at scale:** Design routes to BAU adoption from the outset and accelerate proven solutions.

Table 2.1. Summary of stakeholder feedback used to develop the six strategic innovation themes.

What stakeholders prioritised	Who shared this feedback	What we heard	Innovation Theme for ED3
More efficient network operation	Industry, technology and supply-chain partners, connection providers and regulators	Improve safety, productivity and the efficiency of network operations.	Smart machines and automated systems
Better access to data to reduce costs and improve resilience	Customers, industry, local authorities, community groups and regulators	Provide clearer capacity information, stronger forecasting and better access to network data	Digital backbone and system visibility
Easier access to network data with more insights	Customers, industry, connection providers, data specialists and regulators	Use AI responsibly to improve forecasting, planning, decision-making and network performance.	Network intelligence and optimisation
Improved resilience, especially for the vulnerable within a just transition	Customers, charities, consumer groups, communities and local authorities	Strengthen resilience, accessibility and inclusion so all customers can benefit from the energy transition.	Resilient communities and energy security
Improved resilience in face of climate change	Customers, communities, industry, local authorities and public bodies.	Improve reliability, reduce weather-related disruption and use nature-based solutions where they deliver value.	Adaptive networks and climate intelligence
Faster and lower cost network build	Industry, developers, the supply chain, local authorities and public services as well as within our business	Deliver reinforcement and connections faster, at lower cost and with less disruption.	Advanced construction and infrastructure delivery

In response, we developed six ED3 strategic innovation themes that directly reflect these needs (Table 2.1).

2.4. What stakeholders told us about innovation delivery

Stakeholders challenged us to strengthen not only what we innovate, but how we deliver innovation. They consistently called for innovation to be easier to access, faster to deploy and clearer about the benefits it creates for customers and stakeholders (Table 2.2). Stakeholders also emphasised the importance of translating successful projects into BAU activities more quickly and providing clearer evidence of the value delivered. We have embedded these insights within our ED3 delivery approach (see Section 6 for more details), which will help us increase the pace, scale and impact of innovation, ensuring successful solutions deliver measurable benefits more quickly and more widely across our network.

Table 2.2. Stakeholder feedback on innovation delivery

Stakeholder message	Our ED3 response	Outcomes
Accelerate deployment	Plan BAU adoption and funding earlier; strengthen business sponsorship; define deployment pathways from project inception; and track benefits consistently. Increase adoption of Innovation culture across our business.	Faster transfer of proven innovation into operations and earlier realisation of benefits.
Simplify participation	Streamline governance, procurement and commercial arrangements; clarify NIA and SIF participation routes; and publish accessible guidance for small and medium-size enterprises (SME) and new entrants.	Lower barriers to collaboration and a broader, more diverse innovation supply chain.
Strengthen engagement and transparency	Provide regular portfolio updates; expand workshops, webinars and working groups; communicate capability needs; and offer targeted support to innovators and small medium-size enterprises.	Stronger partnerships, clearer opportunities and continuous stakeholder influence throughout ED3.

2.5. Testing confirmed strong support and improved understanding.

Stakeholders strongly supported both our engagement approach and the direction of our ED3 Innovation Strategy. Feedback confirmed that participants valued the opportunity to shape our plans and recognised the focus on delivering greater benefits for customers, communities and the wider energy system. Importantly, engagement increased understanding of our innovation approach and reinforced confidence in our proposed priorities and delivery model.

Our testing demonstrated strong levels of support and engagement:

- 94% of participants agreed the innovation engagement session was a good use of their time.
- 94% felt they had sufficient opportunity to contribute and that their views had been heard.
- Understanding of our innovation approach increased significantly, rising from 3.2/5 before the session to 4.0/5 afterwards.

This feedback validated our strategic direction and reinforced stakeholder priorities for faster deployment, simpler participation and stronger collaboration. As a result, stakeholder insight is embedded throughout our ED3 Innovation Strategy, shaping the opportunities we pursue, the partnerships we develop and the way we govern, deliver and scale innovation. This creates a clear line of sight between stakeholder priorities, innovation investment and the measurable benefits we will deliver for customers and stakeholders throughout ED3 and beyond.

3. OUR ED2 TRACK RECORD AND LESSONS LEARNED

The foundations are in place to increase the value delivered through innovation. By the end of ED3, our portfolio will enable c.£400 million of customer benefits, reducing costs, improving reliability, and enhancing customer service.

3.1. Our ED2 Track Record – Impact Delivered

Innovation delivers value when ideas become operational improvements, customer benefits and long-term business transformation. Throughout RIIO-ED2, we strengthened our ability to turn innovation into real-world outcomes, embedding successful solutions into BAU activities and enabling benefits at scale.

Collectively, our ED1 and ED2 innovation portfolio is expected to enable **c.£400 million of benefits by the end of ED3**, improving affordability, reliability, resilience, and environmental and societal value for customers. These benefits extend beyond individual projects, shaping how we plan, build and operate the network while supporting wider industry change and collaboration.

Innovation has improved customer outcomes across every aspect of our business:

- **BETTER SERVED** - Innovation is improving network reliability and reducing disruption for customers. Advanced fault location technologies are enabling faster fault identification and restoration, while Smart Estimated Time of Restoration (Smart ETR) now provides more accurate outage information and has been used more than 17,000 times annually.
- **BETTER INFORMED** - We have increased transparency and visibility across our networks through the Near Real-Time Data Access (NeRDA) platform. With more than 800 registered users, NeRDA provides near real-time network and asset information, helping customers, flexibility providers and market participants make better-informed decisions and develop new services.
- **BETTER CONNECTED** - Innovation is improving how future network needs are identified and planned. LENZA and LEAP+ are supporting over sixty local authorities in developing Local Area Energy Plans and climate action strategies, helping coordinate network investment, support decarbonisation and reduce long-term costs for customers. Learning from these projects now informs both our network planning processes and wider ED3 strategy.
- **BETTER PROTECTED** - The HOMEflex project established the Domestic and Microbusiness Flexibility Code of Conduct, creating greater transparency, fairness and consumer protection within flexibility markets. The scheme is now supported by all GB DNOs, DSOs and NESO and continues to influence wider industry and government policy development.
- **BETTER SUPPORTED** - Innovation has strengthened support for vulnerable customers and embedded vulnerability within future network planning. Through initiatives including Vulnerability Future Energy Scenarios, VIVID and VERIFY, we have developed new approaches to identifying and supporting vulnerability, while providing more than 20,000 battery units to Priority Services Register customers during ED2.
- **BETTER INFORMED** - Digital innovation has transformed customer communications during outages. PowerTrack has become our primary customer communication platform, providing real-time outage information and self-service capabilities to more than 1.2 million customers each year.

These examples demonstrate how innovation is increasingly delivering value at scale across SSEN Distribution and we continue to work across the organisation, to embed innovative thinking and culture to maximise the impact of trialling a new approach. However, the greatest impact often comes not from individual projects, but from the cumulative learning, evidence and capabilities created across the portfolio. Innovations such as flexibility services, access products, vulnerability planning and digital customer services have all been enabled, de-risked and accelerated through sustained innovation investment and collaboration across the sector.

This focus on deployment has been critical to our success. Every project is supported by senior business sponsorship and a clear route to implementation, helping ensure successful innovations move into operational delivery and realise

measurable benefits. As a result, we have deployed more innovation into BAU activities during ED2 than ever before, creating a strong foundation for our ambition to increase innovation value by 25% during ED3.

3.2. ED2 Innovation Overview

Innovation has been a key enabler of our ED2 Business Plan, helping us respond to growing demand, accelerate decarbonisation, improve customer outcomes and build the capabilities required for the future energy system. Building

on our ED1 foundation, we significantly increased both the scale and maturity of our innovation portfolio, strengthening our ability to convert innovation investment into measurable benefits and operational change.

Throughout ED2, we moved beyond delivering innovation projects and increasingly focused on deploying innovation at scale. We:

- Deployed more innovation into BAU operations than in any previous price control period.
- Secured one of the largest SIF portfolios in the GB electricity distribution sector.
- Fully utilised the opportunities provided through the NIA, including securing the highest level of additional NIA funding in Years 4 and 5 of ED2. We are on course to fully utilise the allowance by the end of ED2.
- Increased BAU focus and investment in innovation, accelerating deployment and adoption across the organisation.
- Engaged widely with over 200 partner organisations
- Over half of our existing portfolio includes other network licensees as partners, helping to spread learning
- Took a leading role in delivering the Energy Networks Innovation Taskforce vision, including chairing the Innovation Delivery Group for Challenge 1: Accelerating Industrial and Commercial Connections.

We have also successfully deployed innovation learnings with the support of Reopener funding, with the Storm Arwen and the Digital Reopener submission directly coming from the funded innovation portfolio. The recent Load Related Expenditure (LRE), Digital and Environmental Reopener submissions have been informed by funded innovation. Aligning innovation projects to these deployment opportunities gives a firm focus and has accelerated innovation deployment.

Innovation is also increasingly shaping wider business investment decisions. Learning from ED2 projects has informed major deployment and investment programmes, including resilience, digitalisation, environmental improvements, flexibility services, future network planning and customer vulnerability initiatives. This alignment between innovation and deployment has strengthened business ownership, accelerated implementation and increased the value realised from innovation activities.

A growing number of business areas now directly sponsor and lead innovation projects, reflecting how innovation has become embedded across SSEN Distribution. The impact extends beyond individual technologies or projects. Innovation has strengthened organisational capability, built long-term strategic partnerships, improved access to data and insight, and created new tools, processes and services that will continue to deliver value throughout ED3 and beyond.

Our ED2 portfolio balanced immediate customer and operational needs with longer-term opportunities associated with electrification, climate resilience and the evolving energy system. Through a common innovation process, we developed a complementary portfolio across three funding pathways:

- **Network Innovation Allowance (NIA)** projects focused on targeted challenges, operational improvements and deployment opportunities.
- **Strategic Innovation Fund (SIF)** projects addressed larger, transformational challenges requiring industry-wide collaboration and whole-system solutions.
- **Business-as-Usual (BAU)** innovation accelerated the adoption and scaling of proven technologies, tools and processes.

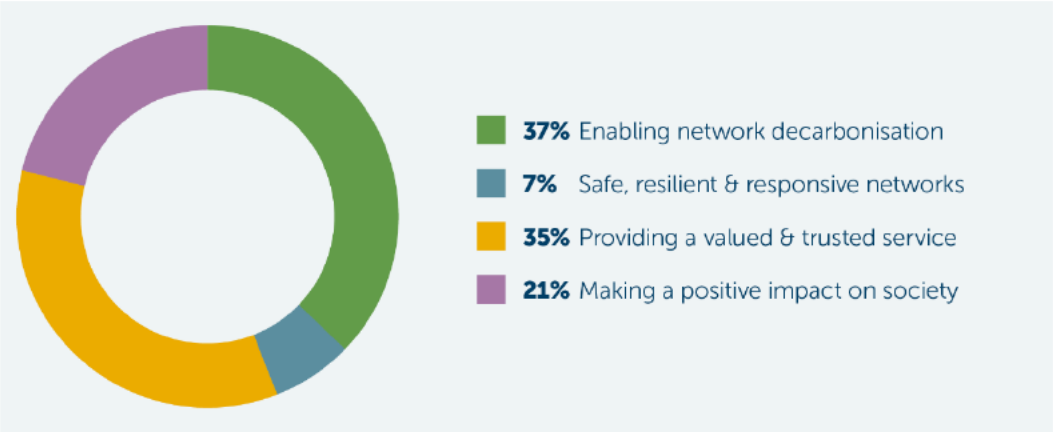


Figure 3.1. Innovation projects undertaken in ED2 by strategic area to April 2026.

As of 1 April 2026, our ED2 portfolio comprised more than 80 innovation activities representing c.£108 million of investment across NIA, SIF and BAU delivery (Table 3.1). This growth reflects more than an increase in innovation, these activities created a balanced portfolio spanning customer vulnerability, flexibility services, network resilience, digitalisation, asset management, climate adaptation, environmental sustainability and decarbonisation activity (Figure 3.1). It demonstrates a more mature organisation with stronger governance, greater deployment capability and an increased ability to convert innovation into measurable customer and stakeholder outcomes.

Table 3.1. Innovation overview to 1 April 2026. Price base is 2025/26.

Funding Source	No. of projects			Investment to date (£m)
	Complete	In Delivery	In Preparation	
NIA	8	6	6	13.1
SIF	19	9	6	31.3
BAU	17	14	6	63.2

*Numbers include projects in which we are a Partner.

The following sections provide an overview of our ED2 NIA, SIF and BAU portfolios, highlighting the scale of investment, progress achieved, deployment activity and the benefits being delivered for customers, communities and the wider energy system.

3.3. ED2 Network Innovation Allowance (NIA) Portfolio

During ED2, our NIA portfolio targeted priority customer and network challenges, including vulnerability, local energy planning, open data, network resilience, flexibility and fault management. We used NIA to develop and test solutions where further evidence was required before wider adoption, maintaining a clear focus on deployment and measurable customer value.

The portfolio includes projects such as LENZA, Vulnerability Future Energy Scenarios, NeRDA, and HOMEflex. These projects have strengthened network planning, improved access to data, increased consumer protection and developed new approaches to managing the changing demands placed on the low-voltage network. Several projects are already informing business decisions, ED3 strategies and subsequent deployment activity. Full portfolio details are provided in Table B. 1.

As of 1 April 2026, we had invested £13.1 million through NIA, with further investment committed across the remainder of ED2 (Table 3.2). The portfolio balanced completed projects with active delivery and a developing pipeline, allowing us to realise benefits from proven work while responding to emerging customer and network challenges.

Table 3.2. NIA portfolio at a glance. Price base is 2025/26.

Measure	Value
Total NIA projects	14
Completed	8
In Delivery	6
Total NIA Funding used up to 31.03.26	£13.1m
Total Investment Committed	£19.9m
NIA Funding available to end of ED2	£3.9m
Total NIA spend (anticipated)	£23.8m
Strategic Themes	4
Projects progressing to deployment	6+

Our NIA portfolio addressed all four ED2 strategic areas, with the greatest concentration of activity focused on societal impact and safe, resilient and responsive networks. This balance reflects the breadth of challenges facing our customers and operations, while demonstrating how NIA supported both immediate improvements and longer-term capability development.

From NIA projects to operational impact

NIA has strengthened our ability to develop targeted solutions, generate robust evidence and build credible routes to deployment. Projects have progressed beyond technical learning to influence strategies, improve operational processes and inform wider investment decisions. Examples include:

- Demand Diversification Service informs our Radio Tele switching Service and Smart Signal product
- LCT Connections Readiness Indicator will be ready to go live before the end of 2026
- HOMEflex, which established a consumer protection framework now supported across the GB flexibility market.
- Lancet, which is approaching deployment and will enable in-service sampling of pole-mounted transformers.
- New Approach to Losses, which has completed development and moved into deployment.
- Low Voltage Power Quality, which is testing new approaches to maintaining power quality as low-carbon technology uptake increases.

These projects demonstrate how focused NIA investment can address defined network challenges, build confidence in new solutions and create a clear route into BAU delivery.

ED2 NIA spend

Our ED2 NIA programme remains on track to fully utilise the available allowance by the end of the price control. NIA continues to be a key foundation of our innovation strategy throughout ED2 and will be an important element of our strategy in ED3 (Table 3.3).

Table 3.3. Breakdown of NIA usage in ED2, showing how much NIA funding goes to each direction. Price base is 2025/26.

Funding direction	£m
[redacted]	[redacted]
[redacted]	
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Strong portfolio governance and financial oversight have maintained alignment between expenditure, strategic priorities and expected benefits. This disciplined approach has enabled us to focus investment where innovation can create the greatest value, while retaining the flexibility to respond to emerging challenges and opportunities.

Collaboration is fundamental to this model. Most NIA expenditure supports third-party delivery, specialist project management and innovators, giving us access to the capabilities and expertise required to develop and demonstrate new technologies, processes and commercial approaches. This investment also strengthens the innovation supply chain that will support delivery during ED3.

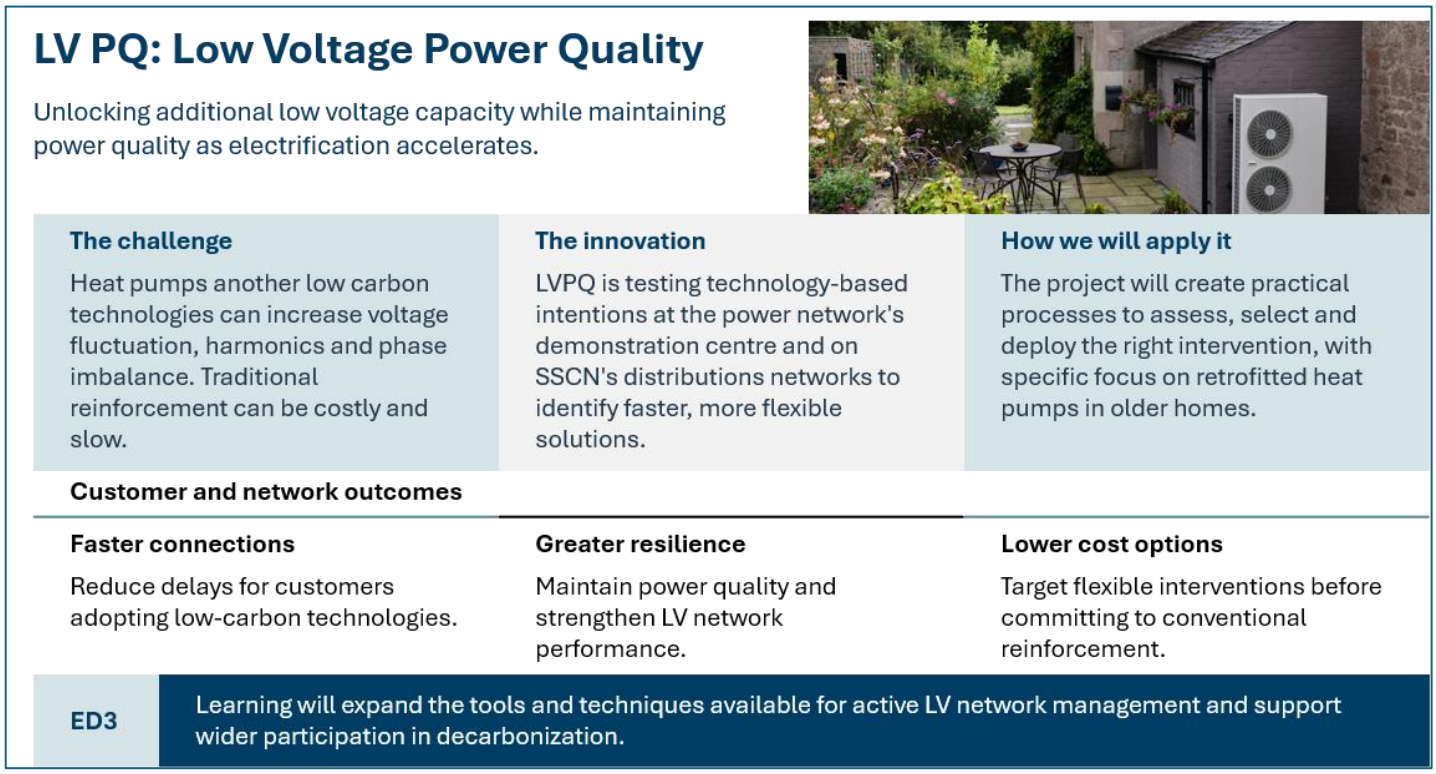


Figure 3.2. Case study of LV PQ initiative

Working with third parties is still the largest proportion of expenditure, reflecting the collaborative nature of our innovation portfolio and the specialist expertise required to successfully develop and deliver projects. Investment in innovators continues to support the development, testing and demonstration of new technologies, processes and business models that can provide long-term benefits for consumers and the wider energy system.

ED2 NIA Pipeline

We have maintained an active pipeline of opportunities for the remainder of ED2, ensuring available NIA funding remains focused on relevant and deliverable customer and network challenges. The pipeline includes opportunities across artificial intelligence, digital asset information, low-voltage visibility, workforce capability, climate resilience, network safety and lower-cost network capacity.

Examples include:

- **AI-ID and DigiLoop**, which will improve visibility of service cable arrangements and reduce delays to low-carbon technology connections.
- **IntelliVolt LV**, which will explore targeted voltage optimisation as an alternative to conventional low-voltage reinforcement.
- **TEMPER**, which will combine asset, fault and climate data to improve understanding of future asset risk.
- **IMPACT**, which will explore immersive training to increase operational training capacity and support workforce development.
- **Alternative conductor materials**, which will assess opportunities to increase network capacity using existing infrastructure.

Each opportunity will progress through our established assessment process. We will define the customer or network need, review existing industry learning, assess expected benefits and confirm the technical, commercial and operational requirements. We will then select the most appropriate funding route based on solution maturity, risk, evidence requirements and the pathway to deployment.

This approach will maintain delivery momentum through the remainder of ED2, prevent duplication and create a strong pipeline of well-developed opportunities for ED3. Table B. 2 provides a more detailed overview of our current pipeline.

3.4. ED2 SIF Portfolio

The Strategic Innovation Fund (SIF) has enabled us to address some of the most significant challenges facing electricity networks through larger-scale, collaborative and transformational innovation. Table B. 3 lists all SIF projects completed and planned for the remainder of ED2 including their cost. Since the launch of SIF, we have established one of the largest and most ambitious portfolios in the GB electricity distribution sector, securing funding across Discovery, Alpha and Beta phases and creating a strong pipeline of future deployment opportunities.

Our SIF portfolio has focused on the challenges that matter most to customers, communities and the wider energy system, including future network planning, flexibility, vulnerability, resilience, decarbonisation and environmental sustainability. Importantly, SIF has allowed us to move beyond individual innovations and explore solutions capable of delivering transformational value at network and whole-system scale.

Three flagship live Beta projects illustrate this ambition:

- **Pathways to 2050** is transforming how low-voltage networks are planned and delivered.
- **Nature4Networks** is developing nature-based alternatives to traditional engineering solutions.
- **VERIFY** is creating new approaches to identifying vulnerability and supporting a fair energy transition.

Together, these projects represent more than £31.3 million of active innovation investment and involve extensive collaboration across industry, academia, technology providers and stakeholder organisations.

Alongside these flagship programmes, projects such as FORTRESS, Grounds for Change, Fast Track AI for Connections, 3D Asset Rating and I-LAD continue to develop solutions that improve resilience, accelerate connections, strengthen planning capability and enable smarter network operation.

Importantly, value is not realised only through live projects. Learning from completed projects including EqualLCT, VIVID, MaxFlex, Dynamic Networks, UN:LOCK, Data2Insights, I-LAD and 3D Asset Rating has already informed consumer vulnerability planning, flexibility services and our overall ED3 DSO Strategy (ED3-S10), climate resilience activities and wider ED3 strategies. This demonstrates our focus on converting innovation learning into operational change and future deployment opportunities.

Alongside our own portfolio, we continue to play an active role in collaborative innovation across the sector. We have partnered with other network licensees on several Strategic Innovation Fund projects, including NESO's Crowdflex and SP Transmission's Predict for Resilience. Our participation in Predict for Resilience directly supported a successful Digital Reopener application, enabling deployment of the solution beyond the life of the original SIF project. This collaborative approach enables us to both contribute to and benefit from industry-wide learning, accelerate the adoption of successful innovations and maximise the value delivered from innovation investment across the sector.

SIF Portfolio Spend Position

As of 1 April 2026, our SIF portfolio represented approximately £31.3 million of awarded funding, spanning Discovery, Alpha and Beta projects across both SSEN-led and collaborative initiatives (Table 3.4). The portfolio includes some of the largest live innovation projects in the GB electricity distribution sector and reflects our commitment to addressing long-term strategic challenges while maintaining a clear focus on deployment.

Table 3.4. SIF Portfolio funding position (1 April 2026)

Status	Funding £m
Beta projects (Lead Network)	23.81
Beta Projects (Partner Network)	0.17
Alpha Projects (Lead Network)	4.76
Discovery Projects (Lead Network)	2.56

Three Live Beta Projects
- **Pathways to 2050 (£9.94m)**
- **Nature4Networks (£8.54m)**
- **VERIFY (£5.33m)**

See Table B. 3 for the full SIF portfolio, project status and funding values.

SIF Pipeline

Our SIF portfolio maintains a strong pipeline of future opportunities that will address emerging customer and network challenges while supporting the Energy Networks Innovation Taskforce Missions and wider ED3 priorities. These projects have been developed through stakeholder engagement, horizon scanning and collaboration with partners across industry, academia and the innovation ecosystem.

Several projects have already identified clear progression pathways towards larger-scale demonstration and deployment, including those in Table 3.5.

Pathways to 2050

Putting Consumers at the heart of low voltage network planning and investment.

Unlocking additional low voltage capacity while maintaining power quality as electrification accelerates.



The challenge
LV investment remains largely reactive while thousands of assets compete for funding and planners must balance engineering need affordability and fairness

The innovation
Pathways to 2050 combines asset condition, future demand, flexibility and consumer insight within one operational planning framework.

How we will apply it
Planners gain a comprehensive evidence base for investment. Consumers and communities gain visibility when upgrades may happen, why they are needed and how they can shape local solutions.

Expected outcomes

£2.72 billion

Expected benefits by 2050 through more efficient planning, investment and network management.

More efficient planning
Potential to reduce planning efforts by more than half and accelerate decisions.

Fairer, clearer outcomes
Increase transparency, reduce disruption and build confidence in a smarter, more resilient network.

Figure 3.3. Case study of Pathways to 2050 initiative

Table 3.5. Projects with progression pathways to larger-scale demonstration and deployment.

Project	Next stage
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Collectively, our SIF portfolio demonstrates the role that large-scale collaborative innovation can play in delivering affordability, reliability, resilience, and environmental and societal value. By combining transformational innovation with a clear focus on deployment, the portfolio is creating the evidence, partnerships and capabilities needed to support our ED3 ambition to increase innovation value by 25% and deliver more than £750 million of benefits by the end of ED4.

3.5. ED2 Business as Usual (BAU) Innovation Portfolio

ED2 marked a significant shift in how innovation is delivered across SSEN Distribution. Innovation is no longer confined to dedicated innovation programmes; it is increasingly embedded culturally within operational delivery, customer service, network planning and business transformation. As a result, more innovation has been deployed into BAU activities during ED2 than at any previous point in the RIIO framework.

BAU innovation plays a critical role in converting innovation learning into customer and network benefits. Where a solution is sufficiently mature, presents an appropriate level of risk and demonstrates a clear business case, we move directly to deployment rather than progressing through further innovation funding pathways. This approach accelerates the delivery of benefits while maintaining a strong focus on value for customers.

Throughout ED2, operational, customer, engineering and digital teams increasingly took ownership of innovation-led initiatives, demonstrating how innovation is becoming embedded within the way we plan, operate and maintain the network. Building on learning from both our own projects and those delivered collaboratively across the sector, we progressed nearly thirty innovation-led initiatives across customer service, flexibility, network operations, resilience, workforce productivity and environmental sustainability.

These initiatives have delivered tangible benefits across all four of our benefit outcomes:

Improving affordability and accelerating connections

We expanded the range of early-access connection solutions available to customers, enabling over 330 MW of connections through flexible access arrangements in the last year alone, representing a seven-fold increase compared to the previous year. We also deployed Systems for Flexibility, enabling automated flexibility scheduling and dispatch and helping optimise network utilisation while reducing costs for customers.

Improving reliability and resilience

Innovation-led deployment is improving network operation and fault response. Advanced fault location technologies are being deployed across more than 900 priority HV circuits, helping improve fault diagnosis, speed restoration and increase network resilience. Additional deployment activities including video surveys, digital pole inspections, VR-based training and enhanced fault-finding toolkits are helping improve operational efficiency and network performance.

Enhancing customer service

Customer-facing innovation has transformed how customers engage with SSEN Distribution during interruptions. Smart ETR has been used more than 17,000 times annually, while PowerTrack now supports over 1.2 million customers each year with real-time outage information and self-service capabilities. Amazon Connect, smart-meter integration and associated digital services continue to improve communication, reduce repeat contacts and provide customers with faster access to information.

Delivering environmental and societal value

Innovation is also creating wider benefits for customers and communities. During ED2, we provided over 20,000 battery units to customers on the Priority Services Register who are most vulnerable during power interruptions. We also transitioned significant elements of our mobile generation fleet from diesel to Hydrotreated Vegetable Oil (HVO), helping reduce emissions and improve local air quality. Environmental initiatives such as the Natural Asset Platform are creating new ways to manage biodiversity and natural capital alongside traditional network assets.

Collectively, these examples demonstrate how innovation is increasingly being deployed at scale across SSEN Distribution and being built into our culture. Rather than delivering isolated projects, BAU innovation is embedding new technologies, capabilities and ways of working that will continue to deliver benefits throughout ED3 and beyond.

BAU Deployment Position

As of 1 April 2026, BAU innovation represented the largest mechanism for converting innovation learning into operational delivery (Table 3.6). Deployment activity spans flexibility, customer service, resilience, digitalisation, environmental performance and vulnerability support, demonstrating how innovation is increasingly integrated into everyday operations. See Table B. 4 for details of deployed and deploying initiatives and associated benefits.

Table 3.6. ED2 BAU innovation portfolio at a glance

Measure	
Innovation-led initiatives deployed, deploying or completed	37
Fully deployed initiatives	17
Ongoing initiatives	20
Strategic areas supported	4
Total BAU Funding spend to 31.03.26	c£63.2m

The deployment profile demonstrates a balanced portfolio delivering benefits across all strategic objectives (Table 3.7). The largest proportion of initiatives support customer service, digitalisation and network resilience, reflecting the areas where innovation has delivered the greatest operational and customer impact during ED2.

Table 3.7. Deployment progress by strategic area

Objective	Completed	Ongoing	Total
Accelerating progress to a net zero world	11	6	17
Delivering a safe, resilient and responsive network	3	7	10
Providing a valued and trusted service	12	5	17
Making a positive impact on society	4	5	9
Total	**30**	**23**	**53**

BAU pipeline and future deployment

While many solutions have already been deployed, BAU innovation remains an active and growing part of our innovation ecosystem. Many of the initiatives within Table B. 4 will continue to evolve and expand their capabilities. New opportunities are continually identified through operational teams, innovation activities, stakeholder engagement and wider business transformation programmes.

The strongest opportunities increasingly originate from innovation projects that have successfully demonstrated technical feasibility and customer value through NIA and SIF. This creates a clear pathway from innovation development through to large-scale deployment. See Table 3.8 for some of our current pipeline of BAU funded innovations.

As we move into ED3, BAU innovation will become an increasingly important delivery mechanism. Our focus will shift from proving concepts to scaling proven solutions, accelerating deployment and maximising the value realised from innovation investment. This approach creates a direct link between innovation activity, operational delivery and customer outcomes.

Table 3.8. BAU project pipeline.

Innovation area	Description	Outcome
Consumer Vulnerability Mapping	Building and embedding new mapping and visualisation techniques to give near real-time insights into consumer vulnerability.	Better targeted network intervention to support vulnerable customers.
Data Visualisation	Increasing the range and strengthening access to our Open Data Portal.	Providing customers with better insights on network usage.
Enhanced LV Network Monitoring and Control	To increase oversight and management of LV network to improve resilience.	Improved fault response and less disruption for customers.
Enhanced Storm Preparedness	Using advanced forecasting techniques to identify potential extreme-weather impacts and deploy resources ahead of weather events.	Improved storm response and less disruption for customers.
Self Service Portal	Developing new options for customers to self-serve for connections applications.	Improved customer experience.
Increasing Automation in LCT Connections	Developing new AI tools to improve automation and detection for domestic LCT connections	Improved customer experience.
Voltage Management	Managing voltage issues, especially those related to high LCT uptake.	Improved quality of supply for customers and reduced disruption.

BAU innovation provides the final element in the innovation process, converting ideas, evidence and learning into enduring business capabilities. Together with our NIA and SIF portfolios, it ensures innovation delivers measurable improvements in affordability, reliability, resilience, and environmental and societal value, supporting our ambition to increase innovation value by 25% and deliver more than £750 million of benefits by the end of ED4.

Amazon Connect

Creating one intelligent, multi-channel platform for faster more flexible and resilient customer support.

Unlocking additional low voltage capacity while maintaining power quality as electrification accelerates.



The challenge	The innovation	How we will apply it
Customer contact must remain fast accurate and dependable during day-to-day operations, storms and emergencies separate channels and legacy processes limit visibility and make consistent personalised support harder to deliver	Following the final migration from the legacy system on the 14th of October 2025 Amazon connect now provides the cloud-based foundation for customer contact. The platform brings telephony, webchat, SMS, e-mail and automated updates into one intuitive environment.	Advisors gain relevant customer and network information in one place, supported by smarter routing, call summaries, knowledge guidance and real time insight. Customers gain more choice, clearer updates and more consistent service across channels.

Expected outcomes

Faster response	Greater resilience	More flexible access
Route contacts effectively, reduce avoidable handling and help advisors resolve inquiries sooner.	Strengthen customer support during storms and emergencies through a scalable cloud platform.	Enable customers to move between phone, web chat, SMS and e-mail while maintaining one joined-up conversation.

ED3	Amazon connect will provide the scalable customer service foundation for ED3, turning insight and automation into quicker responses, clearer information and more inclusive access to support, significantly improving the customer experience.

Figure 3.4. Case study of Amazon Connect

3.6. ED2 Benefits realised and value created

Innovation is only successful when it delivers measurable value. Throughout ED1 and ED2, we have strengthened our ability to convert innovation investment into customer, network and societal benefits through deployment at scale.

Our innovation portfolio has supported improved customer service, faster fault restoration, enhanced network visibility, greater resilience, better informed investment decisions and stronger support for vulnerable customers (Table 3.9). Many of these benefits are already being realised through the deployment of innovation outputs into BAU operations, while others will continue to accrue throughout ED3 and beyond.

Table 3.9. Innovation benefits summary

Theme	Innovation funding (£m)	Deployment costs (£m)	Net benefits (£m)[1]	
			By end of RIIO-ED3	By 2050
Progress to a Net Zero World	£28.50	[redacted]	£14.81	£185.69
Safe, Resilient and Responsive Network	£20.31	[redacted]	£12.51	£44.21
Providing a Trusted and Valued Service	£29.30	[redacted]	£359.27	£1,517.02
Making a Positive Impact on Society	£18.32	[redacted]	£3.42	£23.07
Total	**£96.43**	[redacted]	**£390**	**£1770**

[1]Using the same methodology benefits to date £21.8m and to the end of ED2 are £79.5m – full details in Appendix D: OUR ED3 INNOVATION DEPLOYMENTS.

Based on our benefits assessment methodology (Appendix C: BENEFITS CALCULATION METHODOLOGY), we estimate that innovation activities delivered through ED1 and ED2 will enable £390 million of net benefits by the end of ED3, increasing to approximately £1.8 billion by 2050. This equates to around £4 of value for every £1 invested, reflecting both the direct benefits of innovation projects and the wider value realised through subsequent deployment and operational adoption.

We recognised that not all individual innovation projects deliver immediate benefits directly for consumers. Meaningful impact generally results from incremental learning across multiple projects. Following this approach, we assessed our full portfolio from the start of RIIO-ED1 for the tangible benefits they have delivered, or could deliver

We have estimated the benefits across our portfolio by using the most recent information, whether this was a project-level Cost Benefit Analysis, deployment business cases or realised operational benefits. The assessment captures both innovation investment and deployment costs alongside the benefits expected from innovations already deployed or have committed routes to deployment. We have included a probability weighting factor to reflect the likelihood of the benefits being realised from individual projects. For example, a deployed innovation has a high likelihood of delivering the forecast benefits, whereas an early-stage proof of concept project has a lower likelihood, Benefits are calculated at an SSEN licence area level with no estimates for wider deployment. Full methodology is provided in Appendix C: BENEFITS CALCULATION METHODOLOGY.

3.7. Remaining challenges and opportunities

While ED2 has delivered significant progress, many of the challenges facing electricity networks remain and new challenges continue to emerge. We need to deliver a safe, reliable and resilient network; the capacity to connect low-carbon technologies and enable decarbonisation; faster, simpler connections that unlock economic growth; tailored support for vulnerable customers and communities; and a lower environmental footprint – all at a price that is fair and affordable for bill payers. Further innovation is essential to meet these challenges. At the same time, successful deployment of existing innovations remains a priority.

From innovation to deployment at scale

Earlier, innovations developed through ED1 and ED2, like flexibility services, are now embedded within normal business operations and delivering value at scale, in ED3 we need to further optimise and strengthen their role in the wider system. Other opportunities at earlier stages of development such as robotics or quantum computing require further exploration and testing to fully understand the potential benefits that they can bring to the sector. In ED3 we will continue to explore these new opportunities whilst keeping up our focus on deployment.

Therefore, we need to continue to maintain a balanced pipeline of projects going into ED3, to ensure we fully utilise earlier innovation, ensure deployment of our current innovation work and to develop new projects to meet these emerging issues.

An evolving innovation landscape

The innovation landscape has also evolved significantly since the start of ED2. The Energy Networks Innovation Taskforce identified five sector-wide Innovation Challenges focused on accelerating connections, reducing network build times, enabling plug-and-play electrification, improving resilience and enabling decentralised system optimisation. These challenges will provide focus for much of our innovation work in ED3, especially the development of our SIF portfolio. However, they reinforce many of the priorities identified by our stakeholders and highlight the need for continued innovation across the sector, therefore, will help inform our entire portfolio.

At the same time, growing workforce and supply chain constraints present significant risks to network delivery. Increasing demand for specialist engineering, digital, data and cyber security skills is creating pressure across the sector, while growing construction and resource requirements are driving the need for greater productivity, automation and new delivery approaches. These challenges cannot be solved through traditional methods alone and reinforce the need for continued innovation investment.

There are new and emerging threats to the network including climate resilience and cyber security that need to be addressed. Availability of connections is also being seen as a key enabler of economic growth, which is driving the need for new approaches within the sector. Whilst at the same time we need to provide tailored support for our most vulnerable customer. We need to maintain the scale and pace of innovation to ensure that the network is ready to meet these challenges.

ED2 leaves three priorities for ED3. First, broaden the innovation supply chain beyond the 200+ organisations already engaged. Second, strengthen the transition from successful innovation into established BAU governance and investment. Third, apply consistent benefits management across NIA, SIF and BAU so that portfolio decisions are driven by realised value rather than project activity. Section 6 sets out how our ED3 delivery model responds to these lessons.

4. OUR ED3 INNOVATION STRATEGY

In ED3 we will deliver c.£400m of benefits from our current portfolio a return on investment of 1:4. During ED3 we plan to increase the return from innovation by 25%, from approximately £4 to £5 of benefit for every £1 invested, delivering more than £750 million of benefits by the end of ED4

4.1. Our ED3 Innovation Strategy

Our ED3 ambition is to increase the value realised from innovation through faster deployment and a stronger pipeline of future solutions. As set out in Section 3.6, our existing portfolio is forecast to deliver c.£400m of benefits by the end of ED3. During ED3, we will target a 25% improvement in portfolio return, from approximately £4 to £5 of benefit per £1 invested, supporting more than £750m of benefits by the end of ED4.

The ED2 evidence in Section 3 establishes the starting point for ED3: proven solutions already operating at scale, projects approaching deployment and an active pipeline of emerging opportunities. Our ED3 strategy is designed to manage those three maturity levels differently.

Our ED3 Strategy sets out an integrated innovation portfolio spanning NIA, SIF and BAU. These are not independent, siloed projects but rather a coordinated, co-dependent and aligned programme of projects to ensure we meet both our short term and longer-term ambitions. Taking a portfolio approach enables us to align investment, optimise resources and maximise customer, network and societal value.

A £37.5 million Network Innovation Allowance for ED3 is critical to this ambition. NIA provides the foundation to let us develop the delivery capabilities, partnerships and project pipeline that underpins our wider innovation activity. Through stakeholder engagement and portfolio analysis, we believe this funding level strikes the right balance between ambition, affordability and deliverability.

This level of NIA funding gives the opportunity to put in place the core capabilities which provide the catalyst to deliver a much wider innovation portfolio. It enables us to retain and develop the focussed resource needed to identify the opportunities, develop the solutions, deliver the projects to enable the successful deployment of innovation. The proposed level of NIA investment equips us to deliver a much wider innovation portfolio with up to £40 million of Strategic Innovation Fund activity and up to £75 million of BAU innovation investment, giving an integrated ED3 innovation portfolio £150 million.

The momentum built during ED2 has established a strong pipeline of projects for the rest of ED2 and into ED3. This will see more projects than ever deployed, our ask allows us to continue this growth trajectory and build our ambition beyond our already strong ED2 level. The level of investment and project delivery we have already achieved in ED2 is above the proposal Baseline of 0.4%, our plans for ED3 will see us better the performance and increase benefits by 25%, by identifying the right partners and the right projects to deliver the right outcomes. Further details on our NIA funding request are set out below as well as our plans for BAU and SIF.

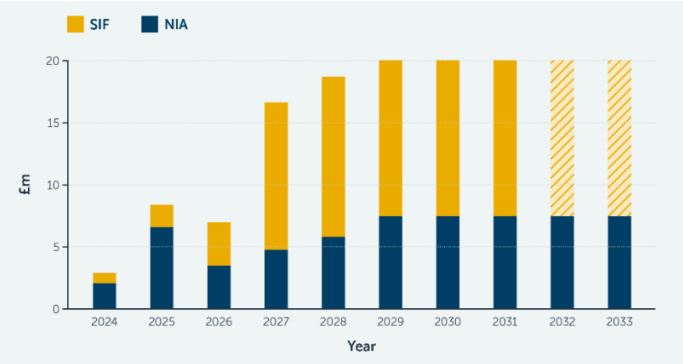


Figure 4.1. SIF2 and NIA spend estimated to end of ED3 maintaining the trajectory of our current portfolio.

4.2. Our ED3 Innovation Ambition – built on ED2 foundations

During ED2, we established a strong track record of converting innovation into operational improvements, customer benefits and lasting business capability. Flexibility services, advanced fault location, digital customer platforms and vulnerability initiatives have shown how innovation can transform the way we plan, operate and support customers.

ED3 raises our ambition. We will:

- **Deploy and Scale proven innovation faster**, implementing solutions into BAU that deliver customer and network value throughout ED3. We anticipate c.£400m of benefits by the end of ED3
- **Complete ongoing innovation journeys**, converting our ED2 projects from innovation to deployment ready.
- **Develop solutions to emerging challenges**, including climate adaptation, workforce constraints, greater network complexity and increasing electrification to make the business better prepared for the future.
- **Strengthen benefits realisation**, increasing the return from innovation from approximately £4 to £5 for every £1 invested by the end of ED4
- **Deliver an Innovation portfolio to enable more than £750 million of benefits by the end of ED4** through an integrated portfolio across NIA, SIF and BAU investment.

This is not simply a larger programme of projects. It is a more focused, connected and deployment-led approach that directs innovation towards the outcomes customers and stakeholders value most (Figure 4.2).



Figure 4.2. ED3 turns proven delivery into enduring value.

ED3 starts from a position of strength, with an innovation portfolio spanning deployed solutions, developing projects, and future opportunities. Our ED3 portfolio approach will allow us to scale what works, complete ongoing innovation journeys and develop the solutions needed for the future (Figure 4.3).

Scaling and embedding proven Innovations: Many innovations developed through ED1 and ED2 are now mature, embedded and delivering value at scale. These include flexibility services, advanced HV fault location, Smart ETR, PowerTrack, LENZA and new approaches to supporting customers in vulnerable situations. In ED3 we will extend adoption of these capabilities and integrate them more deeply into operational processes and maximise the benefits they deliver. We will continue to add to this by identifying proven opportunities and by fast following other licenses. This includes expanding proven technologies across both licence areas, integrating solutions into core systems and ensuring operational teams have the skills, standards and processes needed to sustain deployment.

Completing Ongoing Innovation Journeys: Our portfolio contains maturing projects that have progressed beyond early development but are not yet ready for full operational adoption. For example. Pathways to 2050, Nature4Networks, VERIFY and FORTRESS are developing significant new capabilities in low-voltage planning, nature-based solutions, vulnerability insight and energy resilience. During ED3, we will complete live demonstrations, confirm the technical and

[2] Hatched SIF bars for 2032 and 2033 indicate current post SIF funding so is subject to confirmation.

commercial evidence, establish deployment business cases and confirm the most appropriate route to adoption. We will also capture and apply learning from projects that do not progress, ensuring that every project improves future decisions and portfolio performance.

Developing the Next Generation of Solutions: Other opportunities are at the beginning of the innovation journey. Robotics, automation, quantum-enabled technologies, AI-assisted planning, climate-conditioned asset management and new construction techniques could fundamentally change how networks are planned, built and operated. Projects such as RISE and emerging quantum-enabled solutions illustrate this earlier stage of maturity. These opportunities require structured discovery, collaboration and testing to identify the right deployment pathway, we will progress these quickly and if necessary "fail fast" if the potential benefits do not materialise.

This continuum forms the starting point for ED3. Stakeholder priorities, ED2 learning, our Drivers for Change assessment and the SIF Innovation Challenges have helped us identify six strategic innovation themes where projects can deliver the greatest value.

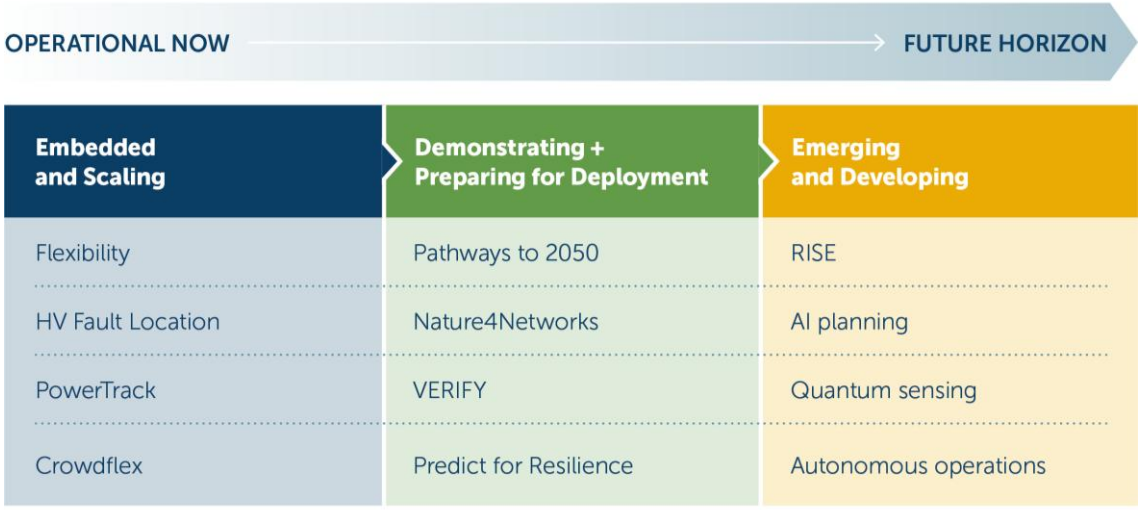


Figure 4.3. Our ED3 portfolio will contain a pipeline of opportunities at every stage of maturity.

4.3. Our ED3 Strategic Innovation Themes and future opportunities

Stakeholder evidence (Section 2), ED2 learning (Section 3), business needs, horizon scanning and the SIF Innovation Challenges have informed six ED3 Innovation Themes. They define the challenges and outcomes towards which we expect to direct innovation, rather than fixed technology commitments. Within each theme, opportunities may be explored through NIA, demonstrated through SIF or deployed through BAU according to their maturity and remaining uncertainty.

The six themes are described in more detail below, setting out both our intended outcomes and an indicative pipeline of future opportunities. These are not fixed technology commitments but provide an indication of the opportunities we expect to **explore and test through NIA, develop and demonstrate through SIF, and deploy and scale through BAU investment**.

Success will depend not only on identifying the right opportunities, but on converting them into deployed solutions and measurable benefits. The following section explains how we will achieve this through the right projects, the right partners and the right outcomes.



Smart Machines and Future Operations

Human Expertise. Machine Capability.

Meeting future network needs cannot rely solely on workforce growth. Smart machines, robotics and automation can increase productivity, improve safety and strengthen workforce resilience. Building on learning from RISE and related projects, ED3 innovation will focus on deployable operational capabilities rather than stand-alone demonstrations. Alongside technical solutions, we will develop the standards, operating models and adoption pathways needed to increase safety, operational capacity and effective use of specialist skills.

- **Innovation frontier:** Developing safe, scalable and vendor-neutral smart-machine capabilities for applications not yet available to UK distribution networks, together with the standards, assurance and workforce competencies needed for adoption. BAU will procure proven solutions, while NIA will address remaining safety, interoperability and deployment challenges.
- **Alignment with strategic priorities:** Investing in our people and partners to create the modern and diverse skills, opportunities and leadership of the future
- **Alignment with Innovation Challenges:** **2** Faster build and maintenance and **4** Eliminating energy outages
- **Outcomes delivered:** Improves workforce safety, productivity and operational efficiency reducing operational cost

NIA: Exploring new applications for smart machines	SIF: Transforming network construction and field operations	BAU: Deploying smart machines at scale
We will explore how robotics, drones, LiDAR, remote sensing and machine-assisted technologies can make network activities safer, faster and more efficient. Potential projects include automated inspection, advanced asset data capture, remote operations and machine-assisted construction, maintenance and fault response.	We will develop and demonstrate robotic and automated solutions that fundamentally change how network assets are built, maintained and operated. Potential applications include automated cable jointing, intelligent construction systems and modular or off-site approaches that improve safety, consistency and productivity while addressing workforce pressures.	We will deploy proven robotic and automated technologies across core network activities, embedding successful trials into everyday operations. This may include overhead line robotics, advanced drone inspection and remote-operated systems to improve safety, productivity, quality and resilience. Building on projects such as SSEN-T O-DIN



Digital Backbone and System Visibility

One Network View

As the energy system becomes more decentralised, customers and stakeholders need easier access to trusted information. Our ED3 focus is to create the digital backbone for a more connected and intelligent network, using digital representations of network assets, interoperable data platforms and advanced planning tools to improve decision-making, transparency and network planning.

- **Innovation frontier:** Creating interoperable digital representations of network assets and connecting information across systems and organisations not designed to work together. BAU will enhance established IT systems and resolve known data issues. NIA will test new architectures, interoperability approaches and shared data models where technical, governance or value uncertainties remain.
- **Alignment with strategic priorities:** Delivering a safe, smart, resilient business and system in a changing world
- **Alignment with Innovation Challenges:** **1** industrial and business connection acceleration, **3** instant use domestic energy devices and **5** decentralised system balancing
- **Outcomes delivered:** Reducing costs for customers by using better data and visibility to enable smarter planning, faster connections and improved network performance

NIA: Exploring accessible and integrated planning tools	SIF: Developing next-generation digital network capabilities	BAU: Establishing trusted and connected network information
We will explore integrated data and planning tools that provide customers, communities, developers and network teams with trusted, actionable insight. This includes open-data platforms, advanced analytics and interoperable datasets to support more transparent and efficient planning.	We will develop and demonstrate digital representations of network assets and planning tools that support whole-system decision-making. This includes addressing interoperability, cyber security and operational challenges in increasingly connected networks.	We will embed proven digital platforms, network models and data services, expanding open-data access and improving data quality, consistency and integration to support planning, operations and external decision-making.



Network Intelligence and Optimisation

Know Sooner. Act Smarter.

Increasing electrification, distributed energy resources and network complexity require more advanced planning and operational decisions. We will explore how AI, advanced analytics and predictive modelling can improve forecasting, planning, asset management and network performance, enabling faster connections, earlier intervention and more efficient investment.

- **Innovation frontier:** Applying and assuring AI in safety-critical network decisions where future conditions, model performance, explainability and accountability remain uncertain. We will also explore network designs optimised for future needs rather than incremental evolution of today's network. BAU will deploy mature analytics and productivity tools. NIA will develop and validate AI-enabled applications where assured, deployable solutions do not yet exist.
- **Alignment with strategic priorities:** Investing in our people and partners to create the modern and diverse skills, opportunities and leadership of the future
- **Alignment with Innovation Challenges:** 1 industrial and business connection acceleration, 4 eliminating energy outages and 5 decentralised system balancing
- **Outcomes delivered:** Enables more informed, proactive and efficient decision making across the network increasing reliability and reducing costs.

NIA: Exploring predictive network management	SIF: Developing and adaptive and optimised network	BAU: Embedding proactive, data-driven operations
We will explore AI, advanced analytics and predictive modelling to improve forecasting, asset management and proactive intervention, enabling earlier action and more efficient use of network assets. This will build on our previous NIA work on HV Fault location and LV fault prediction.	We will develop and demonstrate AI-enabled planning and operational tools, including intelligent network optimisation, automated optioneering and future-focused network design to support capacity, resilience and customer needs.	We will deploy proven analytics and automation capabilities to improve decision-making, increase operational efficiency, enable earlier intervention and optimise asset performance.



Resilient communities and energy security

Keeping communities connected

As society becomes more dependent on electricity, disruption has greater consequences. Electrification, digitalisation and the needs of remote communities are creating new resilience challenges across our network. We will develop and test innovative approaches that strengthen the resilience of customers, communities and critical services before, during and after outages. This includes local energy systems, islanding capabilities, community energy resources and digital technologies that improve energy security and reduce the impacts of disruption.

- **Innovation frontier**: Moving from reactive outage response to predictive, place-based resilience solutions that help communities prepare for, withstand and recover from disruption.
- **Alignment with strategic priorities:** Consistently providing great value, great experience customer services for all
- **Alignment with Innovation Challenges**: 3 instant use domestic energy devices, 4 eliminating energy outages and 5 decentralised system balancing
- **Outcomes delivered**: Ensures the benefits of the energy transition are accessible, affordable and inclusive for all customers.

NIA: Testing new models of local resilience	SIF: Transforming community energy resilience	BAU: Scaling proven support for resilient communities
We will explore resilience solutions that help communities prepare for, withstand and recover from disruption. Potential projects include islanding, vulnerability forecasting, vehicle-to-grid, community batteries and other local energy resources ahead of wider deployment.	We will develop and demonstrate integrated, place-based energy systems that strengthen local energy security. This may include community energy hubs, resilience forecasting platforms, local balancing, energy-sharing arrangements and islanded operation for remote or vulnerable communities, combining local generation, storage and flexibility to maintain critical services during disruption, and help develop a self-healing network with zero interruptions.	We will continue to deploy and embed proven resilience solutions that improve support for customers and communities during network disruption. This may include enhanced critical-service resilience, mobile and fixed battery solutions, coordinated severe-weather support and the replication of successful community resilience initiatives across our licence areas including learning from SSEN's LEO-N and NPg Community DSO projects.

Adaptive Networks and Climate Intelligence

Predict. Adapt. Protect.

Climate change is increasing weather-related risks to network assets, customers and communities. Traditional resilience approaches may not be sufficient to address future challenges.
During ED3, we will develop climate intelligence, predictive resilience tools and nature-based solutions to anticipate risks, target investment and maintain customer services during disruption. Innovation will focus on climate-adapted asset strategies, nature-based interventions, digital resilience and community resilience solutions.

- **Innovation frontier:** Translating climate projections into asset, operational and community decisions, and determining whether nature-based interventions can deliver measurable, long-term network benefits.
- **Alignment with strategic priorities:** Building sustainable, electrified communities and vibrant local economies
- **Alignment with Innovation Challenges: 4** eliminating energy outages
- **Outcomes delivered:** Strengthens resilience to climate-related risks to reduce disruption to customers while delivering environmental and community value

NIA: Building the evidence for proactive adaptation	SIF: Developing next generation climate resilience	BAU: Embedding proven climate resilience measures
We will explore how future climate conditions could affect network assets, operations and communities. Potential projects include climate-informed asset models, adaptation strategies and nature-based solutions that could improve resilience at lower cost	We will develop and demonstrate climate-adapted asset strategies, advanced warning systems and nature-based approaches that use climate intelligence to target resilience investment more effectively. Example Nature4Networks.	We will deploy proven resilience measures through asset management and operations, including flood protection, climate-informed ratings, enhanced vegetation management and resilient materials

Advanced Construction and Infrastructure Delivery

No Dig. Less Disruption.

The scale of future network reinforcement, particularly at LV, requires faster, lower-cost and less disruptive construction methods. Building on recent SIF challenges, we will explore novel construction techniques, advanced materials, modular infrastructure and off-site manufacturing that can accelerate delivery while maintaining safety and performance. Innovation will focus on areas where technical, commercial or regulatory uncertainty remains.

- **Innovation frontier:** Transforming network delivery through new construction methods, materials and manufacturing approaches not yet proven for UK distribution networks. BAU will deploy proven construction solutions and best practice. NIA will test low-dig methods, automated cable jointing, modular assets and advanced materials where safety, durability, cost or regulatory acceptance remain uncertain.
- **Alignment with strategic priorities:** Delivering a safe, smart, resilient business and system in a changing world
- **Alignment with Innovation Challenges: 1** industrial and business connection acceleration and **2** faster build and maintenance
- **Outcomes delivered:** Accelerating network access for electrification and at lower cost enabling economic growth.

NIA: Exploring lower impact infrastructure delivery	SIF: Transforming how network infrastructure is built	BAU: Scaling proven construction innovations
We will explore innovative construction approaches that reduce cost, environmental impact and customer disruption, including low-dig techniques, modular assets, off-site construction and advanced power electronics.	We will develop and demonstrate next-generation construction methods, including no-dig installation, automated jointing, advanced drilling, AI-enabled planning and digitalised substations, to increase capacity while reducing disruption.	We will deploy proven construction methods and technologies that reduce delivery times, improve productivity and minimise customer and environmental impacts.

4.4. Delivering More Value Through Innovation

Our six strategic innovation themes will help define where we will focus our innovation activities to meet the needs of the business.

Delivering these six themes depends on three capabilities: accessing the **right partners**, selecting the **right projects**, and converting successful innovation into the **right outcomes** through deployment (Figure 4.4). These principles inform the investment case below; Section 6 explains how they are applied through our governance and delivery process.



Figure 4.4. The right partners, opportunities and outcomes.

4.5. Enabling Our ED3 Ambition Through NIA Investment

NIA is the essential foundation of our overall ED3 innovation portfolio. It provides the certainty to ensure we have the continuity, flexibility and capability needed to identify opportunities, mobilise partners, develop solutions and prepare successful innovations for deployment.

Unlike competitive and time-limited funding mechanisms, NIA provides the certainty needed to respond quickly to evolving customer and network needs. It funds the critical early-stage activities that turn challenges into deliverable projects, including analysis, partnership development and deployment planning. This sustained pipeline also builds the skills, expertise and organisational capability required to deliver innovation at scale.

Our ED2 experience demonstrates that NIA leverages value beyond the projects it directly funds. It enables larger SIF opportunities, informs business strategy and accelerates the transition of proven solutions into operational delivery. This multiplier effect will become even more important in ED3. A reduced NIA allowance would limit our ability to support SIF and BAU activities, reducing the overall impact and value of the portfolio.

We have considered several scenarios (Table 4.1), which are anchored in NIA and how it acts as a foundation for our overall portfolio:

- **Ofgem Baseline** – this sets our NIA allowance at baseline level as set out in the ED3 Business Plan Guidance
- **Maintaining ED2** – maintains our ED2 momentum but limits portfolio expansion
- **ED2 Growth** – sets NIA at a level which enables a balanced NIA, SIF and BAU portfolio to maximise deployment and remains deliverable

Table 4.1. Funding scenarios considered for ED3.

Scenario	Innovation Funding (£m)				Benefits Multiplier	Benefits Delivered (£m)
	NIA Funding	SIF Portfolio -estimated	BAU	Total		
Ofgem Baseline	20.8	20.8	20	61.6	3.5	215.6
Matching Ed2	28.6	28.6	50	107.2	4.5	482.4
ED3 Growth	**37.5**	**37.5**	**75**	**150**	**5**	**750**

We have considered our ED3 funding needs from a range of different perspectives to determine the amount required

- Building an overall innovation portfolio
- Bottom up based on the pipeline of projects we have already identified
- Our Stakeholder Engagement
- Our internal delivery capability

Based on this we are requesting an NIA allowance of £37.5m over ED3, as shown below

Table 4.2. Our ED3 NIA allowance request

	2028	2029	2030	2031	2032	Total
NIA (£m)	**7.5**	**7.5**	**7.5**	**7.5**	**7.5**	**37.5**

Further information is detailed in Table CV36 - NIA of the BPDT

Building an overall innovation portfolio

As set out throughout this strategy, NIA is the foundation of our ED3 innovation portfolio. It provides the capability, flexibility and continuity needed to develop new opportunities, mobilise partners, accelerate deployment and maximise the impact of both SIF and BAU investment.

Our £37.5 million NIA funding request represents the optimum balance of ambition, customer value and deliverability. It enables a balanced portfolio across all six strategic innovation themes, supporting early-stage innovation, future SIF opportunities and the deployment of proven solutions into business-as-usual operations.

We expect NIA investment to focus on developing and de-risking solutions ahead of deployment, particularly in areas such as Advanced Construction Techniques and Resilient Communities. More transformational innovation, including robotics and AI, is expected to be delivered primarily through SIF projects aligned to ENA Innovation Missions, while BAU investment will focus on scaling proven solutions and building enduring organisational capability.

Together, these funding routes create an integrated portfolio with the flexibility to maintain a strong pipeline of opportunities and accelerate the deployment of innovations capable of delivering more than £750 million of customer, network and societal benefits.

The £37.5 million NIA allowance is therefore not simply a project fund. It underpins a wider innovation portfolio of £150 million, unlocks participation in SIF, accelerates BAU deployment and supports the delivery of more than £750 million of benefits by the end of ED4. By aligning NIA, SIF and BAU investment, we can maximise the value delivered from innovation and achieve the best outcomes for customers, communities and the wider energy system. Figure 4.5 illustrates how we initially expect innovation funding to be allocated across the portfolio. These themes are not mutually exclusive, and many projects will contribute to multiple innovation themes.

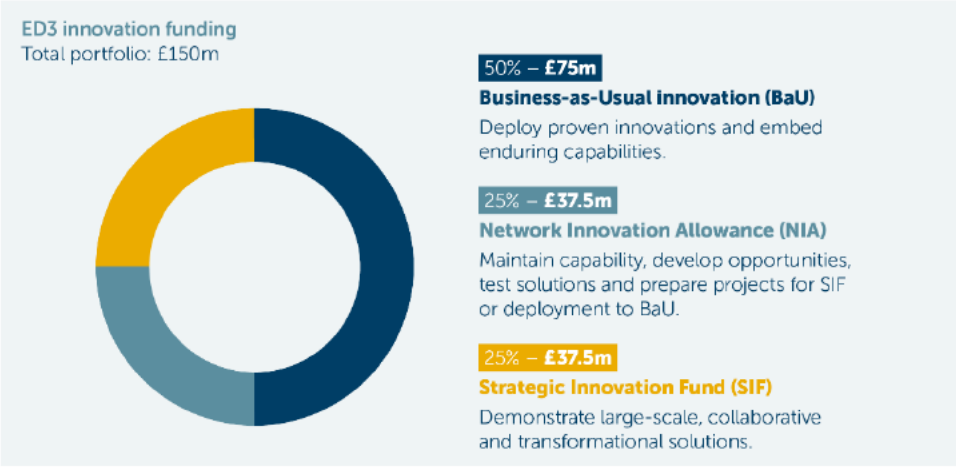


Figure 4.5. NIA Underpins a £150 Million Portfolio

Building the Plan from the bottom Up

We have identified a portfolio of projects that we are confident will be delivered during ED3. A summary of forecast costs by innovation priority is provided Table 4.3, with individual project descriptions and cost forecasts set out in Appendix B: ED2 TRACK RECORD.

Table 4.3. Forecast budget by Innovation priority

	Funding Allocation (£m)			
[redacted]				
[redacted]				
[redacted]				
[redacted]				
[redacted]				
[redacted]				
[redacted]				

These pre-identified projects totalling over £9.0m and include both new innovations and follow-on projects that will scale proven solutions towards deployment. However, innovation opportunities continue to emerge throughout a price control period as technologies evolve and new challenges arise. As a result, a significant proportion of the ED3 portfolio will consist of projects that have not yet been identified.

Table 4.4. NIA pipeline projects.

Innovation Theme	Pipeline Projects Estimated NIA investment (£m)
[redacted]	
[redacted]	
[redacted]	
[redacted]	
[redacted]	
[redacted]	
[redacted]	

Our ED2 experience provides confidence in this approach. We are on track to deliver around **£23.0 million** of NIA-funded projects, all of which were developed during the ED2 period. Combined with the pipeline already identified for ED3 (Table 4.4), this demonstrates our ability to generate, develop and deliver a strong flow of high-value innovation projects and effectively utilise the requested NIA allowance.

Our Stakeholder Engagement

As outlined in Section 2, stakeholders prioritised outcomes that reduce costs, improve resilience, accelerate connections and widen access to benefits. They also challenged us to make innovation easier to access, faster to deploy and clearer in demonstrating value.

In response, we developed six ED3 strategic innovation themes and shaped our funding request to focus on deployment, customer outcomes and measurable benefits. Together, these provide a clear framework for translating stakeholder needs into value for customers, communities and the wider energy system. We have shaped our portfolio and the funding request to meet these needs.

Our internal capability

NIA spend has ramped up substantially through ED2. We have invested in building the foundations required for successful delivery, including frameworks, delivery partnerships, contracts, governance arrangements and a fully

resourced innovation team. Alongside this, we have refined our processes to improve efficiency and accelerate project delivery.

As a result, project activity has increased sharply, and we are confident of fully utilising our remaining ED2 NIA allowance. We forecast spending approximately £4.7m in FY26/27 and £5.8m in FY27/28, demonstrating that this increased rate of delivery is both achievable and sustainable.

Having established the capability to deliver up to £7.5m of NIA-funded innovation each year, reducing funding below this level would constrain delivery and reduce the benefits that innovation can provide to customers and the wider energy system.

The challenges of ED3, including economic growth, decarbonisation, network expansion and resilience, require innovation to be delivered at pace and scale. Innovation is therefore embedded throughout our ED3 plan, and our NIA funding request reflects the scale of innovation required to deliver those objectives.

4.6. SIF and the Innovation Delivery Group challenges

SIF will continue to play a key role in the delivery of our overall ED3 innovation portfolio providing a mechanism to develop, demonstrate and scale transformational solutions that address complex industry challenges and deliver benefits beyond the scope of NIA or business-as-usual activity. Building on the strong foundation established during ED2, we will continue to grow and strengthen our SIF portfolio throughout ED3.

Ofgem's five ED3 Innovation Challenges identified, supported by the Innovation Delivery Groups (IDGs), provide a clear and better coordinated framework for identifying, shaping an accelerating future opportunities:

- Accelerating industrial and commercial connections.
- Delivering faster and lower-cost network build and maintenance.
- Enabling plug-and-play domestic energy devices.
- Moving towards near-zero interruptions.
- Enabling decentralised system balancing and optimisation.

We will use these challenges to focus our collaboration and ideation activities, identify common industry needs and develop opportunities with the potential for sector-wide deployment. SSEN Distribution chairs the Industrial and Commercial Connections Acceleration IDG, placing us at the forefront of shaping innovation that supports strategic connections, economic growth and decarbonisation. We are also active in the other Innovation Delivery Groups, ensuring we contribute to and benefit from innovation activity across all challenge areas.

Our ED3 strategic innovation themes align strongly with the SIF Challenge Framework, creating a clear pathway from strategic priority to project development. For example, our Smart Machines and Automated Systems theme supports Innovation Challenges 1,2 and 3 through the development of technologies that accelerate connections, reduce delivery costs and improve operational efficiency. This alignment ensures our innovation pipeline is well positioned to generate future SIF opportunities throughout ED3.We have built a strong and growing SIF portfolio during ED2, both as the project lead and as a partner. With involvement in over 30 projects, including three Beta projects, our SIF expenditure is expected to exceed £12m per year in the final two years of ED2. Alongside our NIA portfolio, this provides a robust platform from which to maintain momentum, develop new opportunities and expand our pipeline of transformational projects in ED3.

Importantly, SIF projects are already influencing operation and strategic decision-making. Predict for Resilience is being implemented within our Network Control Centres to improve preparedness and response to severe weather events. Learning from Crowdflex has informed our ED3 DSO Strategy (ED3-S10), while PRIDE and Powering Wales Renewably has helped inform our approach to Local Area Energy Planning in ED3. These examples illustrate how innovation is already delivering tangible value.

We are well placed to build on this success and deliver our ambition. Our three Beta projects will extend beyond the start of ED3, whilst our existing Discovery and Alpha phase projects have the potential to be progressed through our project pipeline to create larger scale Beta projects. We also expect to maintain our high level of SIF participation for the remainder of ED2, as we begin to build our project pipeline to meet the new Innovation Challenges. As a result, we anticipate maintaining a SIF portfolio with at least £12.5m per annum to the end of the current SIF funding at the close of ED.3

The value of SIF is directly linked to the strength of our NIA programme. NIA develops the opportunities, partnerships and evidence that enable successful SIF participation, while SIF creates the transformational projects that ultimately transition into BAU deployment.

4.7. Business-as-Usual Innovation (BAU)

BAU investment is where innovation creates lasting value. It enables proven solutions to move beyond demonstration and become enduring operational capabilities, services and processes delivering benefits for our customers. Our BAU innovation work fits alongside our innovation stimulus funded activities and forms part of our overall portfolio.

As outlined in earlier in Section 4.5 we have undertaken and deployed more innovation than ever before in ED2. This has seen us invest over £65m and we propose to maintain this in ED3, expecting to invest £75m over the ED3 period.

This will include:

- **Deployment of successful ED1 and ED2 innovation** projects – i.e. deployment of the Lancet tool which avoids outages to allow oil samples to be collected from pole mounted transformers.
- **Scaling of proven ED3 Innovations as they complete their Innovation Journeys** - i.e. we will look to use BAU further embed the use of our LCT Connection Readiness Indicator to improve customer journeys for customers looking to connect LCTs.
- **Fast Following** technologies developed by other network licensees or those that have been and proven in other sectors – i.e. the Voltage Management section of the (ED3-S10) DSO Strategy directly uses the outcomes from ENWLs CLASS project
- **Internally** developed digital, operational and customer service innovations – i.e. expansion of the use of guided digital surveys to improve customer journeys and improve efficiency in the connection process.
- **Organisational, commercial and process improvements**- to increase the overall effectiveness of the business – for example continuing to improve our Customer Service with the expansion of Amazon Direct
- **Exploring New Deployment ready solutions** – deploying new solutions which are deployment ready and progressing them to implementation.

A full list of the innovations we are planning to deploy in ED3 and how innovation has been included in our wider Business Plan is set out in Appendix D: OUR ED3 INNOVATION DEPLOYMENTS including those which have been funded from BAU.

Why BAU Funded

We operate a single innovation process, across all our innovation activities. Our initial opportunity assessment phase incudes an appraisal of the level of readiness, the potential benefits and the remaining risks. If the project scope, costs and benefits can be predicted confidently or there is sufficient evidence that it has been proven elsewhere then it is likely that the project will be funded via BAU. Full details of how we assess the funding route, within our innovation delivery process are set out in Section 6.

ED3 BAU Innovation – Areas of Focus

The six Strategic innovation themes are applicable across all our innovation activities including BAU. The description of each Strategic Innovation Priority includes an indication of the potential areas for BAU innovation, in addition we will also consider wider topics cross cutting areas, some of which set out below in Table 4.5. Further details are also included in Appendix E: FUTURE THEMES.

In ED2, we have significantly increased our BAU Innovation activities, this is a sign of our growing internal innovation culture. Key to this has the early identification of a clear deployment pathway to ensure early alignment with our established governance process to enable transition to deployment. In ED3 we will continue to build on this to ensure that we maintain the progress already established across all our innovation activities.

Table 4.5. Illustrative ED3 Business-as-Usual innovation

Area	Illustrative ED3 activity	Expected contribution
Customer service and vulnerability	Personal Resilience Plans, service-based PSR, customer platforms and Storm Vulnerability Impact Index	Better targeted and more accessible support
Digital and data	Digital Spine, network visibility, granular simulation and integrated data services	Improved planning, transparency and decision-making
Network operations	Predictive fault management and data-led asset intervention, losses management	Improved reliability and earlier intervention
Flexibility and planning	New Access products to support Build and Flex, flexibility-first optioneering and LENZA	Faster connections and efficient use of network capacity
Climate resilience	Resilience portal, nature based and climate adaptation measures	Stronger preparedness and reduced customer disruption
Cyber resilience	Dynamic Cyber Insights, threat modelling and emerging-technology assurance	Secure adoption of AI, automation and digital capabilities

4.8. Why Totex funding is not suitable for innovation stimulus projects

While Totex funding supports the deployment of proven solutions, NIA and SIF fulfil distinct roles within our innovation portfolio by enabling the development, testing and de-risking of innovative approaches before they are suitable for wider investment.

- **Supports higher-risk innovation** by funding lower TRL and early-stage projects where outcomes are uncertain, enabling promising solutions to be assessed and de-risked before consideration for BAU investment.
- **Provides flexibility to innovate** by allowing projects to be developed, tested and refined iteratively, recognising that innovation requires experimentation, learning and adaptation in order to achieve successful outcomes.
- **Facilitates collaboration and market development** by attracting a diverse range of partners, including technology providers, academia and industry collaborators, helping to access external expertise and share innovation risk.
- **Enables delivery of long-term customer value** by supporting projects aligned with longer term strategic and regulatory priorities where benefits may nor accrue until future price control periods. Or similarly those projects where benefits accrue primarily to customers and society rather than directly to the network operator.
- **Builds organisational capability** by embedding innovation activities across the business, developing skills, knowledge and capacity beyond the dedicated innovation team to strengthen and encourage our wider innovation culture.

In summary, NIA complements Totex by providing the funding flexibility, risk tolerance and collaborative framework required to identify, develop and de-risk innovative solutions. This accelerates the delivery of customer and network benefits while strengthening the capability required to meet future challenges.

5. OUR ED3 OUTPUTS AND METRICS

Our ED3 Innovation Strategy marks a shift from delivering projects to deploying innovation at scale. Our ED3 outputs define how we will turn innovation into measurable benefits for customers, communities and the wider energy system.

ED2 demonstrated our ability to identify challenges, develop solutions and deliver successful projects. In ED3, we will build on this foundation by strengthening the conditions for deployment through clearer priorities, stronger collaboration and more effective routes to adoption and scale.

We also have a clear ambition to increase innovation returns by 25%. Table 5.1 sets out the SMART outputs that will support this ambition.

Table 5.1. Our ED3 Outputs and Metrics

Our ED3 Outputs and Metrics	What we aim to achieve with our ED3 Outputs and Metrics
Output 1: By 1 April 2029, and annually thereafter, we will host at least one open Network Appreciation Day and publish a summary report within 30 working days.	These events will provide innovators, SMEs, academics and other organisations with direct insight into the challenges, opportunities and priorities shaping our network. By improving understanding of how electricity distribution networks operate and where innovation can create value, we will encourage wider participation, attract diverse ideas and improve the quality of innovation proposals.
Output 2: From April 2028, we will provide initial feedback on all innovation funding proposals within 10 working days and include in our Annual Focus Report a summary of proposal volumes, outcomes and emerging themes.	By providing timely and constructive feedback, we will help innovators better understand our priorities, refine future proposals and identify opportunities to align innovative solutions with network needs. Greater transparency will strengthen collaboration and encourage continued participation in innovation activities.
Output 3: From April 2028, we will publish a Deployment and Implementation Pathway for all relevant ED3 innovation projects with a completion date beyond 1 April 2029, at least 12 months before project completion.	These pathways will provide early visibility of the actions, dependencies and partnerships required to deploy successful innovations. By creating clearer routes to implementation, we will help innovators, suppliers and delivery partners prepare for adoption and accelerate the transition from innovation project to BAU deployment.
Output 4: We will target a spend-to-benefit ratio of approximately 1:4 by the end of ED3 from **our** existing innovation portfolio. During ED3 we will **increase** the return of our future innovation portfolio to1:5 a 25% increase.	Innovation only delivers value when benefits are realised in practice. We will ensure our innovation investment translates into tangible benefits for customers, communities and the network, with even better spend-to-benefit ratio compared to ED2.
Output 5: From April 2028, we will publish an annual update on the deployment of innovation projects developed before and during ED3, including the benefits realised.	This output reflects our focus on deployment, benefits realisation and accountability. By tracking implementation progress and benefits, we will ensure transparency with our consumers and partners and hold ourselves accountable to our plan.

Looking Ahead

Innovation will play a critical role in delivering the network our customers need in ED3 and beyond. Our strategy marks a shift from delivering innovation projects to deploying innovation at scale. Ensuring that innovation is fully embedded within our culture whether in physical network delivery, digital and process.

By combining clear priorities, stronger collaboration and effective deployment pathways, we will accelerate the uptake of new technologies and approaches that improve network performance, support net zero and enhance service for customers. Through this approach, innovation will become an increasingly powerful driver of resilience, efficiency and long-term value across our business and the communities we serve.

6. IMPLEMENTING OUR ED3 STRATEGY

Innovation only creates value when it is deployed. In ED3, we will focus relentlessly on turning proven ideas into measurable customer and network benefits at scale.

6.1. How we innovate

We have built a strong record of delivering and deploying innovation throughout ED1 and ED2. In ED3, we will build on that foundation to accelerate deployment, increase the scale of impact and turn innovation into measurable customer and network benefits faster than ever before. Guided by stakeholder insight, we have identified the challenges that matter most and will work with the right partners to develop, trial and deploy solutions with clear pathways to adoption from day one. This approach underpins our strategic ambition to increase innovation value by 25% as set out across this strategy.

Our ED3 Innovation Delivery Strategy, set out in Appendix F: OUR INNOVATION PROCESS, explains how we will consistently identify, develop, govern and deploy innovation. It combines clear strategic direction, proportionate governance, strong delivery and deployment capability, and a disciplined approach to benefits realisation to ensure innovation remains focused on outcomes rather than activity.

We innovate one consistent way across all funding sources. Every opportunity follows the same assessment process, with projects selected based on customer value, strategic alignment, deployment potential and the benefits of further learning. Only then do we determine the most appropriate funding route, ensuring BAU, NIA and SIF funding are used consistently and efficiently to deliver the greatest value for customers and the network.

The Innovation Steering Group, led by a member of our Distribution Executive Committee, provides strategic leadership and portfolio oversight, while the Innovation Governance Board evaluates and prioritises individual opportunities and projects. Together, these forums ensure investment remains aligned with stakeholder priorities, supports SSEN Distribution's wider ED3 strategy and relevant industry challenges.

We follow a consistent high-level process across all our innovation activities, which progresses from idea to deployment.

ED2 Process: **A foundation to build on**

Our ED2 approach has delivered a strong track record of innovation deployment and a growing pipeline of solutions transitioning into BAU. As we prepared for ED3, we commissioned DNV and SSE Group's Corporate Funding team to undertake an independent review of our innovation processes, identifying opportunities to increase value, accelerate deployment and strengthen delivery (Figure 6.1). Combined with extensive stakeholder insight, this review has shaped a more focused and ambitious ED3 approach built around securing the right partners, selecting the right projects and delivering the right outcomes.

We apply a consistent innovation process across all funding routes, ensuring opportunities are assessed and prioritised in a structured and transparent way from initial challenge through to deployment:

- **Identify** → Engage stakeholders to understand emerging customer, network and industry challenges and opportunities.
- **Generate** → Source opportunities through innovators, academia, supply chain partners, horizon scanning and quickly adopt proven solutions from other networks and sectors.
- **Select** → Assess customer value, strategic alignment, collaboration opportunities, deployment potential and the benefits of additional learning to identify the right project.
- **Invest** → Determine the most appropriate delivery route, ensuring BAU, NIA and SIF funding are used consistently and efficiently.
- **Deliver** → Actively manage projects, adapting quickly based on evidence, learning and emerging opportunities.
- **Deploy** → Build deployment readiness from day one and transition successful innovations into BAU to realise customer and network benefits at pace.

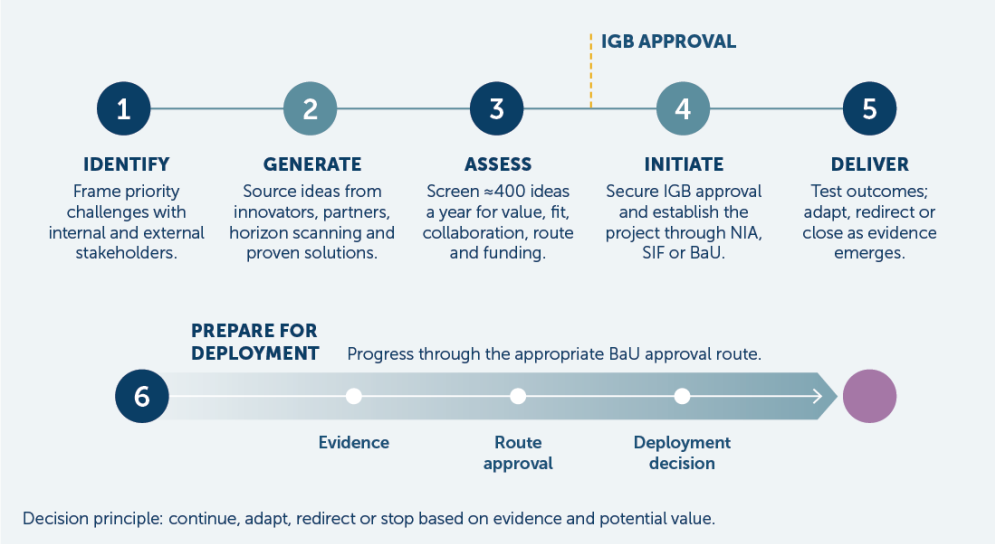


Figure 6.1. Innovation delivery: from challenge to deployment

6.2. Strengthening Our Approach for ED3

Building on the strong foundations established in ED1 and ED2, we will strengthen our approach in ED3 by focusing on three priorities: securing the right partners, selecting the right projects and accelerating the right outcomes. Together, these will create a clear line from stakeholder priorities and network challenges through innovation investment, deployment and measurable customer benefit.

1. The Right Partners – Developing the Innovation Supply Chain

A key lesson from ED2 is that delivering greater value from innovation requires a broader and more capable innovation ecosystem. In ED3, we will strengthen our approach by expanding and diversifying our innovation supply chain, making it easier for organisations of all sizes to work with us and contribute to solving future network challenges.

We will provide clearer visibility of our priority challenges, create more accessible routes into innovation funding and strengthen engagement with universities, research organisations, SMEs, innovators, supply chain partners and industry collaborators. New activities, including Network Appreciation Days, will give potential partners direct exposure to operational challenges and deployment requirements, helping them develop solutions with a stronger pathway to adoption.

We are also strengthening how we collaborate across the energy sector. Through initiatives such as ENA Basecamp, the Energy Innovation Centre and ENA innovation groups, we will continue to share learning, identify opportunities to adopt proven solutions and avoid unnecessary duplication. Where successful innovations have already been developed elsewhere, we will seek opportunities to fast-follow deployment and accelerate customer benefits. Further information on previous “fast follow” projects is provided in Appendix C: BENEFITS CALCULATION METHODOLOGY.

Together, these improvements will strengthen our innovation ecosystem, improve access to new ideas and create a stronger pipeline of deployable solutions.

2. The Right Projects

ED3 introduces a more structured and consistent approach to project selection. Innovation Themes developed through stakeholder engagement, operational evidence, horizon scanning and industry learning will guide investment towards the opportunities with the greatest potential to deliver value.

Our starting point will always be to determine whether a proven solution already exists. Where deployment-ready solutions are available, we will progress directly to BAU implementation. Only where additional learning, testing or development is required will we initiate a new innovation project.

All opportunities will be assessed against customer and network value, strategic alignment, deployment potential, collaboration opportunities and previous innovation activity. We will continue to strengthen collaboration and non-duplication by reviewing relevant industry projects and engaging early with other licensees and partners. Our innovation process is described in Appendix F: OUR INNOVATION PROCESS.

We are also strengthening funding decisions by focusing first on selecting the right opportunity before selecting the most appropriate funding route (Figure 6.2). Proven solutions will progress through BAU funding, projects requiring further learning will utilise NIA funding, and larger transformational challenges will utilise SIF funding.

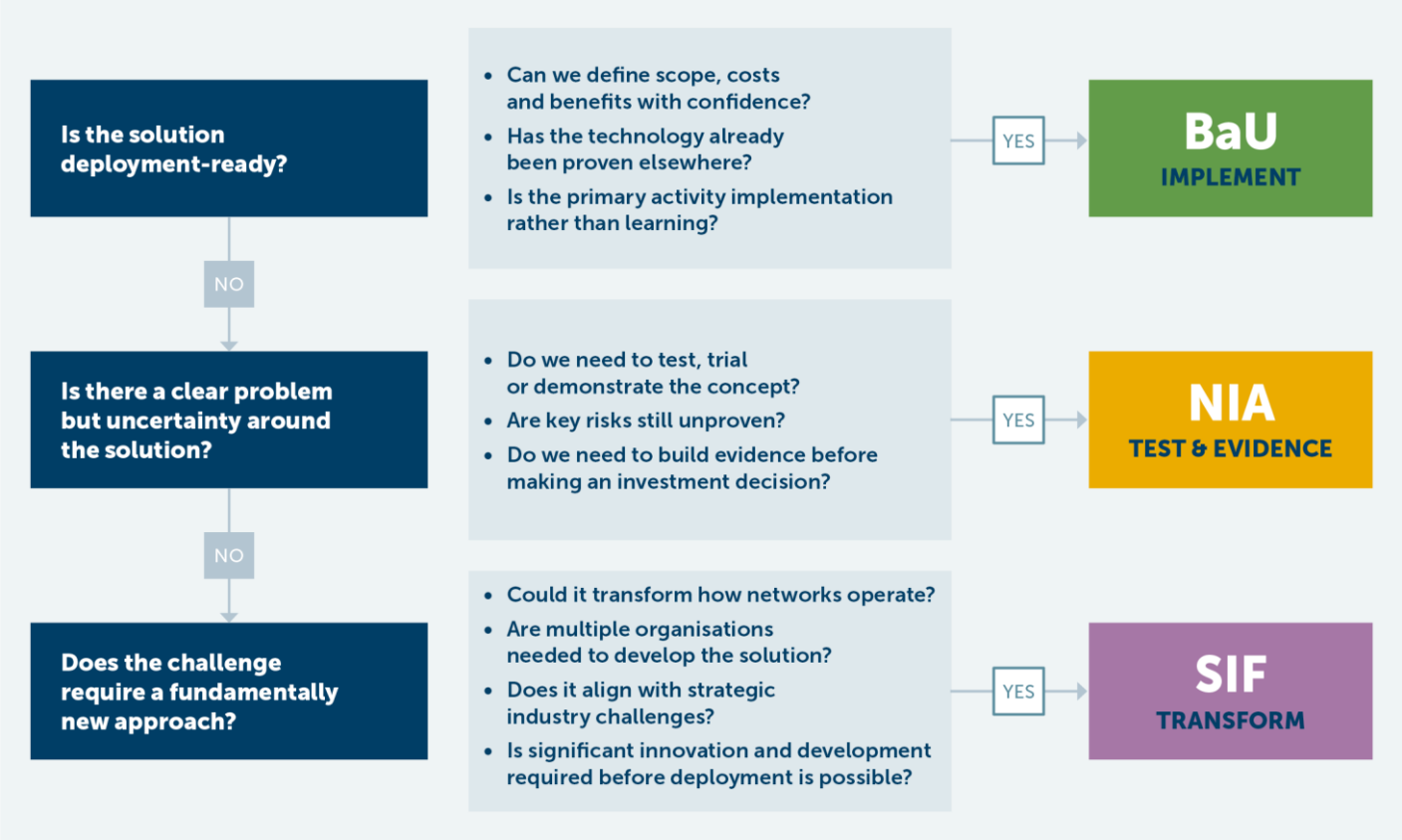


Figure 6.2. Funding decision framework.

Faster delivery through strong governance

Projects with the greatest potential progress to the Innovation Governance Board (IGB), which ensures investments remain aligned with stakeholder priorities, strategic objectives and industry learning. Before approval, projects must demonstrate clear objectives, defined benefits, effective sponsorship, delivery capability and a credible route to deployment, including alignment with the appropriate BAU governance pathway.

Approved projects benefit from structured governance, portfolio oversight and regular reviews of progress, risks, costs, benefits and deployment readiness. This enables timely decisions, focuses resources on the highest-value opportunities and accelerates delivery.

Building on lessons from ED2, deployment planning begins at project inception. Our dedicated ED3 Deployment Team will work alongside project teams throughout delivery to remove barriers, maintain focus on implementation and support the transition of successful solutions into BAU, creating a clear pathway from innovation to customer and network benefit.

3. The right outcomes

The most significant evolution in our approach is an increased focus on deployment. Rather than treating deployment as the final stage of innovation, ED3 embeds deployment planning from project inception.

Every project will develop a Deployment Case that defines the evidence, sponsorship, governance, benefits and implementation pathway required for successful adoption (Figure 6.3). This ensures projects are designed and delivered with deployment in mind from the outset. Further information on Deployment Cases is provided in Appendix F: OUR INNOVATION PROCESS.

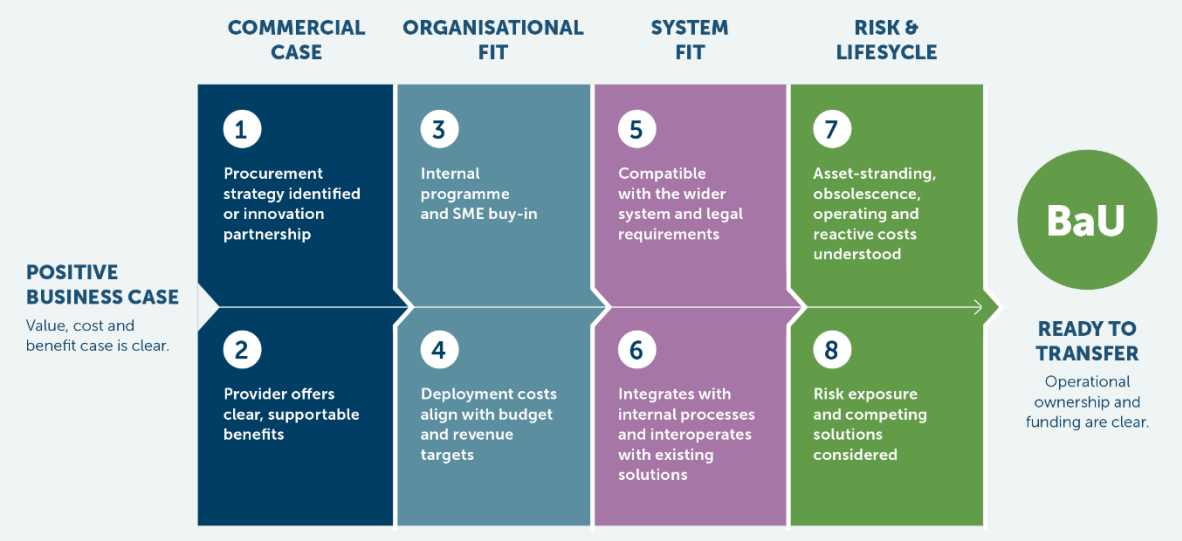


Figure 6.3. Deployment requirements from business case to BAU.

Governance has also been strengthened to support faster implementation. Projects will be overseen through the Innovation Governance Board and supported by a dedicated Deployment Team that will work alongside project teams throughout delivery. This approach helps remove barriers to adoption earlier, align innovation activity with BAU governance processes and accelerate the transition from innovation into operational deployment.

Innovation is also becoming increasingly embedded within business planning (Figure 6.4), investment decisions and delivery strategies. Innovative solutions will be considered alongside traditional approaches, with appropriate business sponsorship established from project inception to ensure that they follow the optimum Governance route to accelerate adoption and deployment to realise benefits sooner.

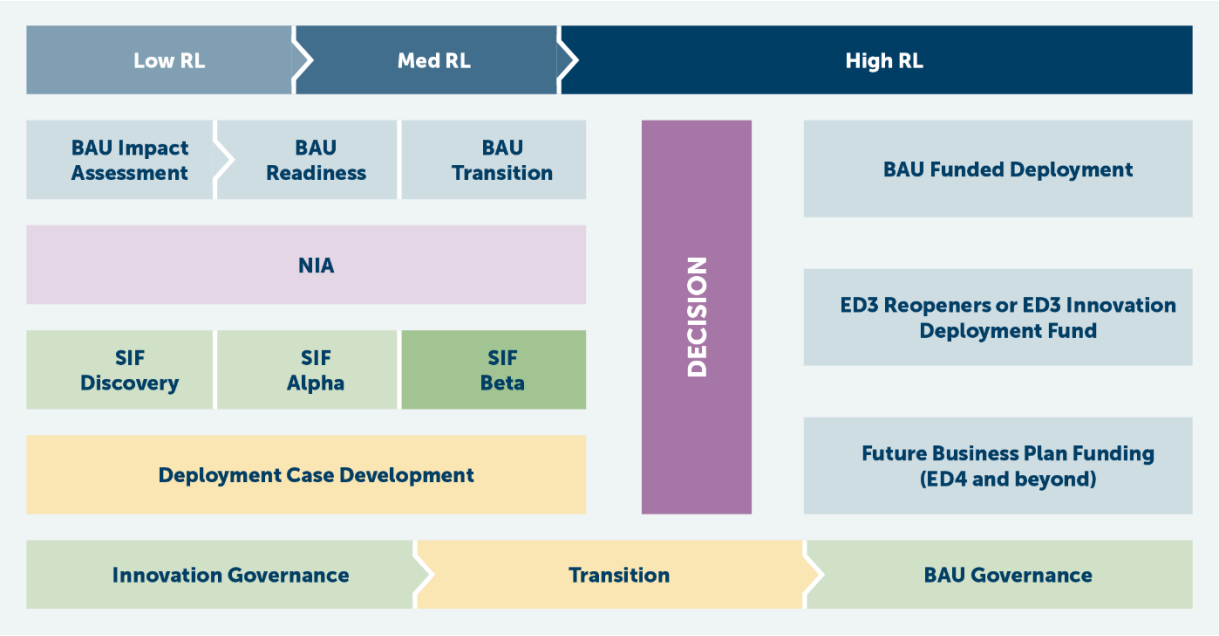


Figure 6.4. A maturing innovation culture - Integrating Innovation into the Business

Measuring and Reporting Benefits

Benefits realisation is central to our approach. Every project will establish a measurable baseline and clearly defined success criteria at approval. Our Innovation Deployment Team will track benefits throughout delivery, confirm expected benefits before deployment and monitor realised outcomes after adoption. This will ensure lessons are captured, benefits are evidenced and investment remains focused on delivering measurable value for customers and stakeholders.

Portfolio reporting will demonstrate how innovation contributes to delivery of our overall business plan, and most importantly the outcomes it delivers for customers, communities and the network. We will report progress annually through our Innovation Focus Report, providing transparent updates on deployment activity, realised benefits and portfolio performance, including progress towards our ambition to increase innovation value by 25% and generate approximately £5 of value for every £1 invested.

Sharing our Learning – Dissemination

Innovation delivers greater value when learning is shared and applied. During ED3, we will actively disseminate insights, evidence and outcomes from our innovation portfolio to accelerate adoption, reduce duplication and improve future project development.

A dedicated knowledge and communications capability will maintain engagement with customers, communities, innovators, SMEs, academics, network companies and delivery partners. Through industry forums, dissemination events, digital content, stakeholder engagement and collaborative working groups, we will create a continuous cycle of learning and improvement that strengthens project selection, identifies emerging needs and accelerates deployment. We will also continue to support industry-wide knowledge sharing through initiatives such as ENA Basecamp, SIF Innovation Delivery Groups and cross-network collaboration. By making innovation outcomes more accessible, we will maximise project value, accelerate the adoption of proven solutions and increase benefits across the energy sector.

Table 6.1. Overview of internal and external dissemination.

Metric	Value
Watts Next sessions delivered	10 recorded sessions
Internal staff attending Watts Next	400+
External Dissemination Events	20 individual events
External Organisations represented	121 organisations
Total External stakeholders	1,100+ stakeholders

We will also continue to strengthen our innovation culture through Watts Next, our internal innovation forum. Over the last year, we have delivered more than ten sessions to almost 400 employees, covering topics such as critical infrastructure resilience and robotics. These sessions have increased awareness, encouraged challenge and scrutiny, and improved confidence in the role innovation can play in solving business challenges.

6.3. Independent challenge, assurance and continuous improvement – closing the loop

Continuous improvement is central to our ED3 Innovation Delivery Strategy. Independent challenge, stakeholder scrutiny and industry collaboration will strengthen our innovation portfolio remains focused on the right priorities, delivers measurable value and continues to evolve in response to emerging challenges.

Throughout ED3, we will seek independent assurance of our innovation activities, including our project selection processes, governance arrangements, benefits management approach and deployment pathways. This external challenge will help ensure our processes remain proportionate, effective and aligned with leading practice across the sector.

We will complement this with ongoing stakeholder engagement and collaboration across the energy industry, using feedback and learning to strengthen future decision-making and improve portfolio performance. We will publish relevant learning and openly share insights to support wider industry progress.

Together, our focus on securing the right partners, selecting the right projects and delivering the right outcomes will ensure innovation remains aligned with stakeholder priorities and delivers measurable improvements in affordability, reliability, resilience, and environmental and societal value. This approach provides the foundation for delivering our ED3 Innovation Strategy, accelerating deployment and increasing the value innovation creates for customers, communities and the wider energy system.

Appendix A: STAKEHOLDER FEEDBACK

Table A. 1. Detailed record of stakeholder engagement feedback on shaping our priorities

Theme	Type of Engagement Undertaken	Stakeholder Groups	Summary Feedback	Impact on this Innovation Strategy/Business Plan – how
Data Visibility and Digital Platforms	Webinars • Connections Forums, • Data to Insights Show & Tell • Equal LCT Surveys • DSO Keep in Touch In-person Events • Energy Innovation Summit • Watt Works Hackathon Bilateral • ENA/Citizens Advice, • Ofgem DNO Innovation Forum Roundtables • UW Focus Groups Reports • Citizens Advice Transparency Review) Research • Consumer Priorities ED3 Stakeholder Engagement Workshops, March 2026 • Perth, Reading & online • Independently facilitated	DNOs, Local Authorities, Academia, ICPs/IDNOs, Community Energy Groups, Consultants, Housing Developers, Installers, Government, Research Bodies, NESO, Regulators, Consumer Advocates, Industrial & Commercial Customers, Domestic & SME Customers	Stakeholders consistently showed there is a clear demand for open, interpreted data. The areas highlighted most included: • LV asset visibility and accurate forecasting to manage LCT uptake. • Transparent capacity information to support connection applications • Real-time network data Strong cross-sector engagement shows broad support for our digitalisation direction. Self-funded innovation using AI/digital tools to improve self-serve connection capabilities and enhance insights was also seen as a key enabler. Citizens Advice highlighted inconsistent transparency in innovation reporting, with SIF projects more transparent than NIA due to stronger regulatory governance.	We have been improving our LV network visibility and LCT forecasting through innovation NIA and SIF initiatives such as **LCT Connections Readiness Indicator (CRI)**, and **RESOP**. This has complemented internally funded work on enhanced DFES forecasting, and a new Network Model Manager, all of which combine to provide greater insight into network and customer readiness for electrification. AI and digital innovation are a core part of our Digital, IT and Connections strategies, and we have strengthened plans in visibility of near-real time and LV asset data following feedback. We continue to prioritise digitalisation in our innovation strategy by making Data Visibility and Digital Platforms and AI-Driven Network Intelligence two of our six core innovation themes. Transparency is a central element of our ED3 Innovation Strategy. We have committed to publishing an annual innovation report, providing feedback on innovation proposals, strengthening benefits tracking, and creating clearer pathways from NIA and SIF projects into business-as-usual deployment. This will improve visibility of innovation decision-making and ensure successful projects

	• Session 1 - Planning for the ED3 price control			are translated more effectively into customer and network benefits
Network investment and decarbonisation	Webinars • FORTRESS Show & Tell • FARM Webinar • Equal LCT • Closing the Loop In-person Events • Energy Innovation Summit Bilaterals • Ofgem DNO Innovation Forum Research • Consumer Priorities ED3 Stakeholder Engagement Workshops, March 2026 • Perth, Reading & online • Independently facilitated • Session 1 - Planning for the ED3 price control	DNOs, Healthcare Sector, Government, Emergency Response, Supply Chain Partners, Academia, Research Bodies, Local Authorities, Community Energy, Consultants, Transmission, Installers, Contractors	Stakeholders perceive network reinforcement as slow, disruptive and expensive, calling for faster, lower impact solutions. With the highest priority being low- or no-dig approaches. Improved insight into cable condition and asset health forecasting were jointly ranked as the second priority. Coordinated planning was emphasised as essential for resilience and cost reduction. Developers suggesting advanced construction techniques such as simplified easements, coordinating upgrades and directional drilling. Insights from our FORTRESS project webinar highlighted the need to focus on decarbonising protected sites (hospitals, airports).	Based on this feedback, we have made Advanced Construction and Cabling Techniques one of our innovation themes. We are committed to developing faster, lower-impact network upgrades, including low-dig installation techniques and improved cable diagnostics. We have started this through projects such as Grounds for Change and Pathways to 2050, which are exploring faster reinforcement approaches, smarter network planning and improved coordination across sectors. Further details are provided in Section 3: Our ED3 Priority Areas. Stakeholders also highlighted the challenge of decarbonising critical and protected sites. Building on the outputs of FORTRESS, SeaChange, FARM and RIDES, we will develop a focused industrial and commercial decarbonisation portfolio. This will improve planning, strengthen stakeholder engagement and support practical, resilient pathways to decarbonisation for these critical infrastructure sites. We continue to look for opportunities in BAU to accelerate connections, through Flexibility and Access Products. We expect to build on Access Products developed in ED2 such as timed connections and ramping products to continue to find new innovative ways of connecting customers sooner. More information can be found in our DSO and Connection Strategies.

Robotics, Automated Systems and AI Driven Network Intelligence	Webinars • Customer Service & AI Think Tank • Future of Installers Think Tank • Data to Insights Show & Tell • Connections Forums In-person Events • Energy Innovation Summit Roundtables • UW Focus Groups Bilaterals • Ofgem DNO Innovation Forum Research • Consumer Priorities ED3 Stakeholder Engagement Workshops, March 2026 • Perth, Reading & online • Independently facilitated • Session 1 - Planning for the ED3 price control	DNOs, Consumer Advocates, Regulators, Academia, Installers, ICPs/IDNOs, Housing Developers, Industrial & Commercial Customers, Government, Supply Chain Partners, Digital & Data Specialists, Research Bodies	Stakeholders confirmed AI must be trustworthy, transparent and explainable. Customers need to understand how answers are generated. There were strong concerns that 'confidently wrong' AI could cause major reputational harm. Customers value easy escalation to humans and clear boundaries for AI operation. Especially for complex or high-stakes issues and vulnerability and inclusivity must be designed in from start. AI, automation and integrated data is viewed as essential for DSO system-orchestration. Improved prediction of outages and restoration times ranked as top AI priority. Stakeholders prioritised robotics as a way of reducing high-risk work (working at height or in confined spaces). The second priority for robotics is to enable faster, consistent asset inspections.	We have already developed AI tools to support our business with AI being used to enable our call handlers in the customer connect centre to give better customer service and to speed up connections via Connect Direct. AI is evolving rapidly and, as stakeholders highlighted, we recognise both the opportunities and the risks. AI-Driven Network Intelligence is one of our six ED3 innovation themes. As shown in our ED3 Data and Digitalisation Annex (ED3-S13), we are focusing on using AI to improve forecasting, decision-making and network performance. We apply robust governance and risk management throughout project development, particularly for innovative projects. AI and data governance are managed at SSE Group level through established policies on the ethical and responsible use, supported by dedicated Information Security and Cyber Defence teams. Learning from our recent AI projects and stakeholder feedback have helped shape these policies and processes. With commitments to explainable AI, human oversight of decision-making, and clear escalation routes to human support for customers. Stakeholders also strongly supported the use of robotics to reduce operational risk. Reflecting this, Robotics and Automated Systems is one of our six core ED3 innovation themes. We will explore how robotics and automation can reduce manual, high-risk and time-consuming

				activities, improving both safety and operational efficiency across the network.
Climate Resilience and Nature-Based Solutions	Webinars • Future-Proofing Power • Greener Horizons EAP • FARM • FORTRESS Show & Tell • Closing the Loop In-person Events • Energy Innovation Summit • ENA Innovation Basecamp Research • Consumer Priorities Surveys • DSO Keep in Touch ED3 Stakeholder Engagement Workshops, March 2026 • Perth, Reading & online • Independently facilitated • Session 1 - Planning for the ED3 price control	DNOs, Local Authorities, Academia, Supply Chain Partners, Storage & Renewable Providers, Community Councils, Community Interest Groups, Contractors, Research Bodies, Policy Forums, Consultants, Healthcare Sector, Government, Energy Suppliers	Predicting and preventing climate-related faults and the use of more climate resilient materials were ranked as top priorities. Stakeholders highly valued further reliability improvements (89%) with improving reliability for customers with multiple unplanned interruptions as a top priority. There was strong agreement (89%) for targeted spending for Worst Served Customers and 81% agreed nature-based solutions should be used as critical tool if proven. 78% supported peatland restoration, 56% woodland/seagrass as priority habitats. 70% agreed ED3 climate resilience investments will improve resilience and 80% saw high value in flexible use of undergrounding.	**Climate Resilience and Nature-Based Solutions** has been prioritised as our number one ED3 innovation theme in direct response to stakeholder feedback. We recognise that improving resilience starts with better understanding and prediction of weather and climate impacts on the network. We expect to fast follow SPEN'S SIF project Predict4Resilience (P4R) and deploy into BAU to support this. When innovations within our Nature4Networks (N4N) SIF project are proven, we anticipate deploying these in BAU in the second half of ED3. We expect these Nature-based Solutions will support climate resilience and adaption whilst offering value for money. We have been able to establish N4N as an industry-leading programme due to the collaborative relationship between the innovation and sustainability teams in SSEN. We expect this to continue with new currently unknown innovations being developed in ED3. Stakeholder priorities around reliability and support for Worst Served Customers have also shaped our plans. Our Hebrides and Orkney Whole System Uncertainty Mechanism (HOWSUM) application is informed by this and innovation projects such as RaaS. Insights from VFES are now being built into VERIFY, enabling a more targeted approach to identifying vulnerability, improving resilience and delivering better outcomes for customers who experience multiple unplanned

				interruptions. In addition, we will continue to assess customer and social impacts alongside engineering requirements when planning LV overlay and unlooping programmes in ED3, helping ensure investment decisions deliver the greatest overall benefit.
Customer and Social Value Innovation	Webinars • Service Based PSR Think Tank • LCT Energy Efficiency & Fuel Poverty Think Tank • Equal LCT Surveys • DSO Keep in Touch In-person Events • Watt Works Hackathon Research • Consumer Priorities Research Roundtables • UW Focus Groups ED3 Stakeholder Engagement Workshops, March 2026 • Perth, • Reading & online deliberative workshops, independently facilitated. • Session 1 - Planning for the ED3 price control.)	Charities, Consumer Groups, Customers in Vulnerable Situations, DNOs, GDNs, Community Councils, Community Interest Groups, Domestic & SME Customers, Future Consumers, Health Workers, Local Energy Advisors, Installers, Local Authorities	Digital exclusion has been identified as major vulnerability with many customers unable to use digital channels, lack confidence, or lose all connectivity during outages. Rural and island communities can experience complete communications blackouts during power cuts, making offline, local and resilient communication methods essential. There are high levels of fear around data use, fraud and privacy leading to mistrust of digital services. Customers often don't recognise SSEN, reducing trust and creating barriers to engagement, whereas local intermediaries are trusted far more than national organisations.	Customer and Social Value Innovation is a core ED3 theme, reflecting our commitment to ensure all customers, particularly those who are vulnerable or face barriers, can benefit from the energy transition. While innovation helps drive digital inclusion, we also recognise we need to retain accessible non-digital options. Our VERIFY programme is a key to this approach and will support improved identification and engagement of vulnerable customers throughout ED3. We are already delivering practical support through BAU funded innovations such as Personal Resilience Plans, PSR Batteries, Suitcase Generators and SmartETR. We will continue to invest in both NIA-funded and business-funded solutions to improve customer resilience. Trust and community engagement remain essential. To support this, we will continue to work c across a wide range of organisations to expand community resilience initiatives. Strong collaboration with Customer, Consumer Vulnerability and operational teams across the business will enable us to find new and innovative approaches.

Appendix B: ED2 TRACK RECORD

Table B. 1. RIIO-ED2 NIA projects (Note: NIA usage in ED2. Project values shown are in nominal price at the time of project registration)

Project	Reference	Focus Area	Current status	Next steps	Value[3]
Accelerating Progress to a Net Zero world					
Equal LCTs	NIA_SSEN_0076	Improving access to LCTs	Completed	Informed ED3 DNO Role in LCT and Energy Efficiency Rollout Annex (ED3-S08)	£0.53m
Regional Energy System Optimisation Planning (RESOP/LEZNA)	NIA_SSEN_0071	Creating a digital tool to help create LAEPS and LHEES	Completed – Deploying	Fully implemented used by 62 local authorities	£3.95m
Low Voltage Power Quality (LVPQ)	NIA_SSEN_0069	Managing the effect of LV LCTs on power quality	Live	Ongoing. Informed ED3 LRE Annex (ED3-S01).	£1.67m
Safe Resilient and Responsive Network					
Demand Diversification Service for LMAs	NIA_SSEN_0072	LV flexibility to manage constraints	Completed – follow on registered	Informed DDS2 phase 2.	£0.33m
Demand Diversification Service for LMAs Phase 2 – Commercial Trials	NIA_SSEN_0078	Trialling findings from first DDS project	Live	Implemented and informed BAU flexibility services.	£2.06m
Voltmetric	NIA_SSEN_0080	Creating an index of voltage and power quality health to inform network investment decisions	Live	Included in ED3 DSO Strategy (ED3-S10)	£1.00m
Pathfinder	NIA_SSEN_0081	Modernising substation communications	Live	Ongoing	£2.54m
Providing a Valued and Trusted Service					
ExtenDER	NIA_SSEN_0067	Market based connections to alleviate constraints	Completed	Informed flexible access products	£1.41m

New Approach to Losses	NIA_SSEN_0068	Losses apportionment in generation dominant networks	Completed – Deployed	Implemented	£0.39m
Near Real-time Data Access 2 (NeRDA 2)	NIA_SSEN_0070	Realtime network data tool - expanding on the outputs of NeRDA	Completed – Deploying	Included in our open data portal.	£0.93m
Alternative Jointing 2	NIA_SSEN_0075	Improving jointing techniques to increase speed and reduce waste	Live	Ongoing	£2.47m
Making a Positive Impact on Society					
HOMEflex (Household or Microbusiness Energy Flexibility) Compliance	NIA_SSEN_0073	Creating consumer confidence in flexibility markets	Completed – Deployed	Utilised by all DNOs, NESO for flexibility procurement	£0.193m
Lancet	NIA_SSEN_0082	Developing a tool to sample oil, for PCBs, from pole mounted transformers in situ	Live – Nearing Deployment	Included in ED3 EAP (ED3-S14)	£0.100m
APPEAL ED-2 (partner)	NIA_SPEN_0098	Finding alternatives to creosote for wood pole treatment	Live	Ongoing	£0.056m
SHINE Non-Electric Boiler (partner)	NIA_CAD0110	Maintaining power to boilers in the event of outages	Completed – Phase 2 in review	Progressing in phase 2	£0.054m
Low to no power heat alternatives (partner)	NIA_NGN_391	Developing community resilience solutions	Completed	No viable solution identified	£0.081m
Vulnerability Visualisation Tool Phase 2 (partner)	NIA_NGN_422	Developing a mapping tool for identifying vulnerability in communities	Completed – Led to Open Maps	See Open Maps	£0.158m
Rethinking Communication for Digital Exclusion (partner)	NIA_NGN_492	Creating a scalable communication framework and roadmap to improve engagement with digitally excluded energy consumers.	Completed – led to project NIA_NGN_503	Ongoing with NGN	£0.034m
Open Maps (partner)	NIA_NGN_458	Continued development of Vulnerability Visualisation Tool	Completed – Deployed	Implemented in vulnerability mapping in ED2	£0.039m
Understanding Consumer Behaviours for a Just Energy Transition (partner)	NIA_WWU_02_81	Building a decision-support toolkit providing consumer insights, modelling, and recommendations for energy transition planning.	Live	Ongoing	£0.107m

Table B. 2. RIIO-ED2 NIA Pipeline (Note: Projects to be completed during the remainder of ED2. These are all subject to approval by innovation governance board before project initiation.)

Project	Description	Anticipated costs - subject to confirmation
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]



Table B. 3. Our ED2 SIF portfolio

Project Name	ED2 Status	Project Description - Outcome /Next Steps	Total Funding awarded
Accelerating Progress to a Net Zero world			
Pathways to 2050	Discovery - NA Alpha - NA Beta - Live	Consumer-centred, data-driven approach to planning and delivering low-voltage electricity networks at scale.	£9.94m

Equal LCT	Discovery - [NIA] Alpha - Complete	Project develops a data-driven approach to enable fair, large-scale uptake of heat pumps and energy efficiency while reducing heating-related network peaks. Learning incorporated in ED3 LRE Annex (ED3-S01), informed role of DNO in Energy Efficiency and also provided input to ongoing unlooping trials	£0.45m
Fast Track AI for Connections	Discovery - Complete Alpha - Complete Beta - Planned	A data-driven planning and visualisation tool that uses probabilistic forecasting to improve how electricity networks assess connection requests and future demand. Awaiting outcome of Beta application August 2026	£0.64m
LEO-N Local Energy Oxfordshire – Neighbourhoods	Discovery - Complete Alpha - Complete Failed Fast	Building on Project LEO, LEO-N develops a whole-system, place-based approach to accelerating local decarbonisation. Helped inform ED3 LRE Annex (ED3-S01) and possible future local energy projects.	£0.62m
SeaChange	Discovery - Complete Alpha - Complete Will move to IDG	Develops a data-driven approach to support the decarbonisation of ports and the wider maritime sector by improving visibility of future electricity demand. Options for progression to Beta after SIF Mission 1 IDG is established	£0.59m
FORTRESS Flexibility and Optimisation for Resilience in Energy Systems	Discovery - Complete Alpha - Live Beta - Planned	Explores how critical and protected sites, such as hospitals, can decarbonise while maintaining resilience and essential services. Options for progression to Beta after SIF Mission 1 IDG is established	£0.15m
DIME Demand Insights for Metered Enterprises	Discovery - Complete Alpha - Planned	Addresses a critical visibility gap in small and medium enterprises (SMEs) electricity demand where half-hourly data is not available to improve low-voltage network planning. Parked meantime to assess other in-house options.	£0.15m
FARM Future Agriculture Resilience Mapping	Discovery - Complete Will move to IDG	Explores how future energy demand from food production could change as agriculture decarbonises, and how distribution networks should plan for this. Options for progression to Beta after SIF Mission 1 IDG is established	£0.13m
RIDES Rural Industrial Decarbonisation Energy Scenarios	Discovery - Complete Will move to IDG	Develops a data-driven tool to help rural industrial sites plan their decarbonisation pathways while giving network operators clearer visibility of future demand. Options for progression to Beta after SIF Mission 1 IDG is established	£0.12m

Providing a Valued and Trusted Service

I-LAD Improving Losses Analysis and Detection	Discovery - Complete Alpha - Complete Beta - Planned	I-LAD develops a modern, data-driven approach to identify and manage non-technical electricity losses such as theft, unmetered supplies and metering issues. Informed ED3 DSO Strategy (ED3-S10), possible future Beta submission	£0.65m
3D Asset Rating Dynamic, Data driven Asset Rating	Discovery - Complete Alpha - Complete Beta - Planned	3DAR developed and tested a digital, sensor-less approach to rapidly identify where Dynamic Line Rating could unlock additional network capacity. Options for progression to Beta after SIF Mission 1 IDG is established	£0.61m
Data2Insights	Discovery - NA Alpha - Complete Beta - Planned	Data2Insights transforms complex, high-volume network and open data into trusted, actionable insights for low-voltage planning and connections. Revaluating for future Beta Submission to address Ofgem feedback	£0.50m
MaxFlex	Discovery - Complete Failed Fast	MaxFlex develops the concept of Energy Flexibility Certificates (EFCs) to make the flexibility potential of industrial, commercial and public-sector buildings visible to networks and customers. Informed LEMA and BAU Flexibility Tool kit also informed ED3 DSO Strategy (ED3-S10).	£0.14m
Dynamic Networks	Discovery - Complete Failed Fast	Dynamic Networks explored and developed a dynamic connections approach to enable faster low-carbon technology connections in constrained residential networks. Informed LEMA and BAU Flexibility Tool kit also informed ED3 DSO Strategy (ED3-S10).	£0.14m
UN:LOCK Unblocking Networks: Local Optimisation, Consumers and Knowledge	Discovery - Complete Failed Fast	UN: LOCK explores innovative commercial arrangements to unlock spare capacity on constrained distribution networks. Informed LEMA and BAU Flexibility Tool kit also informed ED3 DSO Strategy (ED3-S10).	£0.10m
Making a Positive Impact on Society			
Nature4Networks	Discovery - Complete Alpha - Complete Beta - Live	Explores how nature-based solutions (NbS) can be used as sustainable, resilient alternatives to traditional engineering for electricity networks. Informed our ED3 Climate Resilience Strategy (ED3-S03) and Environmental Action Plan (ED3-S14).	£8.54m
VIVID Vulnerability Identification Via Informative Data	Discovery - Complete Alpha - Complete Beta – VERIFY - LIVE	Developed secure, GDPR-compliant methods to combine data from energy networks, local authorities and the third sector to better identify households in vulnerable situations. The project demonstrated how shared insight can significantly improve targeting of support and inform more inclusive network planning. Informed ED3 Vulnerability Strategy (ED3-S06), LRE Strategy (ED3-S01) and DSO Strategy (ED3-S10) as well as ongoing VERIFY Beta project.	£0.54m

VERIFY Vulnerability Evaluation for Resilience Investment and Flexibility	Discovery - VIVID Alpha - VIVID Beta - Live]	Brings together network, property, demographic and smart-meter data to create a GDPR-compliant way of identifying consumer vulnerability and readiness for the energy transition. Informed ED3 Vulnerability Strategy (ED3-S06), LRE Strategy (ED3-S01) and DSO Strategy (ED3-S10) – project ongoing	£5.33m
CREOS-OUT	Discovery - Complete Alpha - Planned	Explores a nature-based bioremediation solution to break down harmful creosote contaminants in treated wood poles. Awaiting outcome of Alpha Application	£0.14m
Grounds for Change	Discovery - Live Alpha - Planned	Explores innovative street works methods to reduce disruption, cost and carbon emissions from electricity network excavation. Awaiting outcome of Alpha Application	£0.09m
Partner Projects			
Multi Resilience Lead Partner - NPg	Beta Partner In Progress	Developing and demonstrating energy storage solutions to improve resilience, flexibility and planning across long HV-fed LV networks	0.07m
Predict for Resilience Lead Partner - SSEN Transmission	Beta Partner In Progress	Being deployed following funding in Digital Reopener	0.04m
Guidelight Lead Partner - UKPN	Alpha Partner Completed	Parked – helped inform Equal LCT NIA and SIF projects.	0.02m
Nimbus SSEN Transmission	Alpha Partner Completed	Parked – informed P4R deployment plan	0.01m
Trinity Lead Partner - UKPN	Alpha Partner Completed	Some learning for Future control room options	0.05m
Crowdflex Lead Partner	Beta Partner Completed	Informed ongoing ED2 Flexibility processes and will be used as basis for future flex projects especially around LV	0.12m
Total			**£30m**

Table B. 4. Our BAU projects completed and planned

BAU Initiative	Description	Benefits	Status	Preceding innovation projects

				including fast follow
Accelerating Progress to a Net Zero World				
Flex Access Products	Enables customers to connect to the network ahead of reinforcement. Using managed or constrained access, supported by flexibility services.	Fast, lower- cost network connections; Supports early connections of low-carbon technologies.	**Deployed – Ongoing improvements**	**EXTENDER FASTRACK**
Local Energy Markets Alliance (LEMA)	LEMA collaboration offering local flexibility services in constrained areas without reinforcement.	Faster local connections; Unlocks domestic customer flexibility, to manage demand within network limits.	**Completed**	**LEO-N UNLOCK Dynamic networks DDS**
Systems for Flex	Integrates data, systems and workflows to enable safe and consistent flexibility of product operations.	Efficient E2E flexible operations capabilities; Improving operational decision-making by automated systems; Improves data visibility and integration supporting better forecasting, reporting and network coordination.	**Deployed – Ongoing improvements**	**LEO-N UNLOCK Dynamic networks DDS**
Investment Optimiser	Integrates load related investment, non-load, resource capability, network data, systems and customer data to optimise network investment planning and delivery	Efficient delivery of network investment, reduced disruption for customers and communities. Optimised use of existing network assets	**Deployed – Ongoing improvements**	**LENZA , VFES**
Advanced project Management tools	New digital solution for managing project portfolios, controlling costs, contracts and schedule milestones, whilst enabling collaboration and communications across projects, all in a single system	These improvements will grant us better data access and a consolidated view of critical project information, supporting informed decision-making, reducing manual work, and improving collaboration across departments and with contractors.	**Deployed – Ongoing improvements**	**Implemented straight to BAU**

Advanced Connectivity Model	New network model to map connectivity across the network from EHV, HV, LV and service level.	Improved network planning, fault response and better-informed investment planning.	**Deployed – Ongoing improvements**	**Project LEO, TRANSFORM**
Delivering a Safe Resilient and Responsive Network				
Lancet (PCB detection on live network)	Developing a tool to sample oil, for PCBs, from pole mounted transformers in situ.	Avoids planned outages, enables targeted PCB compliance testing, and improves efficiency and safety through live-line working techniques.	**Deploying - BAU**	**NA**
Video Surveys	The use of AI-enabled video surveys to support low-carbon technology connections plus, exploring asset inspection, vegetation management and field data capture.	Enables remote surveys, reducing site visits and accelerating customer connections.	**Deployed**	**Implemented straight to BAU**
VR Based Training	Delivering immersive AR/VR-based operational training - primarily supporting LV and HV fault location and anticipation activities.	Improves safety, skills and remote learning in a risk-free environment.	**Deploying - BAU**	**Implemented straight to BAU**

Wooden Pole Data Collection	Digital data-driven tools for inspecting wooden poles.	More accurate inspections with safety improvements for field staff; Provide better asset management decisions.	**Ongoing Deployment in BAU during ED2**	**Smart Hammer Thor Hammer – fast follow from NPG**
HV Fault Location	Advanced monitoring and fault-finding tools to identify HV network faults.	Faster HV fault identification resulting in quicker restoration - reducing customer interruptions.	**Ongoing Deployment in BAU during ED2**	**Distribution fault anticipation phases 1 and 2 fast follow from UKPN DFA NIA project**
LV Fault Finding Toolkit	A suite of advanced fault-finding / digital monitoring tools for low-voltage fault detection and restoration.	Faster, efficient and effective fault diagnosis resulting in quicker restoration - reducing customer interruptions.	**Ongoing Deployment in BAU during ED2**	**LV UFLT NIA project**
Further HV automation	Further development of HV automation and remote switching to reduce disruption for customers from outages	Improved customer service, improved reliability and reduced disruption	**Ongoing Deployment in BAU during ED2**	**Implemented straight to BAU**
Providing a Valued and Trusted Service				
Customer Channel Management – Amazon Direct	Replacing legacy telephony with Amazon Connect, a cloud-based contact platform with AI support.	Faster issue resolution and improved customer experience by embedding AI into human service delivery.	**Deployed**	**Implemented straight to BAU**
Network Model Manager (NMM)	A single digital model of the electricity distribution network to support planning, operations and reporting.	Provides a single, integrated view of the network's data, enabling better planning, forecasting and smarter investment decisions while supporting net-zero and ED3 ambitions.	**Ongoing Deployment in BAU during ED2**	**Implemented straight to BAU**

Smart Estimated Time of Restoration (ETR)	An AI tool predicting estimated times of restoration during outages.	Significantly improving *ETR accuracy and customer communications, while reducing repeat contacts. Enhancing business reputation and supporting regulatory incentives and efficiency savings. *The tool has been used over 17,000 times in a year, benefiting hundreds of thousands of customers	**Deployed – Ongoing improvements**	**Implemented straight to BAU**
PowerTrack	A tracking platform providing real-time outage and restoration progress to customers and internal teams. It's a trusted single of information during power cuts and major incidents.	Provides real-time outage and restoration updates, enables *customer self-service, and supports reporting of network damage. *Used by over 1.2 million customers annually	**Deployed – Ongoing improvements**	**Network visibility manager ED1 innovation**
Zapmap Integration in PowerTrack	Integration of Zapmap EV charger data into PowerTrack, providing live visibility of charger availability and outage impacts during power cuts.	Provides real-time EV charger availability and outage information, improving customer experience and supporting self-service during power cuts elevating customer support pressure.	**Deployed – Ongoing improvements**	**As above**
Smart Meter Pings in PowerTrack	Uses smart-metering outage & voltage data "pings" to help self-triage faults during power cuts.	Faster triage, confirming power status, supporting fault diagnosis, improving outage updates, and restoration efficiency.	**Deployed – Ongoing improvements**	**Implemented straight to BAU**
IVR Smart Meter integration with pings	Integrates smart meter data into IVR and digital outage journeys. Enabling real-time confirmation of customer supply status without manual intervention.	Provides fast, reliable supply status updates, improving fault diagnosis, restoration times and first-contact resolution, while supporting scalable outage management during high-volume events.	**Deployed – Ongoing improvements**	**Implemented straight to BAU**
Making a Positive Impact on Society				

Natural Asset Platform	Digital platform for managing biodiversity and natural capital data. Meeting statutory environmental requirements and managing nature as a measurable asset alongside traditional network infrastructure.	Creates a single platform for managing biodiversity and natural capital, supporting better investment decisions, environmental reporting and regulatory compliance.	**Deploying - BAU**	**Implemented straight to BAU**
Hydrotreated Vegetable Oil (HVO) in mobile generation	Replaces diesel with HVO fuel in mobile generators. This is a transitional step towards planning to go fully decarbonised mobile generation.	Reduces carbon emissions and improves air quality from mobile generation, while supporting the transition to fully decarbonised alternatives.	**Deployed**	**Implemented straight to BAU**
Priority Services Register (PSR) Batteries (CVP)	Battery backup rollout for vulnerable customers, who are medically dependent on electricity during power cuts.	Improves resilience, safety and wellbeing for *vulnerable customers who depend on electricity by providing battery backup during power outages. * The project provided 20,000 high-capacity home battery units to PSR 1+ customers during RIIO-ED2	**Ongoing Deployment in BAU during ED2**	**ED1 funded battery trials**
Personal Resilience Plans (CVP)	Tailored resilience support for vulnerable customers.	Delivering bespoke resilience plans for vulnerable customers.	**Deployed**	**Implemented straight to BAU**
Suitcase Generators	Deployment and improvement of portable emergency generators for vulnerable customers.	Provides quick deployment of portable emergency power for vulnerable customers during outages, with a focus on lower-carbon alternatives.	**Deployed**	**ED1 funded battery trials**
LIDAR	Use of Lidar surveys for vegetation management, is now fully embedded in our BAU processes, this was fast followed from earlier SPEN and National Gas NIA projects	This uses lidar scanning techniques to survey entire overhead network using aircraft. This removes the need for time consuming and expensive line patrols, as well as improving the quantity and quality of the data available to inform our vegetation management processes	**Deployed – fast follow**	**Earlier National Gas NIA_NGGT0116 and SPEN - NIA_SPEN0002 NIA projects**

LV Automation	Use of Bidoyng and other equivalent LV automation devices to reduce disruption to customers from low voltage cable faults,	These devices automatically replace a fuse in the event of an LV fault, in many cases restoring supplies to customers quickly, as well as providing additional data to allow faster repair of the underlying fault. Significantly reducing disruption and improving resilience for customers,	**Deployed – fast follow**	**ENWL LCNF Tier1 - Bidoyng Smart Fuse**
LV Monitoring	Development of LV Monitors has been informed by a series of incremental innovation projects to allow deployment of monitoring at scale	Enhances LV visibility, better understanding of loading on LV network to improve both operation and investment planning	**Deployed – fast follow**	**ENWL – LCNF T1 – LV Network Solutions, NGED LCNF T1 – LV Current Sensor Evaluation. Low Cost Substation Monitoring NIA_SSEPD_0027**
Predict for Resilience	P4R is an innovative to which utilises advanced data science and statistical methods to better predict the impact of severe weather on the network	This enables more proactive deployment of resources to reduce disruption for customers	**Ongoing Deployment in BAU during ED2 – fast follow**	**SPEN SIF Beta – P4R**
CLASS / Voltage Management	How best to manage network voltage to optimise use of the network by more dynamically controlling network voltage	Additional headroom and options for wider network voltage support to improve whole system performance	**Ongoing Deployment in BAU during ED2 – fast follow**	**ENWL – CLASS NIC Project**

Appendix C: BENEFITS CALCULATION METHODOLOGY

Calculating the benefits of innovation, particularly forecasting future benefits, is inherently challenging. Innovation programmes often generate a combination of direct and indirect benefits over extended periods, with outcomes arising from multiple interconnected projects rather than a single intervention.

This document sets out the methodology used to assess the benefits delivered by SSEN's innovation portfolio from the start of RIIO-ED1 to the end of March 2026.

It is important to recognise that the benefits quantified through this methodology represent only a proportion of the total value created by innovation. Innovation delivers a wide range of benefits, including capability building, knowledge creation, organisational learning and market development, many of which cannot be robustly quantified. To ensure consistency and objectivity, this assessment is limited to benefits that can be captured within established Ofgem Cost Benefit Analysis (CBA) frameworks.

The Ofgem CBA methodology focuses primarily on:

- Avoided network costs
- Environmental benefits, principally through reductions in greenhouse gas emissions (tCO_2e)
- Societal benefits, including improved reliability, reduced customer interruptions and safety improvements

As a result, the quantified benefits presented in this assessment should be considered a conservative estimate of the overall value generated by SSEN's innovation activities.

Step 1: Categorisation of Projects

All innovation projects undertaken between the start of RIIO-ED1 and the end of the 2025/26 financial year were mapped against the four RIIO-ED2 strategic priorities.

This enabled the portfolio benefits to be assessed and presented in a way that demonstrates how innovation contributes to SSEN's strategic objectives and priority areas.

Step 2: Identification of Benefit-Delivering Projects

Each project was reviewed to determine whether it had delivered measurable benefits or had a credible pathway to delivering measurable benefits in the future.

Where projects formed part of a wider programme of incremental innovation activity, benefits were generally attributed to the project or phase most directly responsible for delivering the outcome rather than being duplicated across earlier stages.

For example, the Whole System Growth Scenario Modelling programme evolved through several phases before ultimately enabling the RESOP project and the development of the LENZA platform (now LAEP+). While the earlier projects were critical in removing risks and developing knowledge, capability and methodology, the quantified benefits were attributed only to the phase that directly enabled deployment and value creation.

The same principle was applied to Strategic Innovation Fund (SIF) projects, with benefits typically assigned to the most advanced phase for which a robust benefits case existed.

Step 3: Selection of the Benefits Case

For each project, the most up-to-date benefits case available at the time of assessment was used.

Depending on project maturity, this could include:

- Measured benefits from deployed solutions
- Approved business case forecasts used to support deployment decisions
- Forecast benefits from mature innovation projects progressing towards implementation
- Forecast benefits from earlier-stage projects with a credible route to deployment

This approach ensured the assessment reflected the best evidence available for each project.

Step 4: Adjustment for Delivery Confidence

Recognising that benefits forecasts carry differing levels of uncertainty depending on project maturity, an adjustment factor was applied to each project's benefits case to reflect the likelihood of benefits being realised.

Confidence factors were assessed on a project-by-project basis. However, a broadly consistent framework was applied across the portfolio and varied if required for specific projects:

Project Maturity	Typical Confidence Factor
Early-stage projects, including low-TRL activities and SIF Discovery projects	~10%
Projects at approximately SIF Alpha stage or equivalent maturity	~30%
Projects demonstrating strong business engagement, successful trials or evidence of adoption	50-70%
Deployed projects with measured benefits and established operational use	90-100%

These confidence factors were intended to ensure a prudent and realistic assessment of future value, reducing the risk of overstating benefits from less mature innovations.

Step 5: Aggregation and Reporting

Following adjustment for delivery confidence, project benefits were aggregated and grouped into thematic areas. These themes were then aligned to the RIIO-ED2 strategic priorities.

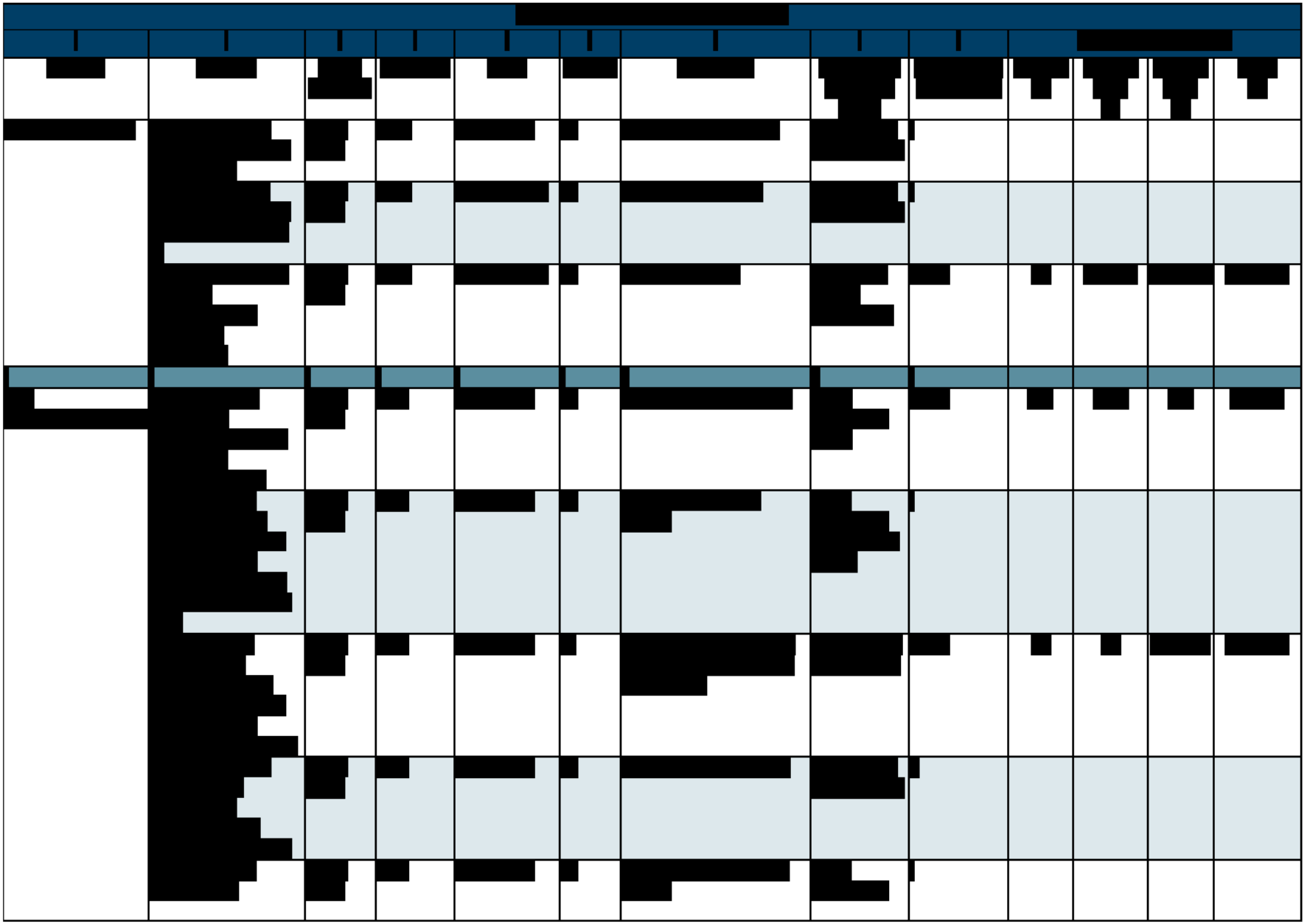
This approach provides a clear view of how innovation activity contributes to strategic outcomes while avoiding unnecessary project-level detail. It also ensures that portfolio benefits are presented consistently and transparently across all innovation investment areas.

Summary

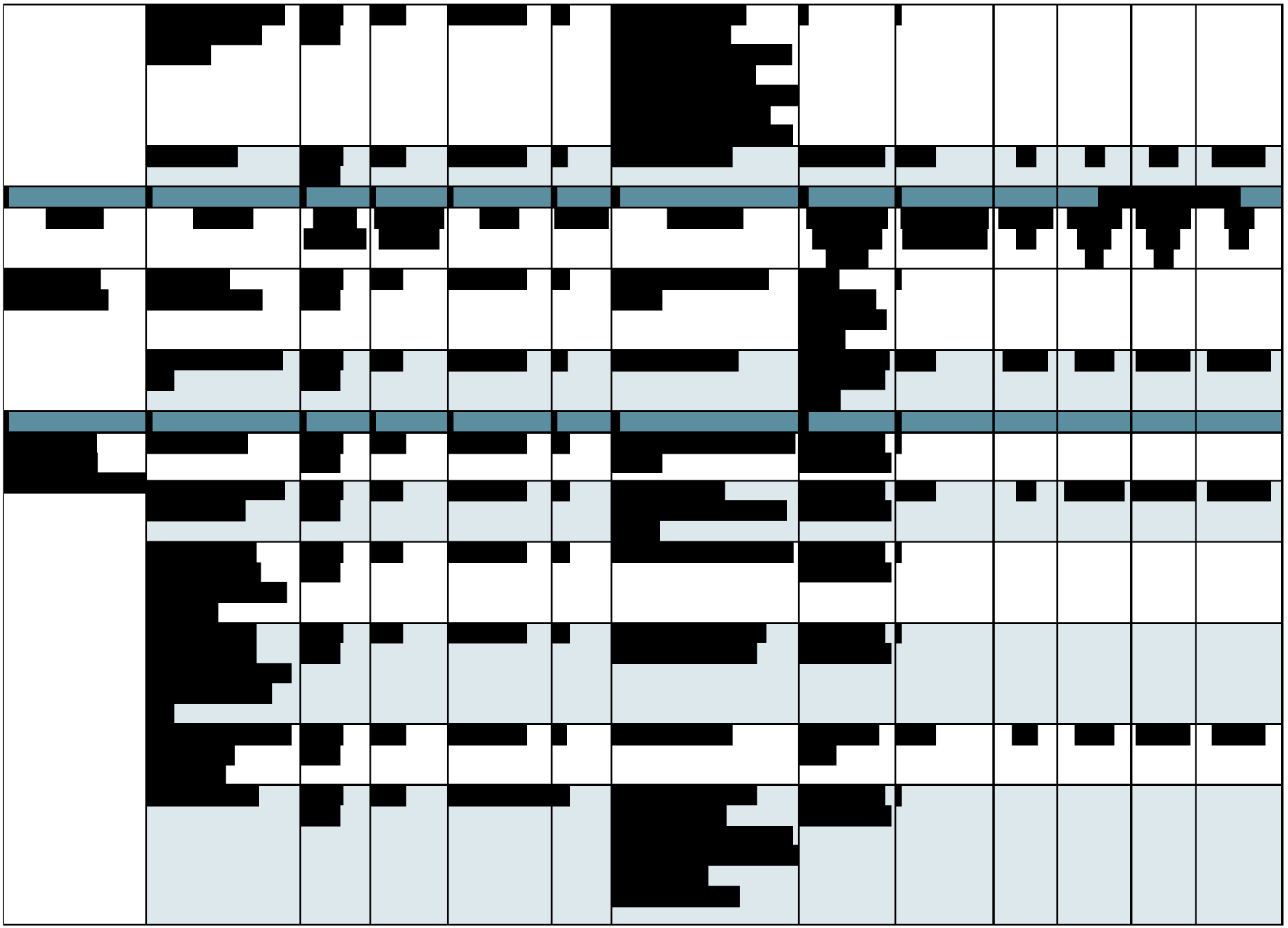
The methodology applies a consistent five-step process:

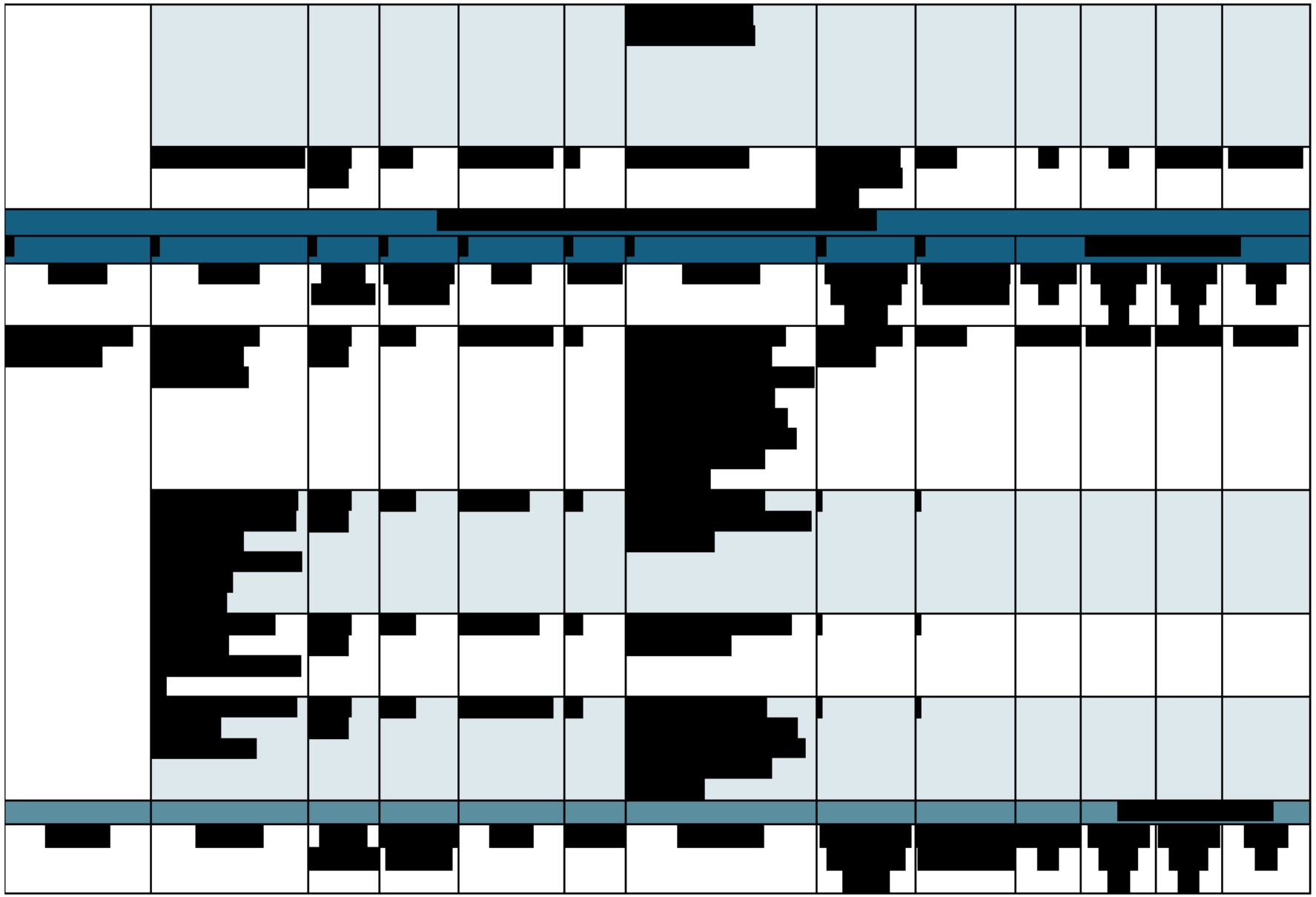
1. Categorise projects against RIIO-ED2 strategic priorities.
2. Identify projects with measurable or prospective benefits.
3. Select the most robust and up-to-date benefits case available.
4. Apply confidence factors reflecting project maturity and delivery risk.
5. Aggregate and report benefits by theme and strategic priority.

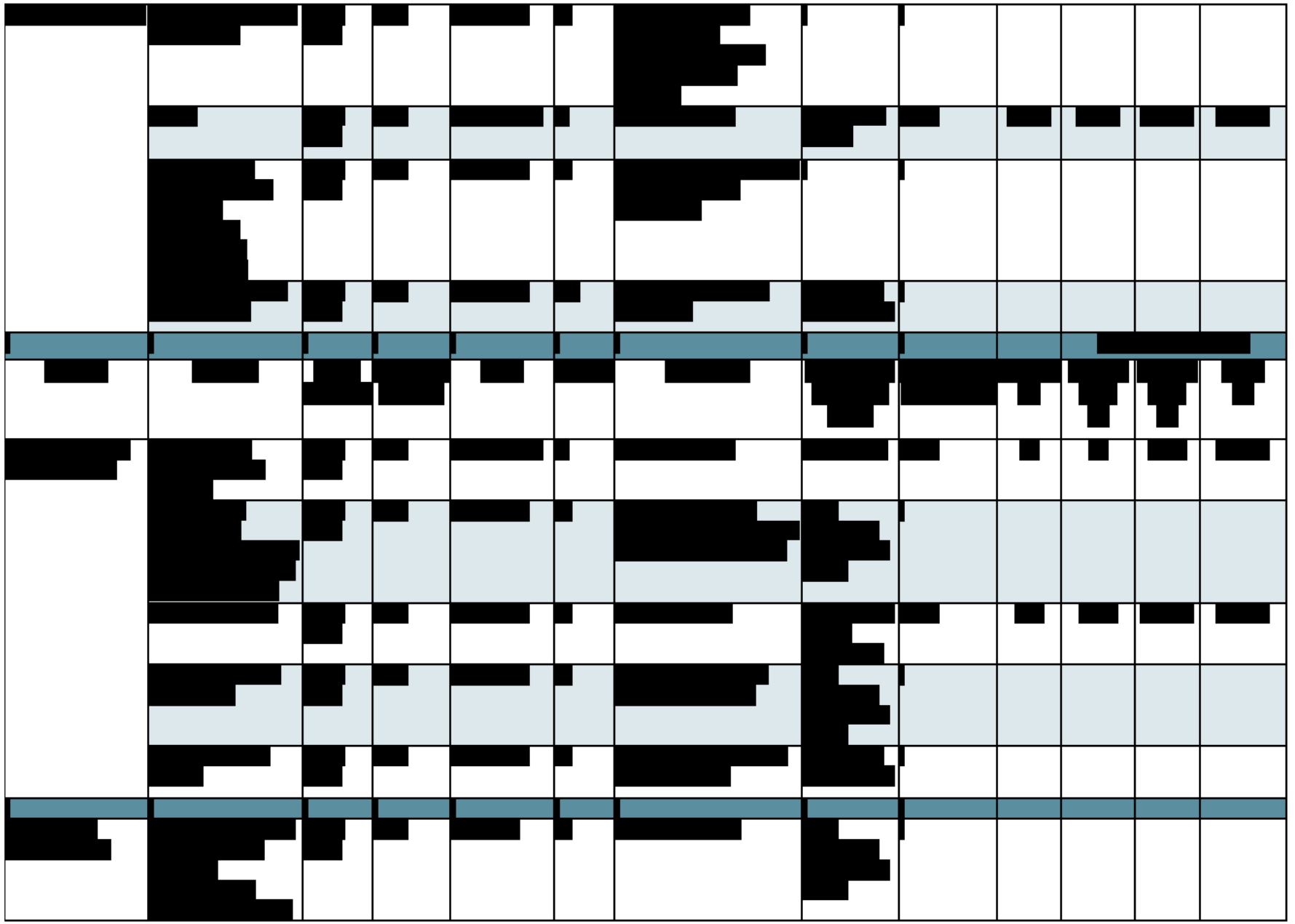
This approach provides a transparent, evidence-based and conservative assessment of the value delivered by SSEN's innovation portfolio while recognising that the quantified benefits represent only a subset of the wider value created through innovation activities.











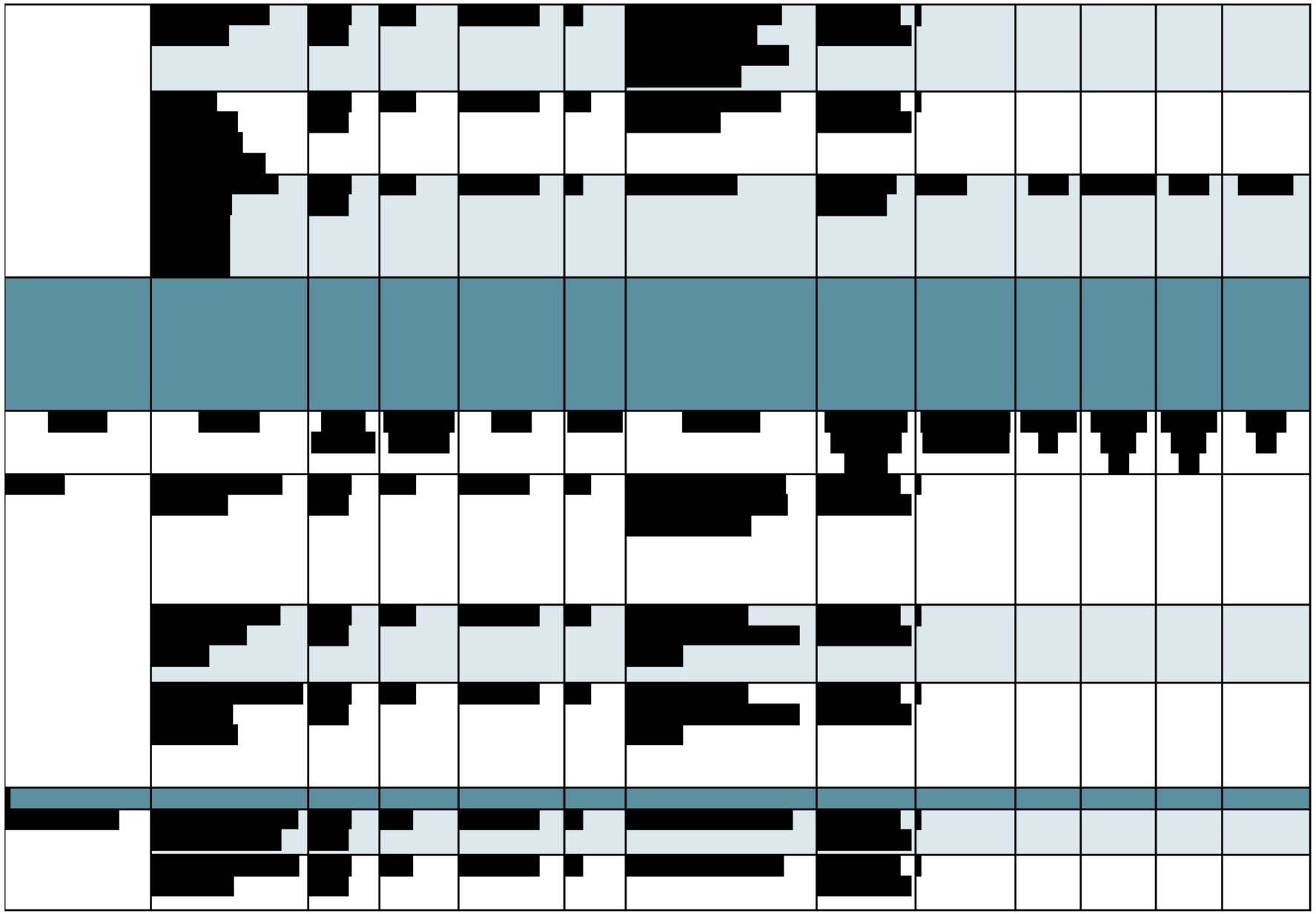


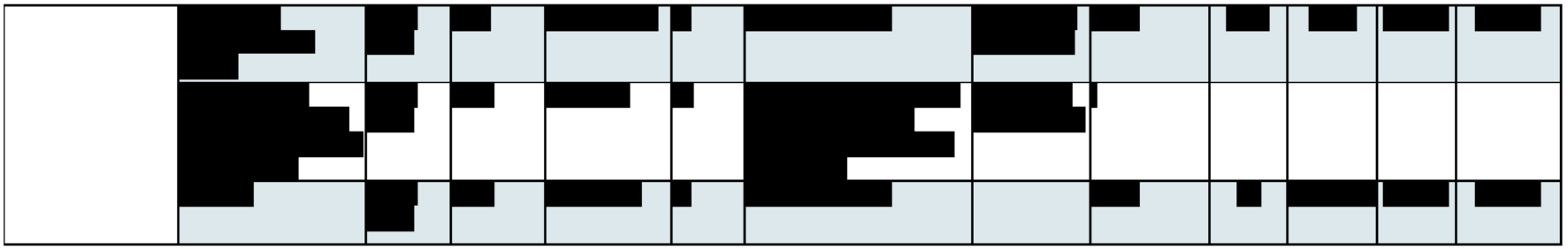












Appendix D: OUR ED3 INNOVATION DEPLOYMENTS

Table D. 1. Our ED3 Innovation Deployments

Project Name	Funding	Status	Where in BP	How did the project development in ED2 help us and our stakeholder and then informed ED3 planning.
Customer Channel Management - Amazon Direct.	BAU	Deployed - ED2	ED3 Data and Digitalisation Annex (ED3-S13)	ED2 modernised customer contact through cloud-based, intelligent routing and adviser support, improving customer experience and operational efficiency. This provides the digital foundation for ED3 to further develop joined-up, personalised and scalable customer journeys.
Near Real-time Data Access 2 (NeRDA 2) NIA_SSEN_0070	NIA	Deployed - ED2 with ED3 scale up and further development	ED3 DSO Strategy (ED3-S10) ED3 Connections Strategy (ED3-S16) ED3 Data and Digitalisation Annex (ED3-S13)	NeRDA proved in ED2 that near-real-time network data could be shared at scale, improving SSEN's network visibility and planning while giving stakeholders clearer insight into capacity and constraints. This evidence provided the foundation for ED3 to scale and embed near-real-time situational awareness, open data and APIs into BAU, supporting better planning, connections, flexibility and LCT uptake.
NMM [Network Model Manager]	BAU	Deployed with ongoing improvements - ED2	ED3 DSO Strategy (ED3-S10)	ED2 established a more consistent digital model of the network, improving data quality and supporting planning, operations and flexibility. This capability underpins ED3 ambitions for integrated network modelling, forecasting and data-driven decision-making.
Smart ETR (Estimated Time of Restoration)	BAU	Deployed with ongoing improvements - ED2	Fully deployed and embedded in ED2	ED2 demonstrated that data-driven restoration estimates could materially improve ETR accuracy and customer communications. Its deployment into BAU provides ED3 with a proven capability to further improve outage information and customer experience.
PowerTrack	BAU	Deployed with ongoing improvements - ED2	ED3 Data and Digitalisation Annex (ED3-S13)	ED2 established PowerTrack as a scalable customer self-service channel for outage and restoration information, reducing reliance on contact centres. ED3 can build on this platform through enhanced digital services, accessibility and customer communications.
Zapmap integration with live status on PowerTrack	BAU	Deployed with ongoing improvements - ED2	Fully deployed and embedded in ED2	ED2 expanded PowerTrack to provide EV users with information on nearby charging infrastructure and outage impacts. This learning supports ED3 development of more personalised digital services as customer reliance on LCTs increases.

Smart Meter Pings in PowerTrack	BAU	Deployed with ongoing improvements - ED2	Fully deployed and embedded in ED2	ED2 demonstrated how smart-meter data can improve fault triage and customer self-service by confirming supply status. This supports ED3 plans for increasingly data-driven outage management and customer communications.
IVR Smart Meter integration with pings	BAU	Deployed with ongoing improvements - ED2	Fully deployed and embedded in ED2	ED2 integrated smart-meter insight into automated customer journeys, improving fault identification and reducing unnecessary adviser and engineer intervention. This provides a foundation for more automated and efficient customer service in ED3.
LCT Connections Readiness Indicator NIA_SSEN_0077	NIA	Deployed with ongoing improvements - ED2 with ED3 scale up	ED3 Connections Strategy (ED3-S16) ED3 Load Related Expenditure Annex (ED3-S01)	ED2 developed a property-level view of readiness for EVs and heat pumps, helping customers understand potential connection upgrades while improving SSEN's visibility of future requirements. This informs ED3 plans for proactive network readiness, improved customer journeys and more targeted investment.
Alternative Jointing 2 NIA_SSEN_0075	NIA	Deployment in ED3 (pending CBA)	ED3 Environmental Action Plan (ED3-S14)	ED2 developed and tested lower-impact alternatives to traditional cable-jointing materials and methods, with potential safety, environmental and efficiency benefits. Subject to successful trials and CBA, this evidence supports potential ED3 deployment and more sustainable network delivery.
Power Lines	SIF	Deployment in ED3 (pending CBA)	NA - early innovation	Early innovation, deployment case not ready to inform ED3
ExtenDER NIA_SSEN_0067	NIA	Learnings embedded in ED2	Fully deployed and embedded in ED2	ED2 tested market-based connections and identified that there was no viable route to implementation under current market and regulatory conditions. The project informed ED3 connections and flexibility thinking by providing evidence on market design, risk and stakeholder requirements.
New Approach to Losses NIA_SSEN_0068	NIA	Learnings embedded in ED2 / Tool deployed	Fully deployed and embedded in ED2	ED2 tested and improved the methodology used to understand network losses under changing demand and generation patterns. The learning has been embedded into SSEN's losses approach.
Project Name	**Funding**	**Status**	**Where in BP**	**How did the project development in ED2 help us and our stakeholder and then informed ED3 planning.**

HOMEflex (Household or Microbusiness Energy Flexibility) Compliance NIA_SSEN_0073	NIA	Deployed - ED2	Fully deployed and embedded in ED2	ED2 helped establish consistent consumer protection and compliance principles for household and microbusiness flexibility, supporting confidence in emerging flexibility markets. This learning informs the design and scaling of trusted domestic flexibility services through ED3.
HVO in mobile generation	BAU	Deployed - ED2	ED3 Environmental Action Plan (ED3-S14)	ED2 demonstrated a practical lower-carbon alternative to conventional diesel for mobile generation while maintaining operational resilience. This reduced environmental impact and informed ED3 thinking on the further decarbonisation of temporary and mobile generation.
PSR Batteries (CVP)	BAU	Deployed - ED2	ED3 Vulnerability Strategy (ED3-S06)	ED2 demonstrated how targeted battery provision can improve resilience for customers medically dependent on electricity during outages. The learning informs ED3 approaches to personalised resilience and targeted support for customers in vulnerable situations.
Personal Resilience Plans (CVP)	BAU	Deployed - ED2	ED3 Vulnerability Strategy (ED3-S06)	ED2 developed more personalised approaches to helping vulnerable customers prepare for and manage power cuts. This experience informs ED3 plans for increasingly targeted, needs-led resilience support and customer engagement.
Suitcase Generators	BAU	Deployed - ED2	Fully deployed and embedded in ED2	ED2 demonstrated the value of portable emergency power for supporting individual customers during outages, particularly those in vulnerable situations. The learning informs ED3 consideration of cleaner, more flexible and lower-carbon resilience solutions.
Natural Asset Platform Managing our Natural Capital	BAU	Deploying in BAU - ED2	ED3 Environmental Action Plan (ED3-S14)	ED2 established a digital capability for measuring and managing natural capital and biodiversity alongside network assets. We will continue to develop it in ED3, providing us with a stronger evidence base for environmental planning, biodiversity obligations and nature-based investment decisions.
Lancet NIA_SSEN_0082	NIA	Deploying in BAU - ED2 and ED3 scale up	ED3 Environmental Action Plan (ED3-S14)	ED2 developed live-line oil sampling for pole-mounted transformers, reducing customer disruption and enabling more targeted PCB testing rather than precautionary asset replacement. Successful deployment provides ED3 with a more efficient approach to PCB compliance, asset management and environmental performance.
Open Maps (VVT3) NIA_NGN_458	NIA	Deployed in ED2	ED3 Vulnerability Strategy (ED3-S06)	ED2 developed improved vulnerability mapping and secure cross-sector data sharing, helping SSEN and stakeholders better identify communities requiring support. This learning informs ED3 plans for more targeted, data-driven vulnerability and resilience interventions.

Nature4Networks	SIF	Deployment in ED3 Subject to successful CBA	ED3 Environmental Action Plan (ED3-S14) ED3 Climate Resilience Strategy (ED3-S03)	ED2 developed evidence, standards and potential applications for nature-based solutions as alternatives to traditional engineering interventions. Subject to successful trials, this provides ED3 with options to improve resilience and environmental outcomes while potentially reducing whole-life costs.
Verify Vulnerability Evaluation for Resilience Investment and Flexibility	SIF	Deployment in ED3	ED3 Vulnerability Strategy (ED3-S06)	The project is developing richer, GDPR-compliant insight into vulnerability and energy-transition readiness in ED2 by combining network, property and customer data. This evidence will inform plans for earlier identification, better targeting of support and more inclusive network planning and will be applied during ED3 and beyond.
APPEAL ED-2 NIA_SPEN_0098	NIA	Deployment in ED3 (pending CBA)	ED3 Environmental Action Plan (ED3-S14)	ED2 investigated environmentally preferable alternatives to traditional creosote treatment for wooden poles, improving understanding of potential environmental and asset-lifecycle benefits. The evidence provides a basis for potential ED3 adoption subject to technical and economic viability.
Creos-Out	SIF	Deployment in ED3 (pending CBA)	ED3 Environmental Action Plan (ED3-S14)	ED2 demonstrated the potential for bioremediation to reduce the environmental and disposal impacts associated with creosote-treated poles. This provides an evidence base for potential ED3 deployment, subject to further development and CBA.
Grounds for Change	SIF	Deployment in ED3 (pending CBA)	NA - early innovation	Early innovation, deployment case not ready to inform ED3
Project Name	**Funding**	**Status**	**Where in BP**	**How did the project development in ED2 help us and our stakeholder and then informed ED3 planning.**
Digital Surveys (Use of AI for identifying on-site assets)	BAU	Deployed - ED2	Fully deployed and embedded in ED2	ED2 demonstrated that guided digital surveys could reduce site visits and accelerate customer and field processes while maintaining the information needed for engineering decisions. This supports ED3 plans for more efficient, digitally enabled customer journeys and workforce productivity.

Pathfinder NIA_SSEN_0081	NIA	Deploying as joined NIA pilot and accelerated ED2 deployment with ED3 scale up	ED3 Network Asset Management Strategy (ED3-S12)	During ED2 is developing and testing digital-substation technologies, standards and operating approaches, building confidence in a move away from traditional protection and control architecture. This evidence will inform ED3 approach to scale digital substations and the associated workforce, standards and delivery capability.
ELEVATE	BAU	Deploying in BAU - ED2 and ED3 scale up	NA - early innovation	Early innovation, deployment case not ready to inform ED3
Smart Hammer	BAU	Deploying in BAU - ED2 and ED3 scale up	ED3 Network Asset Management Strategy (ED3-S12)	ED2 demonstrated a more objective, data-driven method of assessing wooden-pole condition, improving inspection consistency and asset-health information. This evidence supports ED3 scale-up to lines people and more targeted asset intervention and replacement decisions.
Residrill	BAU	Deploying in BAU - ED2 and ED3 scale up	ED3 Network Asset Management Strategy (ED3-S12)	ED2 demonstrated improved intrusive testing of wooden poles to validate internal condition and reduce uncertainty in asset grading. ED3 deployment builds on this evidence to improve targeting of pole replacement and maximise value from asset investment. The use of Residrill directly supports the Smart Hammer deployment as a secondary inspection method.
HV Fault Location	BAU	Deploying in BAU - ED2 and ED3 scale up	ED3 Reliability Strategy (ED3-S04) / System Monitoring in ED3 DSO Strategy (ED3-S10)	ED2 demonstrated that enhanced monitoring and fault-location technology can identify HV faults faster and more accurately, improving restoration and operational efficiency. This evidence supports ED3 scale-up through the System Monitoring investment programme.
LV Fault Finding Toolkit	BAU	Deploying in BAU - ED2 and ED3 scale up	ED3 Reliability Strategy (ED3-S04) / System Monitoring in ED3 DSO Strategy (ED3-S10)	ED2 developed and tested a suite of complementary technologies for faster and more accurate LV fault identification, reducing reliance on traditional trial-and-error approaches. This evidence supports ED3 deployment through the Tools and Equipment programme
RISE Robotics Integration for Sustainable Energy	SIF	Deployment in ED3 (pending CBA)	NA - early innovation	Early innovation, deployment case not ready to inform ED3
Powering Ohms	SIF	Deployment in ED3 (pending CBA)	NA - early innovation	Early innovation, deployment case not ready to inform ED3
HF-PQ Net High Frequency Power Quality for LCT Networks	SIF	Deployment in ED3 (pending CBA)	NA - early innovation	Early innovation, deployment case not ready to inform ED3

Voltmetric NIA_SSEN_0080	NIA	Learnings embedding in ED2 and scale up in ED3	ED3 DSO Strategy (ED3-S10)	ED2 is developing and validating a consistent Voltage Index to improve visibility of voltage and power-quality performance and target interventions more effectively. This evidence informs ED3 plans to scale the index as a core planning and operational capability, subject to successful demonstration.
Predict4Resilience	SIF	Deployed - ED2 with ED3 scale up and further development	ED3 Climate Resilience Strategy (ED3-S03)	During ED2, Predict4Resilience developed and trialled a data-led approach to forecasting weather-related network impacts, helping SSEN better anticipate fault risk and target storm preparedness and response. The learning has shaped ED3 resilience planning and is progressing towards Control Room deployment through the funded Digital Reopener, subject to DEC approval and internal delivery governance.
Project Name	**Funding**	**Status**	**Where in BP**	**How did the project development in ED2 help us and our stakeholder and then informed ED3 planning.**
Systems for Flex	BAU	Deployed with ongoing improvements	ED3 DSO Strategy (ED3-S10)	ED2 established scalable digital and operational capability for forecasting, procuring, dispatching and settling flexibility services. This provides the BAU foundation for ED3 to expand flexibility markets, access products and increasingly automated DSO operations.
Connect Direct	BAU	Deployed with ongoing improvements - ED2	ED3 Connections Strategy (ED3-S16)	ED2 demonstrated how digitalisation and automation could simplify and accelerate elements of the connections journey for customers and SSEN. The learning supports ED3 plans for more streamlined, automated and customer-focused connections services.
Low Voltage Power Quality (LVPQ) NIA_SSEN_0069	NIA	Deployment in ED3	ED3 DSO Strategy (ED3-S10)	ED2 tested technologies and approaches for managing LV power-quality issues arising from increasing LCT uptake, improving understanding of alternatives to conventional reinforcement. This evidence informs ED3 voltage and power-quality monitoring and potential deployment of targeted interventions.
Pathways to 2050	SIF	Deployment in ED3 (pending CBA)	ED3 DSO Strategy (ED3-S10)	The project us developing is establishing a data-driven, long-term approach to understanding LV network requirements and local decarbonisation pathways during ED2. The evidence will inform ED3's move towards proactive, place-based and programmatic LV investment, with deployment subject to successful development and CBA.
Fast Track AI for Connections	SIF	Deployment in ED3 (pending CBA)	ED3 Connections Strategy (ED3-S16)	ED2 development is testing probabilistic forecasting and advanced analytics to improve connection assessments and move beyond conservative worst-case assumptions. Subject to successful development and CBA, this evidence will inform ED3 plans for faster connection decisions, improved capacity utilisation and smarter investment planning.
Regional Energy System	NIA	Deployed - ED2 with ED3 scale up	ED3 DSO Strategy (ED3-S10)	ED2 developed LENZA and demonstrated how digital tools can support local authorities and SSEN with coordinated local energy planning. This evidence

Optimisation Planning (RESOP) NIA_SSEN_0071		and further development	ED3 Load Related Expenditure Annex (ED3-S01)	informs ED3 plans to evolve LENZA/LAEP+ into an integrated RESP-aligned planning capability supporting forecasting and investment decisions.
LEMA [Local Energy Markets Alliance]	BAU	Completed - learning embedded in ED2	ED3 DSO Strategy (ED3-S10)	ED2 tested new commercial and technical approaches for using local flexibility to enable earlier connections and manage constraints. The learning has informed ED3 flexibility and access-product design rather than requiring deployment of a standalone LEMA solution.
			ED3 Load Related Expenditure Annex (ED3-S01)	

Appendix E: FUTURE THEMES

Table E. 1. Our Innovation Future Themes

Innovation Priority	Key Future Themes Emerging from ED3 Strategies	Future challenges and potential innovations:
Smart machines & automated systems	Automated inspections, digital asset management, workforce productivity, immersive training, remote operations. New Tools and equipment to automate existing tasks to reduce risk and increase productivity or reduce disruption	**How do we maintain and expand the network without proportionally increasing workforce requirements?** - Automated/Autonomous inspections - Robotics for pole/cable inspection and construction - Autonomous defect identification - Remote condition assessment - VR/AR workforce training - Digital commissioning support – off site
Digital backbone & system visibility	Whole-system planning, place-based planning, digital twins, network visibility, customer data, open data, planning platforms, smart meter and LV monitoring data usage	**How do we create a transparent, data-rich and digitally enabled network where customers, communities and planners can make decisions with confidence?** - Improved load forecasting to improve investment planning, better scenario modelling - AI for connections queue forecasting to better utilise existing headroom - Automated planning and design/self service - Improved visibility and support for customers
Network intelligence & optimisation	Forecasting, probabilistic planning, asset risk modelling, fault prediction, outage prediction, decision support	**How do we use artificial intelligence and advanced analytics to make faster, smarter and more proactive decisions across planning, operations and asset management?** - AI planning engines – quantum-based modelling - Probabilistic forecasting - Outage prediction - Asset failure prediction - Workforce decision support - Automated options assessments -Solutions for islanding and remote locations, including local balancing, local generation etc -Advanced sensing and detection methods for underground

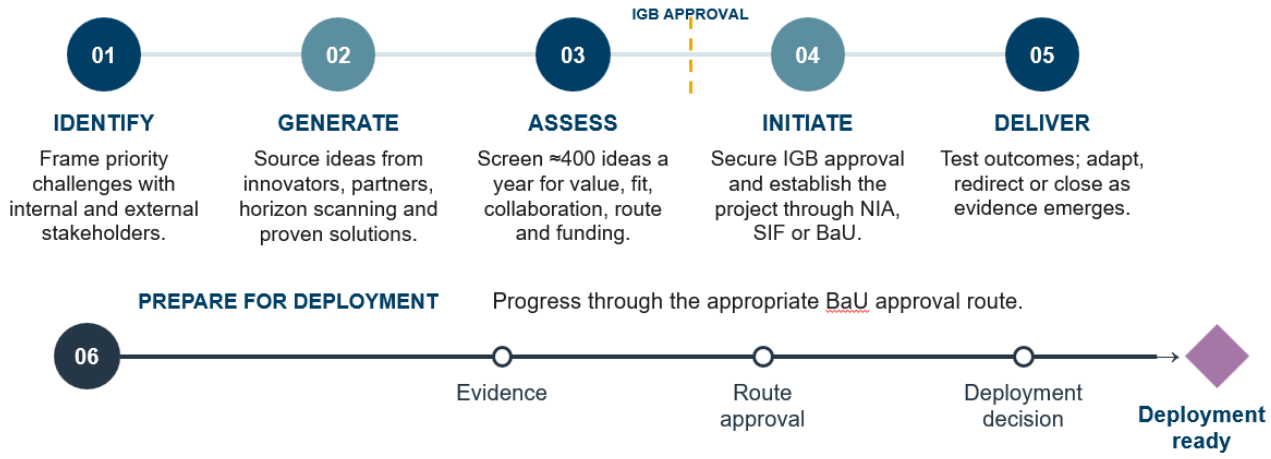
Resilient communities & energy security	Vulnerability, resilience, LCT readiness, participation, accessibility, community resilience, local energy systems	**How do we ensure all customers and communities can benefit from the energy transition, regardless of circumstance, location or vulnerability?** - Future vulnerability forecasting - Community resilience - Inclusive electrification - LCT accessibility - Regional readiness indicators - Storm support - Social value optimisation
Adaptive networks & climate intelligence	Climate-adapted assets, predictive resilience, nature-based resilience, biodiversity optimisation, environmental risk modelling	**How do we anticipate, adapt to and recover from increasingly severe climate and weather-related impacts while maintaining affordability for customers?** - Further development of LAEP capability - Centralised Network View evolution - Open Data evolution - Integrated Planning Platforms -Increased preparedness for extreme weather, especially new risks from prolonged hot spells or drought
Advanced Construction & Cabling Techniques	Faster reinforcement, low disruption works, capacity uprating, digital substations, industrial decarbonisation enabling infrastructure	**How do we deliver the unprecedented scale of network reinforcement required for electrification faster, cheaper and with less disruption?** - No-dig solutions - Faster cabling installation - Composite materials - Dynamic ratings in response to changing climate and loading - Alternative conductors - Digital substations - Industrial decarbonisation infrastructure and support to drive economic growth -

Appendix F: OUR INNOVATION PROCESS

We apply a consistent innovation process across all opportunities regardless of funding route, ensuring opportunities are assessed and prioritised in a structured and transparent way from initial challenge through to deployment:

- **Identify** → Engage stakeholders to understand emerging customer, network and industry challenges and opportunities.
- **Generate** → Source opportunities through innovators, academia, supply chain partners and horizon scanning. Where possible look to quickly fast follow and adopt proven solutions from other networks and sectors.
- **Assess** → Assess customer value, strategic alignment, collaboration opportunities, deployment potential and the benefits of additional learning to identify the right project.
- **Initiate**→ Determine the most appropriate delivery route, ensuring Business-as-Usual, NIA and SIF funding are used consistently and efficiently.
- **Deliver** → Actively manage projects, adapting quickly based on evidence, learning and emerging opportunities.
- **Deploy** → Build deployment readiness from day one and transition successful innovations into Business as Usual to realise customer and network benefits at pace.

Our innovation process is set out below



1. IDENTIFY - CHALLENGE AND OPPORTUNITY IDENTIFICATION

Our innovation process begins by identifying the customer, community, network and system challenges where innovation could deliver meaningful value. We continually engage internal and external stakeholders to understand emerging needs, operational constraints and opportunities to improve how we plan, build and operate the network.

Challenges and ideas come from a broad range of sources:

- **Innovation Delivery Group** – sets wider Innovation Challenges for the sector and SIF in particular
- **Our Customers and Stakeholders** – our regular engagement with customers, stakeholders, supply chain etc helps drive our understanding of risks and opportunities.
- **Our business:** We work with operational, engineering, customer, digital and other business teams to identify current challenges, emerging risks and opportunities for improvement.
- **External innovation challenges:** We translate priority business needs into clear challenge statements and share them through our Business-as-Usual procurement channels and Innovation Calls delivered with the Energy Innovation Centre and other organisations.
- **Academic partnerships:** Through the wider SSE Group, we work with academic institutions including the University of Strathclyde, Imperial College London and the University of Oxford. These relationships provide

access to specialist research and expertise that can help us explore complex challenges and develop our innovation portfolio.

- **Our supply chain:** We engage suppliers, manufacturers and delivery partners to identify problems that can be solved collaboratively and opportunities to apply emerging capabilities across our network.
- **Innovators and technology providers:** Innovators, academics, original equipment manufacturers and other third parties can approach us directly through our dedicated innovation website or engage with us at events including Utility Week Live, All-Energy and the Energy Innovation Summit.
- **Industry collaboration:** We participate in cross-sector ideation and collaboration through activities such as ENA Basecamp, UKRI workshops and wider industry innovation groups.
- **Horizon scanning and fast-following:** Our Future Networks team monitors emerging technologies and innovation activity in the UK and internationally. This includes identifying successful solutions developed by other network companies or sectors that SSEN Distribution could adopt or scale without unnecessarily repeating previous work.

We do not assume that every challenge requires a new innovation project. Our first step is to understand whether a proven solution already exists and whether it can move directly into Business-as-Usual delivery. Where further development or evidence is required, we convert the challenge or idea into a clear, evidence-led problem statement that defines who is affected, the current constraint, why existing approaches are insufficient and the outcome required. This ensures subsequent activity starts with a genuine customer or network need, rather than a predetermined technology or funding route.

Table F. 1. Steps to create a clear, evidence-led problem statement and the outcome required.

Inputs	Customer and stakeholder priorities; operational and asset evidence; business change programmes; ED3 innovation themes; industry challenges; emerging technology and regulatory developments.
Actions	Engage operational, engineering, customer and digital teams. Describe who is affected, the current constraint, its scale, why existing approaches are insufficient and the outcome sought.
Control	Confirm strategic relevance and identify an initial business sponsor or challenge owner.
Output	A prioritised challenge statement with a named owner and target outcome, including initial deployment path.

2. GENERATE - HOW WE GENERATE AND SOURCE OPPORTUNITIES

Once we have defined the challenge and the outcome required, we will look at the best routes to solve it. We do not begin with a predetermined technology, partner or funding mechanism. Instead, understand the previous work, bring together internal expertise, external innovation resources and existing industry learning to identify the solutions most likely to deliver measurable customer and network value.

We source opportunities through:

- **Internal expertise:** We work with operational, engineering, customer, digital and commercial teams to identify potential solutions, build on existing capabilities and understand the practical requirements for implementation.
- **Innovators and technology providers:** Innovators, SMEs, equipment manufacturers and delivery partners can approach us through our dedicated innovation website. We also issue targeted Innovation Calls through the Energy Innovation Centre where a challenge requires new ideas or specialist capability.
- **Academic and research partnerships:** We share priority challenges with universities and research organisations, drawing on specialist knowledge, emerging research and new approaches that may not yet have been applied within electricity distribution.
- **Our supply chain:** We engage existing and prospective suppliers to identify solutions that can be developed collaboratively, adapted from other sectors or incorporated into future delivery programmes.

- **Industry collaboration:** We work with other network companies through cross-network projects, the ENA Innovation Strategy Group, ENA Basecamp, SIF Innovation Delivery Groups and wider industry forums. This helps us share learning, identify common challenges, find opportunities for collaboration and avoid unnecessary duplication.
- **Events and engagement:** We connect with potential partners through industry events, dissemination activities, workshops and Network Appreciation Days. These activities provide innovators with a clearer understanding of our network, operational environment and priority challenges.
- **Horizon scanning:** Our Future Networks team monitors technological, commercial and operational developments in the UK and internationally, including innovations emerging from other infrastructure sectors.

Fast-following proven solutions

Before developing an innovation project, we assess whether a suitable solution has already been developed or demonstrated elsewhere. We review relevant projects and deployments across other network companies and adjacent sectors, engage directly with the organisations involved and assess whether the solution could meet SSEN Distribution's requirements.

Where a solution is sufficiently mature, delivers a clear benefit and can be implemented with confidence, we will seek to fast-follow the original deployment and progress through the appropriate Business-as-Usual governance route. This accelerates customer benefits, reduces duplication and ensures innovation funding remains focused on challenges where further learning, testing or evidence is genuinely required. The ED3 Innovation Strategy confirms that deployment-ready solutions should move directly into Business-as-Usual implementation, with innovation funding used only where additional development is necessary.

Developing new opportunities

Where existing solutions do not fully meet the challenge, we work with the most appropriate partners to shape a new opportunity and really understand what the innovation need is. This may involve adapting an emerging technology, combining complementary proposals or developing a new technical, commercial or operational approach.

At this stage, we establish:

- How the proposed opportunity responds to the defined challenge.
- The potential solution or range of solutions to be explored.
- The relevant internal and external partners.
- Existing projects, evidence and learning on which the opportunity will build.
- The solution's indicative maturity and principal areas of uncertainty.
- The potential customer, network and system benefits.
- The further evidence required to support implementation.
- An initial view of the pathway to deployment.

This process ensures that opportunities are developed around a genuine need and a target outcome, rather than shaped around a preferred funding route. It also provides the evidence needed for the next stage, where we assess the opportunity's strategic alignment, additionality, feasibility, benefits and deployment potential.

Table F. 2. We find the strongest route to solve the challenge, including solutions already proven elsewhere.

Sources	Internal ideas; direct innovator submissions; Energy Innovation Centre calls; academic partnerships; supply chain engagement; industry events; ENA Basecamp; UKRI workshops; cross-network collaboration; horizon scanning.
Fast-follow	Review relevant projects and deployments across networks and adjacent sectors. If a solution is mature and suitable, progress directly towards BAU implementation.
New development	Where existing solutions do not meet the need, work with partners to shape proportionate technical, commercial or operational responses.

Control	Confirm that relevant existing and concurrent work has been considered, opportunities for collaboration have been explored and further innovation activity is genuinely required.
Output	A recorded opportunity, potential partners and an initial view of maturity and route.

3. ASSESS - SELECTING THE RIGHT OPPORTUNITY

Once an opportunity has been identified, we apply a proportionate stage gate assessment to determine whether it should progress. This allows us to focus resources on opportunities that respond to a clear customer or network need, offer measurable value and have a credible pathway to adoption.

We assess the opportunity before selecting the funding mechanism. This ensures projects are driven by the challenge and the evidence required, rather than shaped around the availability of Business-as-Usual, NIA or SIF funding. Opportunities that are already mature and supported by a robust business case can move directly towards Business-as-Usual deployment. Where further development, testing or demonstration is necessary, we determine the most appropriate innovation route.

Gate 0: Initial screening

Every opportunity is recorded and screened against proportionate, high-level criteria. Gate 0 establishes whether the proposal is relevant, requires innovation support and has sufficient potential to justify more detailed development.

The initial screening considers:

- **Eligibility and relevance:** Is the opportunity appropriate for an electricity distribution network and eligible for the proposed form of funding?
- **Strategic alignment:** Does it respond to an ED3 Innovation Theme, stakeholder priority or wider business need?
- **Evidence of need:** Is there a clearly defined customer, community, network or system challenge?
- **Innovation additionality:** Is further innovation genuinely required, or could an existing or commercially available solution be implemented through Business-as-Usual activity? Does an existing solution already exist?
- **Potential impact:** Could the opportunity contribute meaningfully to affordability, reliability, resilience, or environmental and societal value?
- **Existing learning:** What relevant projects, research or deployments have already been completed or are currently underway?
- **Readiness and uncertainty:** How mature is the proposed solution, and what technical, operational or commercial uncertainties remain?
- **Deployment potential:** Is there an initial view of how the solution could be implemented and its benefits realised?

The review of previous and concurrent activity is a mandatory part of Gate 0. An opportunity does not progress until there is sufficient evidence that it builds on existing learning and avoids unnecessary duplication. At the Gate 0 decision, the opportunity may progress for further development, require refinement, move directly towards Business-as-Usual implementation or close. We provide feedback on the decision, so innovators and partners understand the outcome.

OUTCOME – If sufficient evidence proceed to next stage, if not reject idea and feedback.

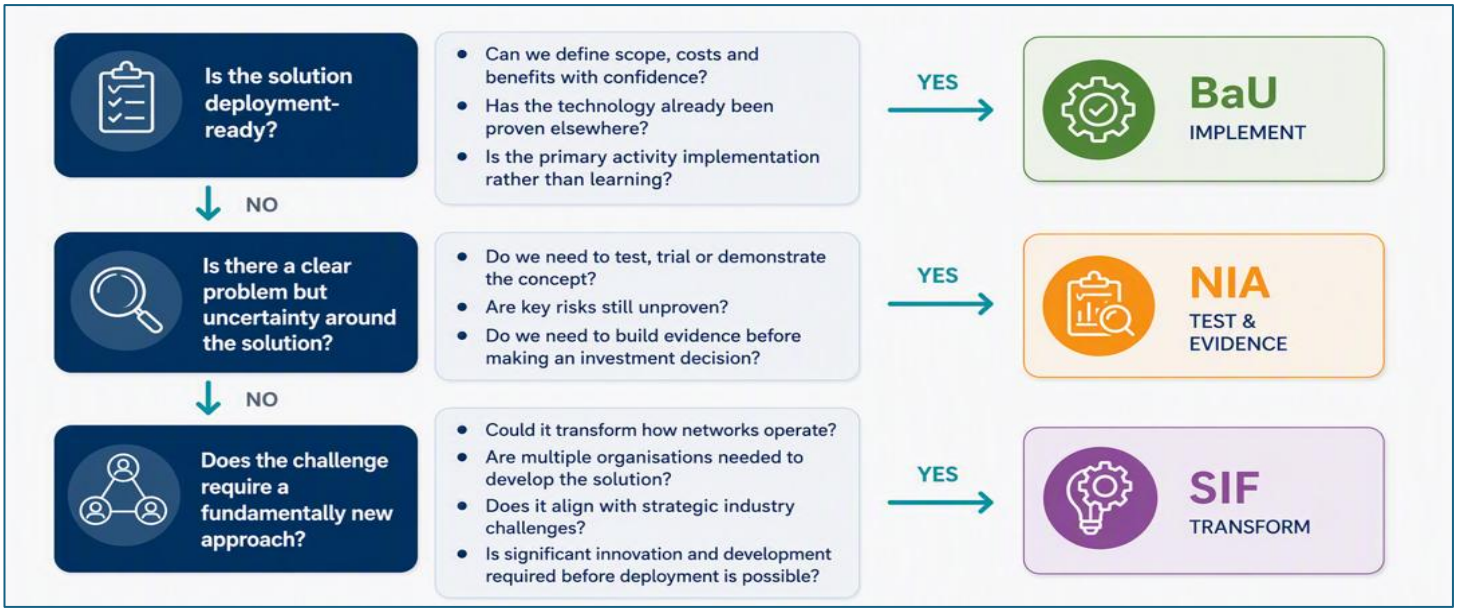
Gate 1: Opportunity assessment

Opportunities that demonstrate sufficient potential move into a more assessment and project development stage. At this stage, we develop the proposal collaboratively with the relevant business teams and external partners, strengthening the evidence needed to decide whether it should become a project.

The assessment develops:

- **Business need and strategic fit:** A clearer definition of the challenge, its importance and its alignment with wider business strategy and ED3 priorities.

- **Customer and network benefits:** An assessment of the expected benefits, affected groups and contribution to our four benefit outcomes.
- **Business sponsorship:** A senior sponsor, operational owner and relevant subject matter experts.
- **Delivery capability:** The internal resources, specialist expertise and external partners needed to deliver the work.
- **Scope and programme:** The proposed activities, deliverables, budget, timescales, risks and decision points.
- **Existing learning and non-duplication:** A deeper review of previous and concurrent projects, including direct engagement with other network companies where relevant.
- **Collaboration opportunities:** Whether the proposal could be strengthened by working with another network, combining complementary ideas or involving additional partners.
- **Outputs and evidence:** The specific outputs, learning and evidence the project must produce.
- **Deployment pathway:** The intended route into Business-as-Usual delivery, including the likely governance, procurement, investment and change requirements.
- **Funding route:** Whether the opportunity should progress through Business-as-Usual investment, NIA, SIF or another appropriate mechanism.



The funding route is confirmed only when the need, maturity, uncertainty and deployment requirements are sufficiently understood. This directs innovation funding towards opportunities where further learning creates additional value, while enabling proven solutions to move directly into operational delivery.

Collaboration and non-duplication

For potential NIA and SIF projects, we engage other network licensees and relevant industry forums before project registration. This allows us to identify related work, explore collaboration, share learning and understand whether another organisation is developing a similar project. This is coordinated via the ENA Innovation Strategy Group.

Where relevant activity is identified, we engage the lead network directly and document how the proposed project builds on, differs from or complements previous and concurrent work. Feedback is used to refine the scope before the proposal progresses.

Selection decision

At the end of the opportunity assessment, the proposal is reviewed to determine whether it:

- **Progresses** to project initiation and formal approval.
- **Requires further development** before a decision can be made.

- **Combines with another opportunity** to create a stronger project.
- **Progresses collaboratively** with another network or delivery partner.
- **Fast-follows an existing solution** through the appropriate Business-as-Usual route.
- **Does not progress**, because the need, value, additionality, feasibility or deployment pathway is not sufficiently strong.

Only opportunities with a clear need, measurable benefits, appropriate sponsorship and a credible route to deployment proceed to project initiation.

Table F. 3. Our Gateway to select the right opportunities

Gateway	Objective
Gate 0: Screening	Test eligibility and relevance, strategic alignment, evidence of need, innovation additionality, impact potential, previous learning, readiness and the initial deployment pathway.
Gate 1: Opportunity assessment	Develop the business need, benefits, sponsor, project team, outline scope, budget, programme, risks, intended outputs and route to deployment.
Collaboration and non-duplication	Engage other network licensees and relevant industry forums early. Document how the opportunity builds on previous work, responds to concurrent activity and creates opportunities for collaboration.
Funding route	Select Business-as-Usual, NIA, SIF or another mechanism according to maturity, uncertainty, evidence requirements, risk and deployment readiness.
Decision	Proceed, refine, combine with another opportunity, fast-follow, route to BAU, or stop with feedback.
Output	A fully assessed opportunity with a defined need, expected benefits, accountable sponsor, outline scope, appropriate funding route and credible pathway to deployment.

4. INITIATE INITIATING AND APPROVING THE PROJECT

Opportunities that pass the assessment stage move into project initiation. At this point, we turn the selected opportunity into an investable and deliverable project by defining what the project must achieve, the evidence it must produce, who will deliver it and how a successful outcome could be implemented.

Project initiation is proportionate to the scale, maturity, risk and proposed funding route of the opportunity. However, every project must establish clear objectives, accountable business ownership, appropriate delivery capability, an agreed commercial and funding approach, and a credible pathway to deployment.

Scope and evidence requirements

We develop a detailed project scope that translates the opportunity into a clear and controlled delivery plan. This defines:

- The challenge and business need being addressed.
- The project objectives and intended outcomes.
- The proposed technical, commercial or operational approach.
- The activities, work packages and deliverables.
- The evidence and learning required to support future decisions.
- The success measures and benefits baseline.
- The project programme, milestones and review points.
- The principal risks, assumptions and dependencies.
- The criteria for continuing, adapting, accelerating or stopping the project.

The evidence requirements are defined with deployment in mind. Rather than testing a solution in isolation, the project must generate the technical, operational, commercial and benefits evidence needed to inform a future implementation decision. The source material requires developed proposals to establish detailed objectives, outputs, deliverables, review points and benefits analysis before approval.

Ownership and delivery capability

Every project requires strong business ownership. During initiation, we confirm:

- A **senior business sponsor** who owns the strategic need and supports the project through governance.
- An **operational owner** who will help shape the project and take ownership of the solution if it progresses into Business-as-Usual delivery.
- The relevant **subject matter experts**, including operational, engineering, customer, digital, commercial or regulatory expertise.
- The **project manager and delivery team** responsible for programme, budget, risk, reporting and partner coordination.
- Any **external partners** or specialist support required to deliver the project successfully.

This ensures that innovation is not delivered separately from the wider business. The teams that could ultimately adopt the solution are involved early enough to shape the project, identify practical implementation requirements and build internal commitment to deployment.

Where complementary proposals or capabilities have been identified, we may bring organisations together to form a stronger project team. This can improve the quality of the proposed solution, reduce duplication and combine technical, customer, commercial and delivery expertise within one coherent project.

Initiating the Deployment Case

Every relevant project establishes an initial **Deployment Case** during initiation. The Deployment Case describes what must be demonstrated, resolved and put in place for a successful project output to move into operational use.

The Deployment Case is not completed once and set aside. It is maintained and strengthened throughout project delivery as evidence develops. Establishing the case at initiation ensures that deployment requirements influence the project's scope, evidence and partner arrangements from the outset. It also gives relevant business teams early visibility of potential future investment and change requirements. Further details on the deployment case are set out in the next section.

Innovation Governance Board approval

Fully developed proposals are submitted to the **Innovation Governance Board** for formal review and approval. The Board evaluates whether the proposed project:

- Responds to a clearly defined and evidenced need.
- Aligns with SSEN Distribution's strategic priorities and ED3 Innovation Themes.
- Builds on existing learning and avoids unnecessary duplication.
- Offers credible customer, network or wider system benefits.
- Has clear objectives, outputs and success measures.
- Has an appropriate sponsor, operational owner and delivery team.
- Has a proportionate budget, programme and risk profile.
- Uses the most appropriate funding and commercial route.
- Has a credible pathway to deployment and benefits realisation.

The Board may approve the project, request further development or decide that the project should not proceed. This ensures investment remains focused on opportunities with the strongest combination of strategic need, deliverability, additionality and deployment potential.

Following approval, the team completes the documentation required for the selected route. This may include NIA registration, a SIF submission or the relevant Business-as-Usual investment and change approvals. Previous and concurrent innovation activity is reviewed again as part of NIA or SIF registration to confirm that the project builds on existing evidence and does not unnecessarily repeat earlier work.

Table F. 4. Steps for Innovation Governance Board Approval

	Objective
Scope and evidence	Define objectives, deliverables, success measures, evidence requirements, stage gates and review points.
Ownership and capability	Confirm senior sponsor, operational owner, subject matter experts, project team and partner roles.
Commercial and funding	Agree budget, procurement and commercial strategy, collaboration arrangements and the appropriate delivery route.
Deployment Case	Set the initial strategic, technical, operational, commercial, procurement, change, funding and benefits requirements for implementation.
Approval	Secure Innovation Governance Board approval and complete required NIA or SIF registration, or progress through the relevant BAU governance route.
Output	An approved, funded and mobilised project with clear ownership, defined evidence requirements, proportionate delivery controls and an agreed pathway towards deployment.

4. DELIVER: DELIVER, LEARN AND PREPARE FOR DEPLOYMENT

Once approved, each project moves into structured delivery. We actively manage projects against their agreed objectives, programme, budget, risks and expected benefits, while continuing to test whether the solution remains relevant, valuable and capable of deployment.

Delivery is not treated as a fixed sequence of activities. Regular reviews allow evidence, learning and changes in the wider business or regulatory environment to influence the project as it progresses. This enables us to maintain momentum where the evidence is strong, adapt projects where circumstances change and stop activity that no longer offers sufficient value.

Active delivery control

Each project is supported by structured governance, dedicated project management and portfolio oversight. Progress reviews consider:

- Delivery against the agreed programme and milestones.
- Actual and forecast expenditure against the approved budget.
- Progress towards the project's objectives, outputs and evidence requirements.
- Technical, operational, commercial and delivery risks.
- Changes in scope, assumptions or dependencies.
- Project performance against the agreed benefits baseline and success measures.
- New evidence or learning generated through trials, testing and stakeholder engagement.
- Changes in the business, regulatory or industry environment.
- Progress in addressing the requirements set out in the Deployment Case.
- Continued alignment with the original customer or network need.
- Creating deliverables to transition from Innovation Governance regime to the identified BAU Governance process

The Project Management Office supports project teams with delivery controls, resources, assurance and regulatory reporting. If a project is not progressing as anticipated or the learning is not supporting the initial hypothesis then we

will stop the project and fail fast. This provides a consistent view of project performance and enables emerging issues to be identified and addressed early.

The Deployment Case

A key lesson from ED2 was that successful deployment depends on far more than demonstrating a positive cost-benefit ratio. Technical performance is only one part of the decision. Successful implementation also requires business ownership, operational readiness, procurement alignment, funding, organisational support and integration with wider business priorities. To address this, every relevant project in ED3 will develop and maintain a **Deployment Case**.

The Deployment Case is created during project initiation and progressively strengthened throughout delivery. It provides the evidence, organisational readiness assessment and implementation plan required to support a deployment decision and transition the innovation into Business-as-Usual operation. Rather than waiting until project completion, deployment requirements are considered from the outset, ensuring projects generate the evidence needed for implementation and that potential barriers to adoption are identified early.

The Deployment Case acts as the bridge between innovation delivery and operational deployment. It provides visibility of emerging deployment opportunities within the business, supports alignment with existing investment and change programmes, and helps identify the most appropriate governance and funding route for future implementation. The Deployment Case remains a live document throughout delivery and is updated as evidence, learning and stakeholder requirements evolve.

What the Deployment Case Covers

The Deployment Case brings together the information required to determine whether a solution is ready for implementation and, if so, how deployment should proceed.

- **Strategic alignment and defined need**
  Confirms the continuing customer, community, network or system need being addressed, alignment with ED3 strategic priorities and how the proposed deployment contributes to affordability, reliability, resilience, or environmental and societal value.
- **Expected benefits**
  Defines the expected benefits, how they will be measured, who will realise them and the evidence supporting the forecast outcomes. This includes expected affordability, reliability, resilience, environmental and societal benefits together with the assumptions underpinning the business case.
- **Business sponsorship and operational ownership**
  Identifies the senior sponsor, operational owner and key stakeholders responsible for supporting implementation and embedding the solution into Business-as-Usual activities. Strong ownership is essential to ensure innovation is adopted and supported beyond the life of the project.
- **Technical performance and standards**
  Records the evidence demonstrating technical feasibility, operational performance, safety requirements and compliance with relevant engineering standards. It also identifies any remaining technical risks, assumptions or validation activities required before deployment.
- **Operational readiness, workforce and training**
  Assesses how the innovation will interact with existing operational processes, systems and ways of working. This includes identifying workforce impacts, competency requirements, training needs and long-term support arrangements.
- **Digital, data and cyber security requirements**
  Identifies any digital infrastructure, data integration, assurance, information governance and cyber security requirements that must be satisfied before implementation can proceed.
- **Commercial model, procurement route and supplier readiness**
  Defines the proposed commercial approach, procurement strategy, intellectual property considerations, supplier capability and supply-chain readiness needed to support deployment at the intended scale. Procurement requirements are considered early to avoid delaying implementation after project completion.
- **Investment source and governance route**
  Identifies how deployment will be funded and governed. Depending on the nature of the opportunity, deployment may be supported through Business-as-Usual investment, an ED3 reopener, a Deployment Fund or future

business planning activities. The Deployment Case defines the most appropriate business governance route and the approvals required.

- **Dependencies, integration and change impacts**
  Assesses interactions with existing investment plans, business transformation programmes, operational systems and organisational priorities. This ensures the innovation can be integrated successfully and avoids conflicts with wider business activities.
- **Risks, mitigations and decision thresholds**
  Identifies the principal technical, operational, commercial and organisational risks associated with deployment. It also establishes decision criteria and thresholds that must be satisfied before implementation can proceed.
- **Implementation plan, scale and timing**
  Defines how deployment will occur, including deployment sequencing, timescales, geographical coverage, asset populations, resource requirements and any phased implementation approaches. It also identifies opportunities for wider adoption across SSEN Distribution and the broader sector.
- **Success measures and benefits tracking**
  Establishes the baseline, performance measures and reporting arrangements required to monitor realised benefits following implementation. This ensures accountability for benefits realisation and provides evidence of the value delivered through innovation.

Developing the Deployment Case Through the Project Lifecycle

The Deployment Case is not a single approval document prepared at project completion. Instead, it evolves throughout the innovation lifecycle.

Table F. 5. Innovation cycle

Stage	Deployment Case Focus
Project Initiation	Identify the likely route to deployment, key stakeholders, governance pathway, expected benefits and principal risks.
Project Delivery	Strengthen the evidence base, engage business functions, refine implementation requirements and confirm organisational readiness.
Project Review Gates	Assess whether emerging evidence supports deployment, adaptation, acceleration or project closure.
Deployment Decision	Confirm technical performance, operational fit, benefits, funding, governance and implementation readiness.
Business-as-Usual Adoption	Use the Deployment Case to support implementation, benefits monitoring and operational ownership.

Why the Deployment Case Matters –

The Deployment Case is central to our ED3 ambition of moving faster from innovation to operational value. By integrating deployment planning from project inception, we will reduce barriers to adoption, improve alignment with Business-as-Usual governance, increase organisational ownership and accelerate the delivery of benefits for customers and stakeholders. It will provide a consistent and transparent basis for deployment decisions across NIA, SIF and Business-as-Usual innovation activity, ensuring successful innovations are not just delivered, but adopted, embedded and scaled.

Evidence-led decisions

Projects pass through agreed review points where progress, evidence and deployment potential are assessed. The purpose of these reviews is not simply to confirm that planned activities have been completed. They provide clear decision points to determine whether the project remains the right use of innovation resources.

A review may result in a decision to:

- **Continue unchanged** where delivery remains on track and the evidence continues to support the project.

- **Progress to the next phase** where a SIF project has demonstrated sufficient value and readiness to move from Discovery to Alpha or from Alpha to Beta.
- **Accelerate delivery to Deployment** where evidence demonstrates strong deployment potential or the need for the solution has become more urgent.
- **Adapt the project** where learning, changing circumstances or new stakeholder needs require the scope, approach or outputs to evolve.
- **Pause or undertake further work** where key evidence, capability or dependencies remain unresolved.
- **Stop the project / Fail Fast** where the original need has changed, the proposed solution is no longer viable, or the expected benefits no longer justify further investment.

These decisions ensure resources remain focused on opportunities with the greatest potential to deliver customer and network value. They also recognise that stopping or redirecting a project in response to robust evidence is a positive outcome of disciplined innovation management.

Maintaining deployment readiness

Deployment planning continues throughout project delivery. Each relevant project maintains and progressively strengthens its Deployment Case, using emerging evidence to confirm what must be in place for the solution to move into Business-as-Usual adoption.

Project teams work with the relevant operational, engineering, asset management, digital, customer, commercial, procurement, cyber-security, training and change teams to:

- Validate technical performance and confirm applicable standards.
- Understand operational requirements and impacts on existing processes.
- Assess compatibility with existing assets, systems and data.
- Identify cyber-security, information governance and assurance requirements.
- Develop the procurement and commercial route for future deployment.
- Assess supplier readiness and the capacity to support wider roll-out.
- Identify workforce, competence and training requirements.
- Coordinate the solution with existing investment and business-change programmes.
- Confirm the likely deployment funding and governance route.
- Refine the implementation plan, scale, timing and accountable business ownership.
- Update the benefits case using evidence generated during delivery.

Early involvement from these teams reduces the risk of a technically successful project reaching completion without the organisational support, funding or capability needed for adoption. It also ensures the project produces the evidence required by the relevant Business-as-Usual governance process.

The dedicated ED3 Deployment Team will work alongside project teams to maintain focus on implementation, coordinate the transition into the business and help remove barriers to adoption. Deployment Cases that reach the required level of confidence will progress into the appropriate Business-as-Usual investment or change process.

Benefits management

Benefits management remains active throughout delivery. Each project tracks progress against the baseline and success measures established at approval, testing whether the expected customer, network and stakeholder value remains achievable.

As evidence develops, we will:

- Refine the expected benefits and the assumptions that support them.
- Confirm the relationship between innovation expenditure, deployment costs and expected value.
- Identify when and where benefits could be realised.

- Assess whether the scale of the potential benefit continues to justify the project's cost and risk.
- Confirm how benefits will be measured following adoption.
- Identify the operational owner responsible for post-deployment benefits tracking.

Before a solution progresses to deployment, the expected benefits will be confirmed using the strongest available project evidence. Realised outcomes will continue to be monitored after adoption, creating a clear line from innovation investment to measurable customer and network value.

This also provides a valuable feedback loop to help develop future projects.

Capturing and sharing learning

Learning is captured and shared throughout delivery, rather than waiting until project closure. This allows emerging evidence to improve the live project, inform other initiatives and help organisations avoid repeating work that has already been completed.

We will share relevant learning through:

- Project reviews and internal working groups.
- Engagement with operational teams and business sponsors.
- Collaboration with other network companies and project partners.
- Industry forums and SIF Innovation Delivery Groups.
- Project dissemination events.
- Stakeholder workshops and engagement activities.
- Digital content and project updates.
- The annual Innovation Focus Report.

Learning includes successful findings as well as evidence about approaches that did not perform as expected. Making both accessible supports better project selection, reduces duplication and enables other teams and network companies to make more informed decisions.

Preparing the deployment recommendation

As the project progresses, the team brings together the technical evidence, benefits case, operational requirements and Deployment Case into a clear recommendation.

The recommendation should confirm:

- Whether the original challenge remains relevant.
- Whether the project has achieved its objectives and success measures.
- What has been demonstrated and what uncertainty remains.
- Whether the solution is technically, operationally and commercially ready.
- The expected costs, benefits and principal risks of deployment.
- The proposed scale, timing and route to adoption.
- The accountable business owner.
- The remaining approvals, procurement activity, funding or change requirements.
- How implementation and realised benefits will be monitored.

A positive project result does not automatically trigger deployment. The recommendation must demonstrate that the solution can be integrated into the business, supported over its operational life and deliver benefits proportionate to its cost and risk. The completed Deployment Case provides the basis for that decision.

Summary

Table F. 6. Steps for deployment recommendation

Steps	Objective
Delivery control	Review programme, budget, risk, scope, benefits case and changes in business or regulatory context.
Decision discipline	At agreed review points, continue unchanged, move to the next SIF phase, accelerate, adapt or stop.
Deployment readiness	Maintain the Deployment Case throughout delivery. Engage procurement, cyber security, engineering, operations, asset management, digital, customer, training and change teams as relevant.
Benefits management	Track performance against the agreed baseline, update the benefits case and define how expected and realised value will be measured.
Learning	Capture and disseminate learning during delivery, not only at closure, so other teams and networks can act on emerging evidence.
Output	Validated evidence, completed deliverables, updated benefits case and a deployment-ready recommendation.

5. Deploy, embed and realise benefits

The purpose of innovation is not to deliver projects, it is to deliver lasting improvements for customers, communities and the network. Once sufficient evidence has been generated and the Deployment Case demonstrates that implementation is viable, responsibility transitions from innovation delivery into normal business governance and operational ownership. This ensures successful innovations become embedded within the organisation and continue to deliver value long after the innovation project has concluded. Our ED3 approach is designed to shorten the pathway from innovation to Business-as-Usual adoption, accelerating deployment and increasing the value realised from innovation investment.

Decision to Deploy

Successful project completion does not automatically result in deployment. Before implementation proceeds, the completed Deployment Case is reviewed to confirm that the solution can be integrated into the business and deliver benefits that justify the required investment, resources and organisational change.

The deployment decision considers:

- Technical performance and evidence generated during project delivery.
- Expected customer, community, network and stakeholder benefits.
- Operational suitability and alignment with existing processes.
- Business integration requirements and organisational readiness.
- Strategic alignment and ongoing business need.
- Risk profile and assurance requirements.
- External compliance and industry obligations.
- Procurement and commercial requirements.
- Availability of deployment funding and resources.
- The proposed implementation route and accountable owner.

This assessment reflects a key lesson from ED2: successful deployment depends on much more than a positive cost-benefit analysis. Internal sponsorship, operational readiness, procurement requirements, business integration and alignment with wider investment activities are equally important in determining whether deployment can proceed successfully. The Deployment Case is essential in identifying the most appropriate governance route for ensuring that the project is presented to the appropriate decision makers who have the mandate to deliver the proposal. This is informed by the financial value, the level of risk and the impact of the change proposed.

Transition into Business as Usual

Once approved, the innovation moves from the innovation governance process into the appropriate Business-as-Usual governance route. We do not operate a separate deployment framework for innovation projects. Instead, successful innovations are assessed and prioritised alongside other business investments and change programmes, ensuring they are integrated into the organisation in a consistent and sustainable manner.

At this stage, we confirm:

- The accountable business owner.
- The implementation plan and delivery programme.
- Funding and investment approvals.
- Operational processes and procedures.
- Asset, system and data integration requirements.
- Standards, engineering requirements and assurance activities.
- Training, competency and support requirements.
- Procurement and supplier arrangements.
- Benefits monitoring and reporting arrangements.

This transition is supported by the ED3 Deployment Team, which works with operational, engineering, customer, digital, asset management, procurement and commercial teams to maintain momentum and ensure deployment remains aligned with business priorities and governance requirements. Early engagement with these functions throughout project delivery reduces barriers to implementation and improves the likelihood of successful adoption.

Deploying at Scale

The scale of deployment will depend on the nature of the innovation, the benefits demonstrated and the business need. Some innovations may be targeted at a specific operational process, geographical area or asset type, while others may be implemented across the entire licence area.

Deployment activities may include:

- Roll-out across a defined asset population.
- Adoption within a specific business function.
- Integration within major change or transformation programmes.
- Inclusion within future investment programmes or reopeners.
- Wider deployment across both SSEN Distribution licence areas.
- Replication across the wider GB energy sector.

Where opportunities exist, we will actively support the adoption of successful innovations beyond SSEN Distribution. This includes sharing evidence through industry forums, collaborating with other network companies and identifying opportunities to fast-follow or replicate proven solutions. Accelerating wider adoption increases the overall value delivered from innovation and avoids unnecessary duplication across the sector.

Realising and Tracking Benefits

Deployment is not the end of the innovation lifecycle. Benefits realisation continues after implementation to confirm that the innovation is delivering the outcomes originally anticipated and to capture any additional learning.

For each deployed innovation, we will:

- Confirm the benefits baseline and success measures.
- Monitor realised operational, customer and system outcomes.
- Compare actual performance against forecast benefits.
- Capture deployment costs and implementation lessons.
- Identify opportunities for optimisation or wider roll-out.

- Report deployment progress and realised value.
- Update portfolio-level benefits assessments.

Benefits will be assessed against our four ED3 outcomes:

- A more affordable energy system.
- Improved reliability.
- Greater resilience.
- Enhanced environmental and societal value.

The Innovation Deployment Team will continue to track benefits following adoption and provide transparent reporting through our annual portfolio RRP reporting and Innovation Focus Report. This ensures that innovation performance is measured by the value delivered rather than the number of projects completed.

Closing the Loop

The final stage of the process is using deployment experience and realised benefits to improve future innovation activity. Every deployed innovation generates insight into customer needs, deployment barriers, organisational readiness and future opportunities.

We will use these insights to:

- Refine future challenge statements.
- Improve project selection criteria.
- Strengthen Deployment Cases.
- Update benefits methodologies.
- Inform future strategic priorities.
- Identify opportunities for further innovation.
- Share lessons internally and across the wider industry.

This creates a continuous improvement cycle, ensuring that experience gained from deployment directly influences future opportunity identification, project selection and portfolio development. In this way, every deployed innovation helps strengthen the effectiveness of future innovation investment and accelerates our ability to deliver measurable customer and stakeholder value.

Table F. 7. Steps to close the loop

Steps	Objective
Decision to deploy	Confirm technical performance, customer value, operational fit, risk, business integration, external compliance, procurement route and available deployment funding.
BAU transition	Transfer the approved deployment into the relevant business investment or change process. Confirm accountable owner, implementation plan, systems, standards, training and support.
Scale	Deploy across the appropriate licence area, business function or asset population. Consider replication and cross-network adoption.
Benefits	Confirm baseline and success measures, monitor realised outcomes after adoption and report deployment progress and portfolio value annually.
Close the loop	Use delivery and benefits evidence to refine future challenges, project selection and portfolio priorities.
Output	An embedded Business-as-Usual capability delivering measurable customer, network and stakeholder benefits, supported by ongoing performance monitoring and benefits realisation.

Roles and accountabilities

Table F. 8. Roles and responsibilities

Role / forum	Primary accountability	Key points of involvement
Innovation Steering Group	Strategic direction and portfolio oversight.	Priorities, balance, performance and alignment.
Innovation Governance Board	Challenge and approve developed opportunities.	Project initiation, material changes and key decisions.
Senior business sponsor	Own the need, value and organisational commitment.	Selection, approval, delivery reviews and deployment decision.
Operational owner and SMEs	Design adoption requirements and own enduring use.	Scoping, testing, readiness, implementation and benefits.
Innovation project team	Develop and deliver the project and evidence.	Initiation through project closure.
PMO	Project controls, assurance, resources and regulatory reporting.	Planning, delivery reviews and reporting.
Deployment Team	Maintain momentum and coordinate the transition to BAU.	From inception through implementation and benefits tracking.
Knowledge and communications	Share learning and maintain engagement.	Throughout delivery and after completion.