

Public

NESO Technology Advisory Council

TAC-20 5th September 2025

Meeting pack

TAC-20 agenda – 5th September 2025

Item	Start	Finish	Time	Item	Presenter	Notes
1	9:00	09:30	30	Arrival		
2	09:30	09:35	5	Welcome & Apologies	Eric Brown	
3	09:35	09:40	5	Minutes of last meeting and matters arising	Eric Brown	
4	9:40	9:50	10	Feedback from the last meeting	Keith Trilloe	
5	9:50	10:20	30	Roadmap for DSAP	Joe Stepney / Keith Trilloe	
6	10:20	10:40	20	NESO 1 & 2 –year Business plan	Joe Stepney / Keith Trilloe	
7	10:40	11:10	30	Day 2 Change Journey	Sangeeta Agrawal	
			15	BREAK		
8	11:25	12:05	40	Innovation showcase	Carolina Tortora	
9	12:05	12:15	10	Open Balancing Platform Update	Brendan Lyons	
10	12:15	12:20	5	Subgroups update	Joe Stepney	
11	12:20	12:25	5	Next meeting	Eric Brown	Next meeting: Friday 5th December 2025
12	12:25	12:30	5	AOB	Eric Brown	

Welcome and apologies

Item 2

Eric Brown

Minutes of last meeting and matters arising

Item 3

Eric Brown

Minutes of last meeting and matters arising

- Minutes of TAC-20 have been published on the NESO website.
- The material from the meeting has also been published.
- This section will be used to discuss any matters arising.

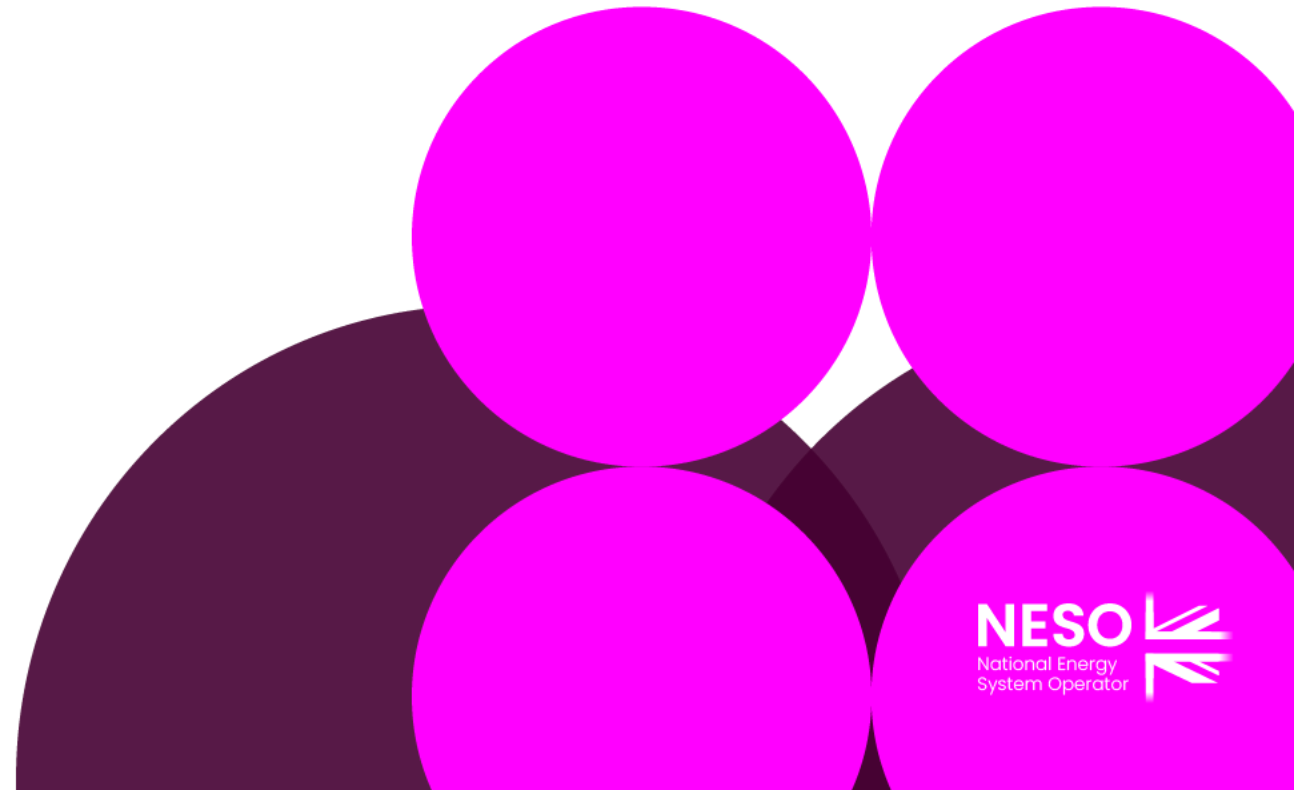
Actions

ID	Action Description	Owner
A02	Investigate whether teams can be used as an offline communication method with TAC members.	JS
A06	Work with SP and FD to organise a session with another sector.	Chair
A17	Come back to TAC with details on the Engineering Advisory Council.	SR
A18	Share any views on the TOR or membership of the TAC	All
A21	Review Control Room of the future sub group.	JS
A25	Check if there is anything shareable between NESO and DESNZ head of data regarding the volume of data initiatives and concerns about duplication of effort	SR
A26	Send out questionnaire on renewing membership including the refreshed TOR	CS
A27	Setup a discussion on DNO's lack of visibility on voltage information and acting on 'what if' scenarios	JS

Feedback from the last meeting

Item 4

Keith Trilloe



Feedback from the last meeting

Digital Strategy <ul style="list-style-type: none"> TAC asked about the role of AI in the strategy. Focusing on building trust and ensuring human oversight. TAC praised the iterative approach to updating the strategy and asked for continued engagement to align with industry needs. 	Action Taken Since <ul style="list-style-type: none"> We will include a dedicated section on AI and governance. Charters include directorate AI. We would like to get any feedback on engagement and alignment to industry.
Clean Power 2030 Delivery Track <ul style="list-style-type: none"> TAC suggested integration and dependencies between projects may be where the issues occur for CP2030 not individual projects What is the trackers role in the broader CP2030 context? 	Action Taken Since <ul style="list-style-type: none"> NESO has started work on linking connections queue data to assess dependencies and risks An enabler for Mission Control which NESO have attempted to assist with digital tooling
AI Operating Model and Roadmap <ul style="list-style-type: none"> TAC queried the aspiration of global influence in NESO's AI ambitions. TAC highlighted the need for continuous improvement and iteration in AI models 	Action Taken Since <ul style="list-style-type: none"> Taken feedback on board and NESO day to day focus remains on driving NESO excellence and GB Industry champion. Implementation approach has this embedded within how NESO deploy and continuously enhance the model.
Open Balancing Platform <ul style="list-style-type: none"> The latest updates to OBP were discussed including the roadmap. TAC suggested more details on constraint management and the national optimiser in the next industry event. 	Action Taken Since <ul style="list-style-type: none"> A dedicated breakout session on constraint management was held at the Balancing Programme Industry event in June. An Optimisation Stakeholder Focus group meeting was held in June focusing on National Optimisation.



Roadmap for DSAP

Item 5

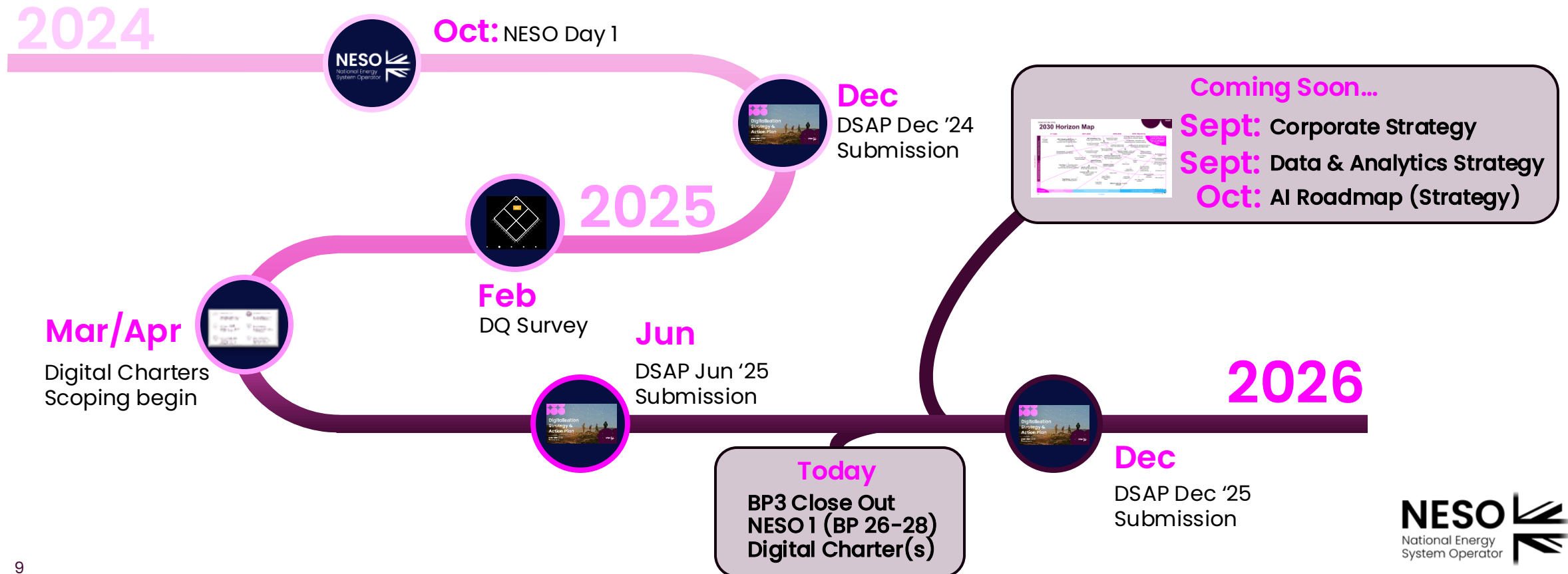
Keith Trilloe / Joseph Stepney

Topics to discuss...

- Re-cap on approach.
- Discussion around engagement and industry feedback sessions.
- Other industry comparators/countries.
- Best way to engage TAC and subgroups.

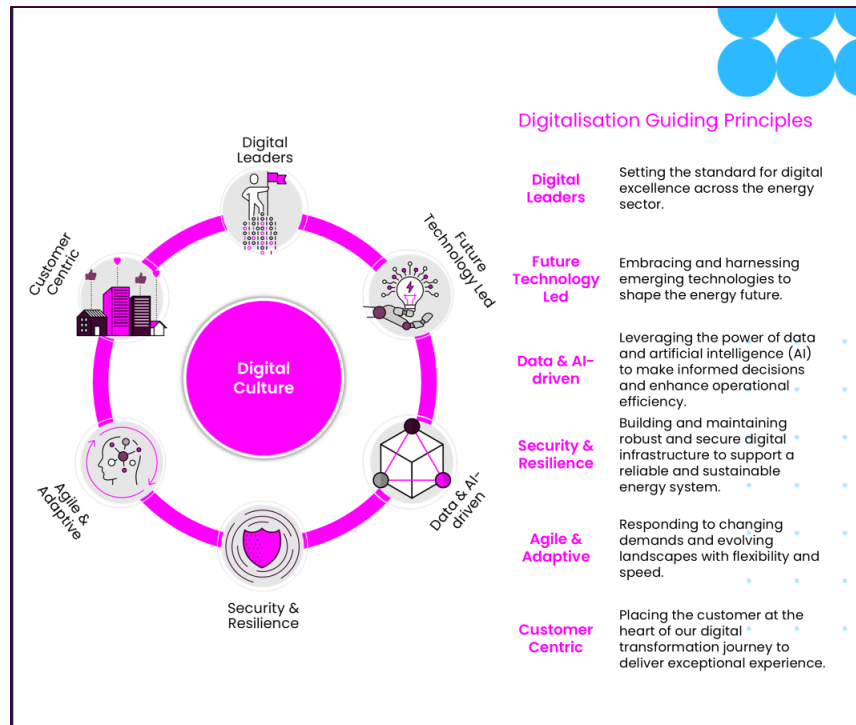
Strategy Roadmap 2025...

Since Day 1 in 2024, the approach to Digitalisation Strategy development and implementation has continued to evolve, aligned to both “top-down” Corporate Strategy development and “bottom-up” Digital Charters, supported by an in-depth Data & Analytics Strategy and AI Roadmap. Collectively, these will form the bridge between Directorate, NESO Priorities / Roles and the key enabling role that Digital, Data & Technology plays, enabling the organisation, enabling the industry.

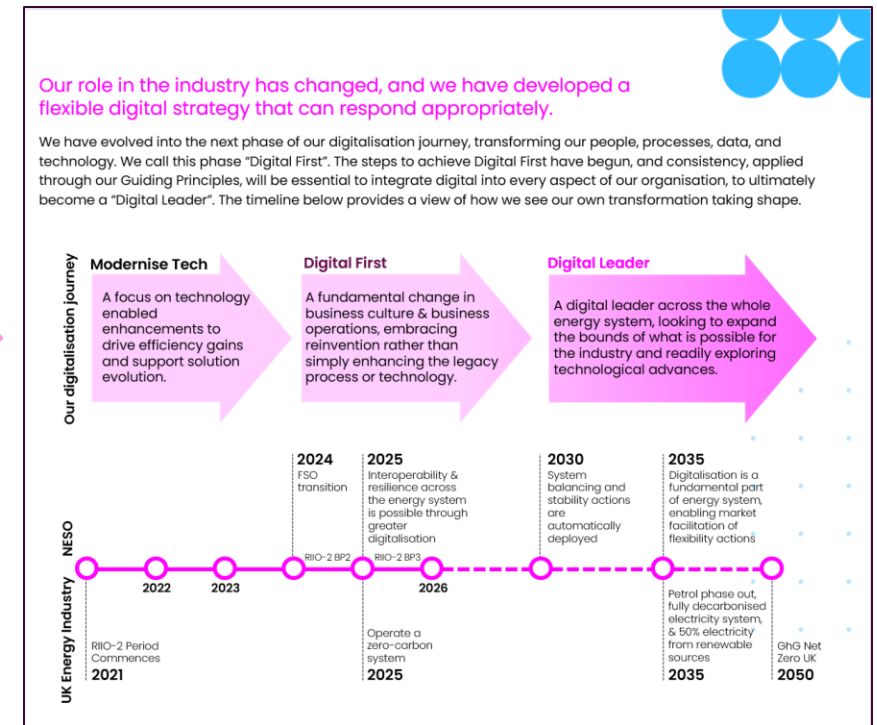


Digital Culture: Principles & Vision

- Whilst we're aiming to build the Strategy based up Digital Charters for each Directorate (c14 in total), we recognise that some top-down alignment will be required. To ensure the output is adhering to the Corporate Strategy we've already started to collate relevant information via discovery and workshops and are aligned to both internal Business Planning and Corporate Strategy timelines. Note that DD&T's Charter will in effect become the IT Strategy for NESO and may differ from content below.



The underlying positioning of the DSAP will remain focused upon how technology is **ENABLING** NESO's roles, driving transformation across the industry.

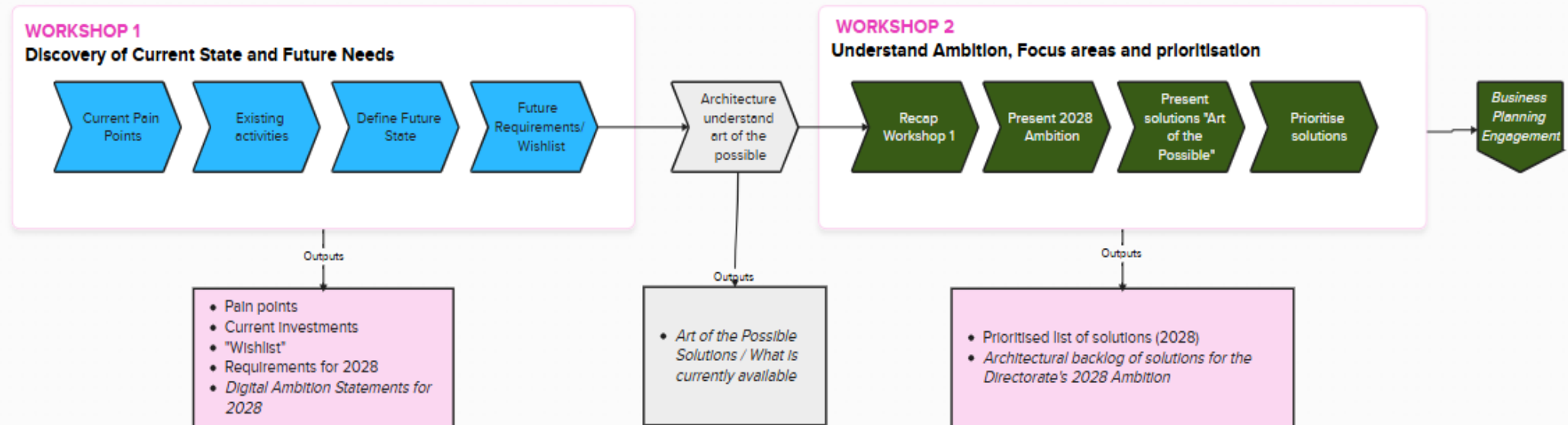


Digital Culture, People & Skills remain a significant part of the DSAP

getting this right internally is seen as the key enabler and hence it's retention at the heart of the DSAP and forthcoming Corporate Strategy.

General Approach – Digital Charters

CHARTER PROCESS OVERVIEW



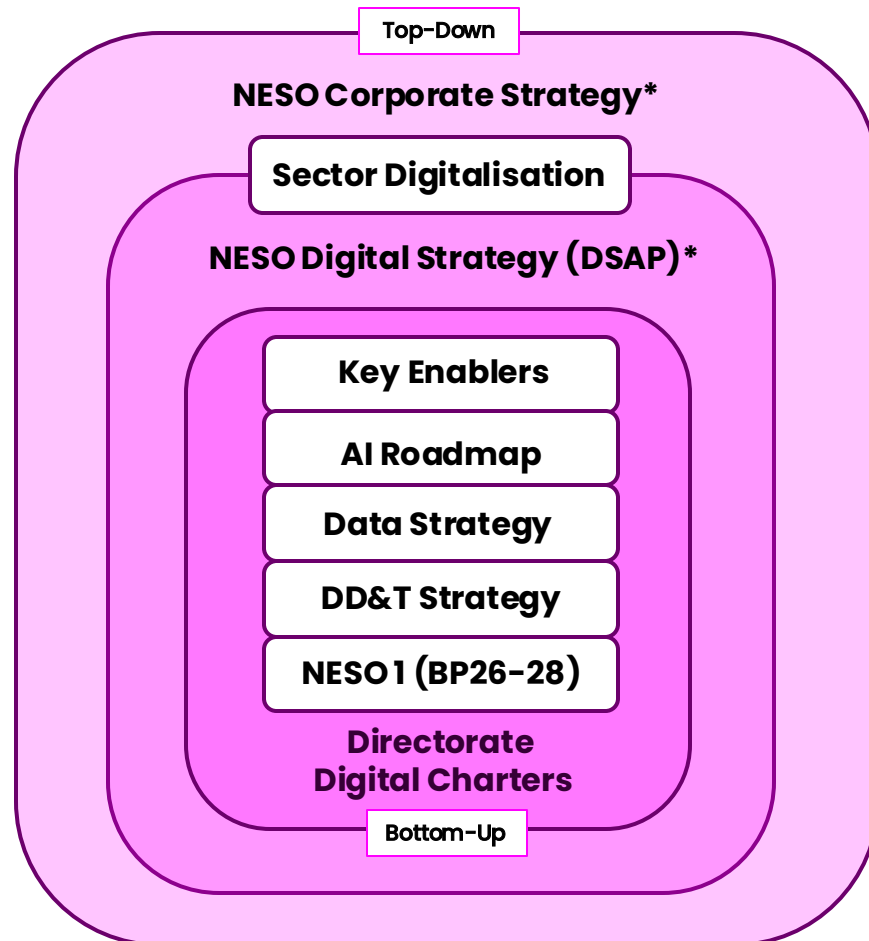
An evolving process, aimed at defining the “Art of the Possible”...

The Contents of a Directorate Digital Charter

NESO Vision and Purpose	
Digital Strategy and Digital Principles	•Digital Strategy, Digital leader vision, and NESO's 6 Digital Guiding Principles
Directorate Missions	•Formally published purpose of the Directorate
Directorate Ambition	•Published Role 2031 Ambition, mapped to the directorate
Future Capabilities Required	•Not only digital, capture the day-to-day challenges and inefficiencies
Digital ambition	•What the directorate wants to achieve digitally
Performance Objectives and Success Measures	•Drafted by Business Planning
Digital Enablers	•Priorities to make tangible progress towards the Digital Ambition
Digital Activity Roadmap	•BP 26-28 and future activities, mapped against digital principles and themes.

Strategy Framework: Our Golden Thread

- Whilst we're aiming to build the Strategy based on Digital Charters for each Directorate (up to 14 in total), we recognise that some top-down alignment will be required, to ensure the output is adhering to the Corporate Strategy. Our primary aim for Dec 2025 is to align across the pending strategy updates, whilst retaining a high degree of ownership and engagement at a directorate level, to facilitate technology adoption, business and ultimately industry transformation.



- Internal transformation to ENABLE sector digitalisation is the fundamental premise behind every aspect of Digitalisation across NESO.
- Directorate Digital Charters are to become “living documents”, continuously updated to reflect co-creation and collaboration between business & technology.
- AI Roadmap and Data & Analytics Strategy to be in-depth, stand-alone and prioritised, then woven into the future DSAP, reflecting integration across NESO via Digital Charters.
- Digital Strategy (DSAP), a regulatory obligation, to be comprehensively overhauled and built using the Digital Charters as a foundation. The key document that aligns both top-down and bottom-up strategy creation methodologies.
- Technology Strategy will be reflected within the DD&T Digital Charter, authored by Head of Strategy & Architecture.
- Key 2026-31 Internal Transformation Milestones have already been identified within Corporate Strategy process and are being baked into NESO 1 (BP26-28) formulation.
- Facilitating Sector Digitalisation, a primary aim for NESO, embedded in the forthcoming Corporate Strategy & aligned with internal Data & Digitalisation transformation milestones.
- Corporate Strategy will provide the wider engagement framework, to facilitate alignment and transformation readiness (as essential requirement) across NESO Directorates.

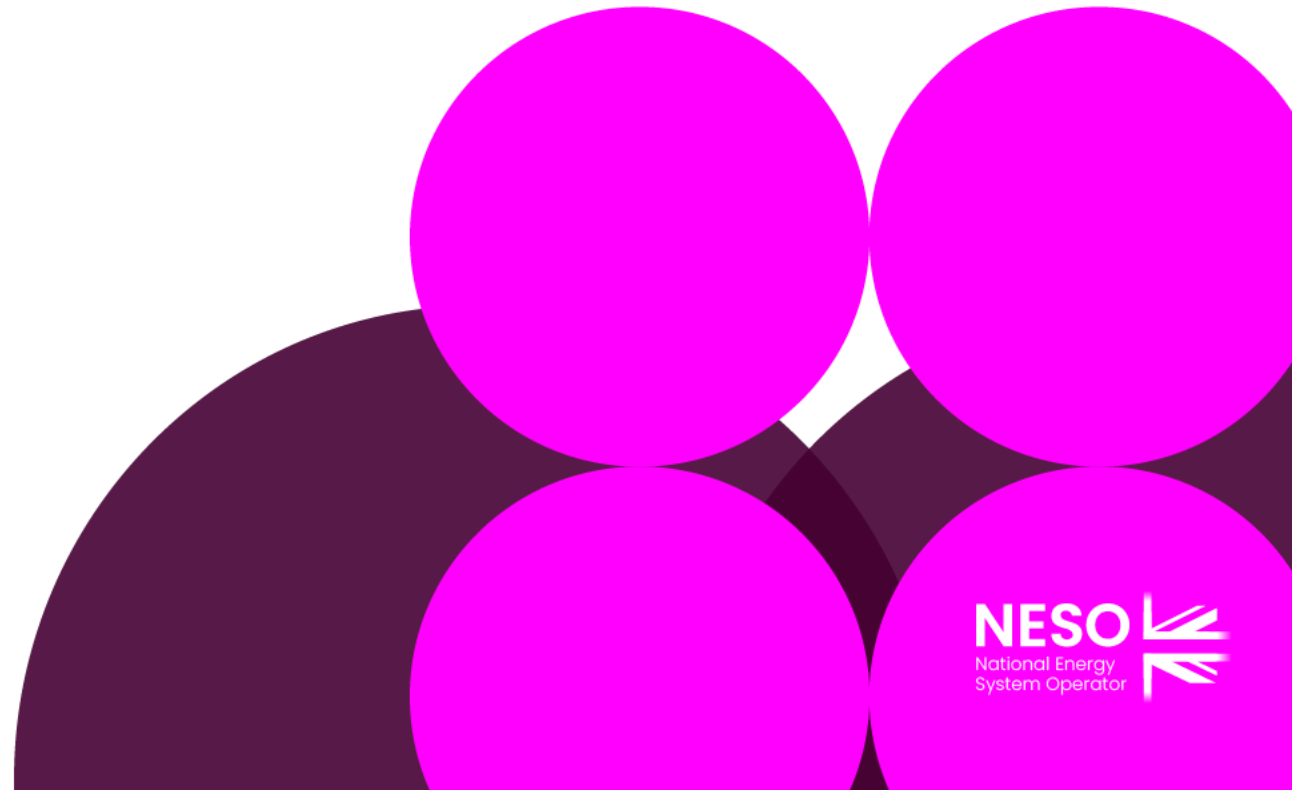
NESO 2-year Business Plan

Item 6

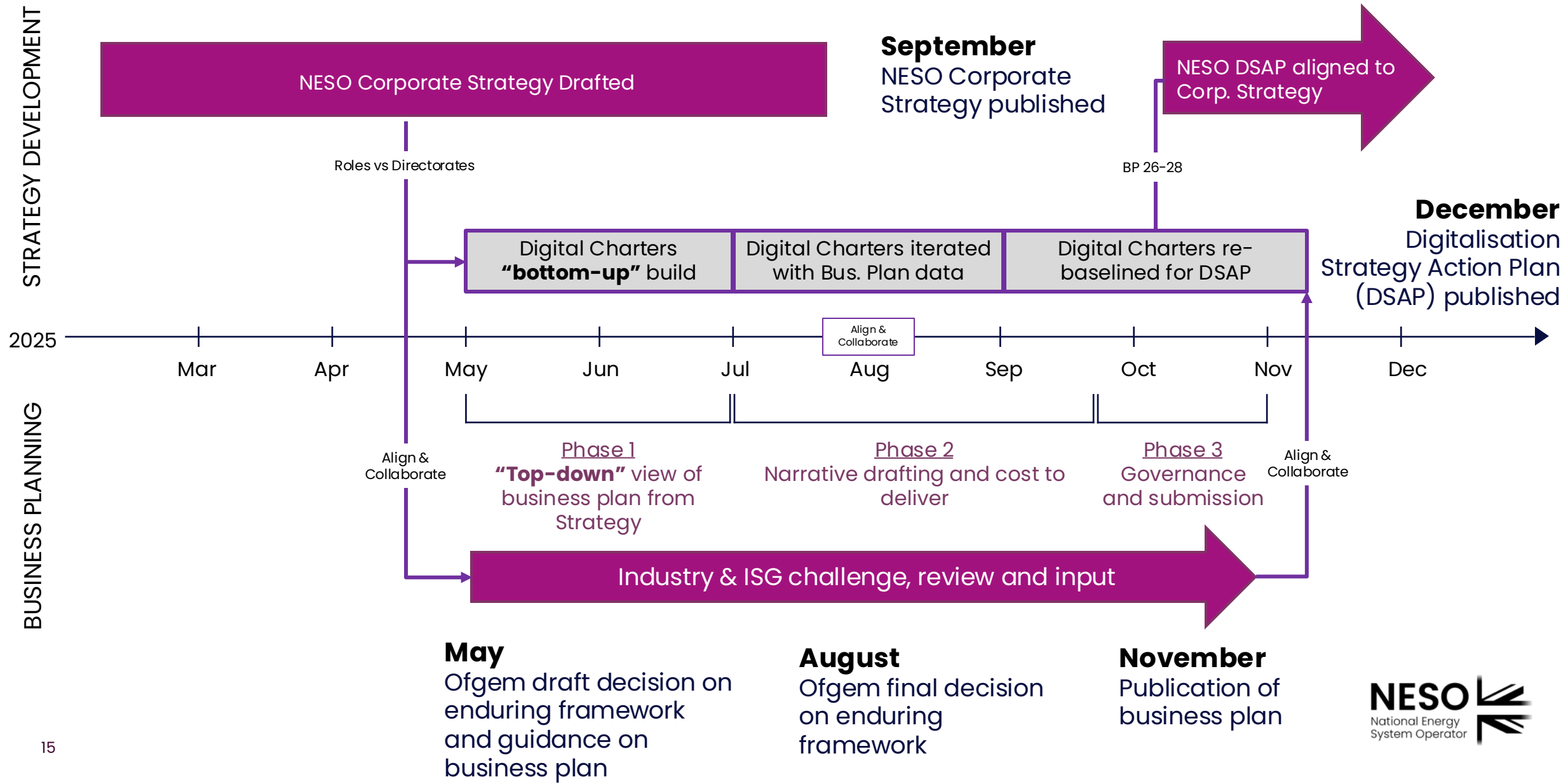
Joe Stepney

An update on the live business planning process

- High level timescales & alignment
- 2 Year Plan preparations
- Example (Draft) Performance Objectives
- DD&T Annex, approach
- Wider Public engagement



High level process & timescales, how we align...



We are currently preparing our 2-year business plan.

We will submit the FY27 – FY28 (NESO 1) business plan to Ofgem by end of October 2025.

- The business plan submission will include an overview of all new & continuing DD&T investments.

For the Business Plan, Performance Objectives* (POs) have been defined to cover all aspects of NESO.

- A Performance Objective is defined as a major outcome that NESO intends to achieve by the end of the two-year Business Plan period.
- Each PO will be supported by Major Deliverables and Success Measures which sit within that objective, to demonstrate what successful delivery looks like.

To provide continuity from BP3, we are proposing a PO on Facilitating Sector Digitalisation, see next slide for draft example...



Building a Digitally Connected Energy System – Draft example for TAC

Performance Objective

NESO will enable a digitally connected energy system through open data, smart standards, AI and interoperable tools—accelerating innovation, broadening participation, and driving system-wide efficiency.

We will achieve our objective by

Accelerating digitalisation across the energy sector by enabling data access, interoperability, and innovation.

Fostering a digital ecosystem that supports system efficiency, consumer participation, and new business models.

Championing open data and digital standards to unlock value and drive collaboration across the sector

Major Deliverables & Success Measures

**Underpinned by Major Deliverables and Success Measures,
(currently being drafted and agreed)**

DD&T Annex Update

The NESO 1 business plan will have an updated structure but with the same investment detail as BP3.

Key Changes to DD&T Annex structure include

- The Annex will be structured by Performance Objectives.
- The investments will be structured by outcomes.
- This aligns the DD&T Annex with the approach used in the wider BP3 plan previously

Same investment detail as BP3

Investment Summaries	
Continuing Investment	New Investment
Overview	Overview
Current State	Current State
Future State	Future State
Roadmap	Roadmap
Costs	Costs
	Approach
	Alternative options
	Risks / Assumptions

KEY QUESTION: What are committee members views regarding the revised approach to the DD&T Annex and introduction of Performance Objectives for business planning?

If any TAC members wish to contribute further, we have public engagements you're welcome to attend...

NESO-1 Business Plan April 2026 – March 2028

Performance Objective Webinars

For a first look at our draft Performance Objectives, please register for our business plan development webinars on our website

Thursday 11 September 14:00 – 15:00

Monday 22 September 10:30 – 11:30

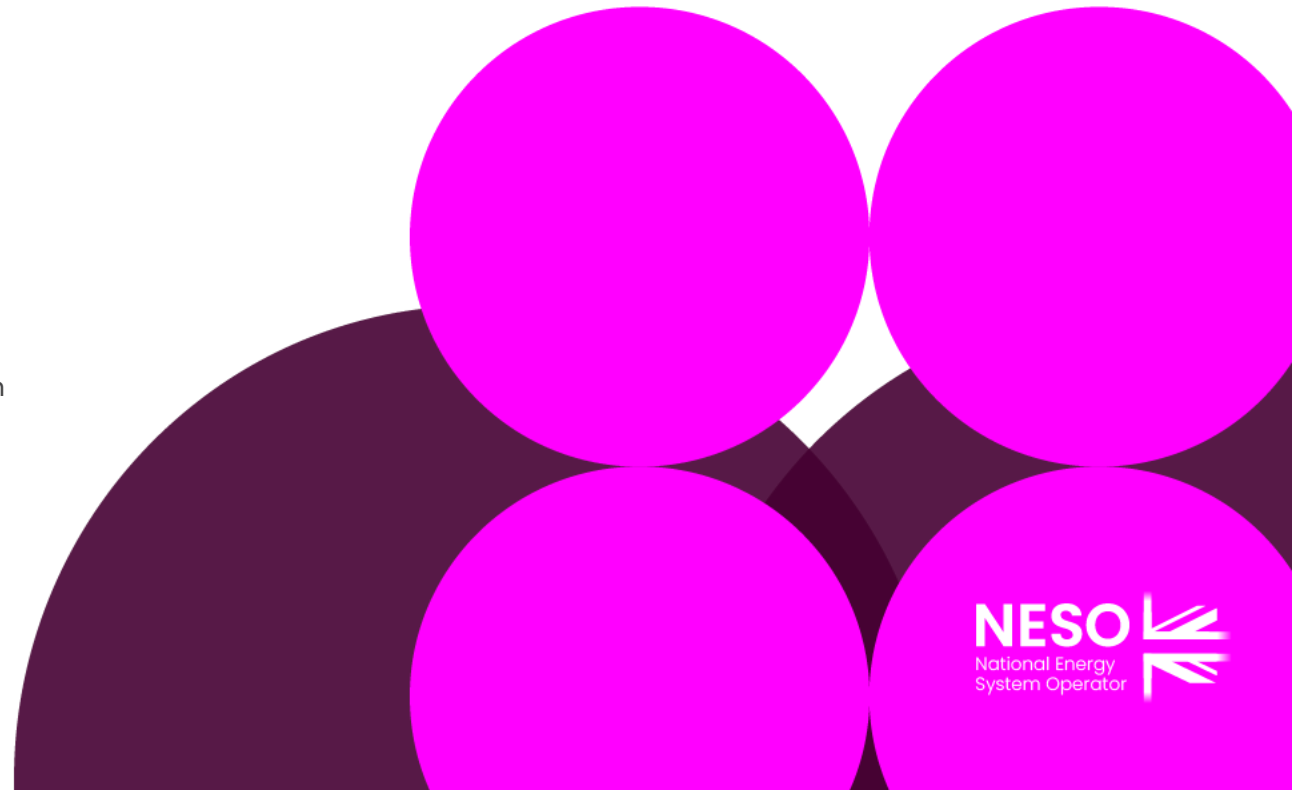
Day 2 Change Journey

Item 7

Sangeeta Agrawal

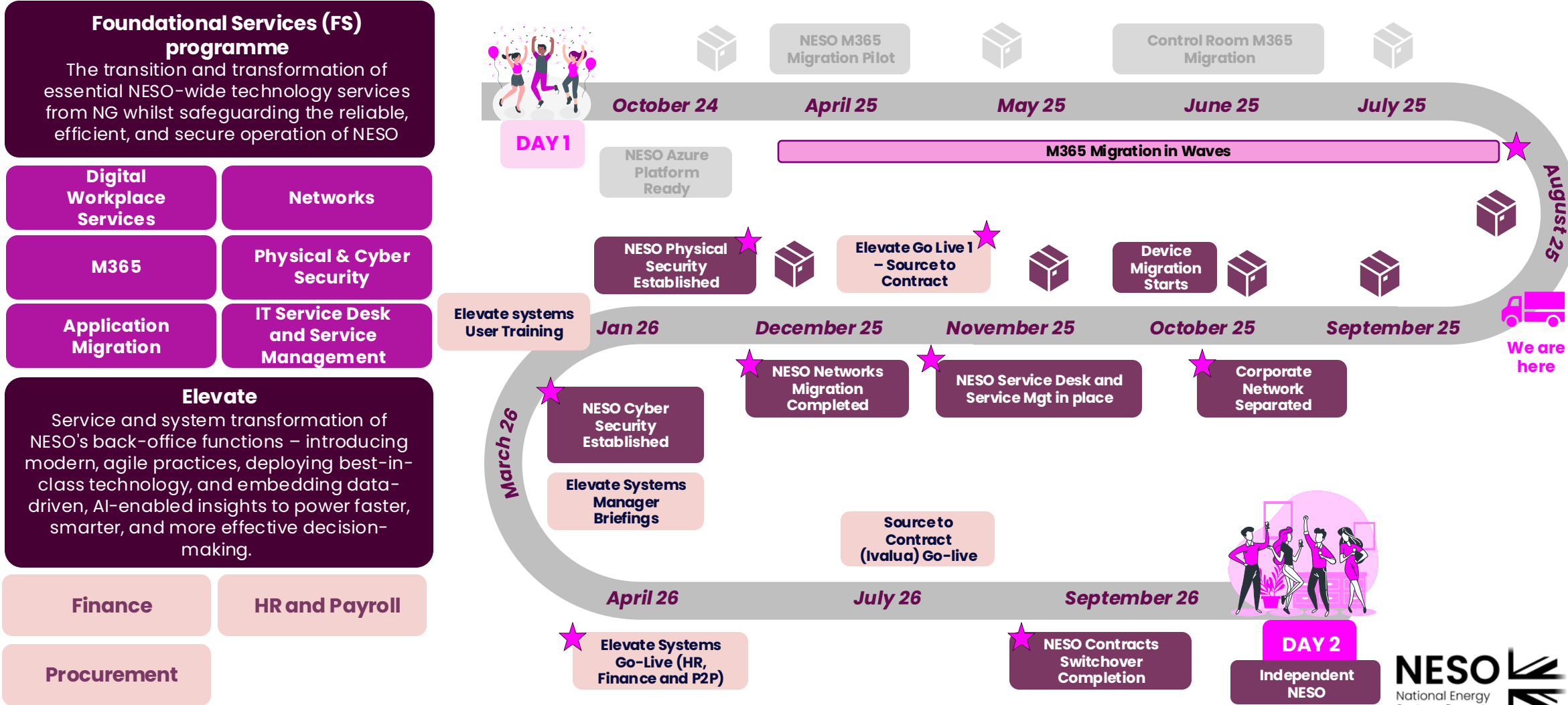
Topics to discuss...

- The Roadmap for delivering Day 2 Separation and TSA exit
- How NESO maintain colleague engagement throughout multiple layers of change
- Achieving a balance between pace of delivery and managing colleague disruption and change fatigue



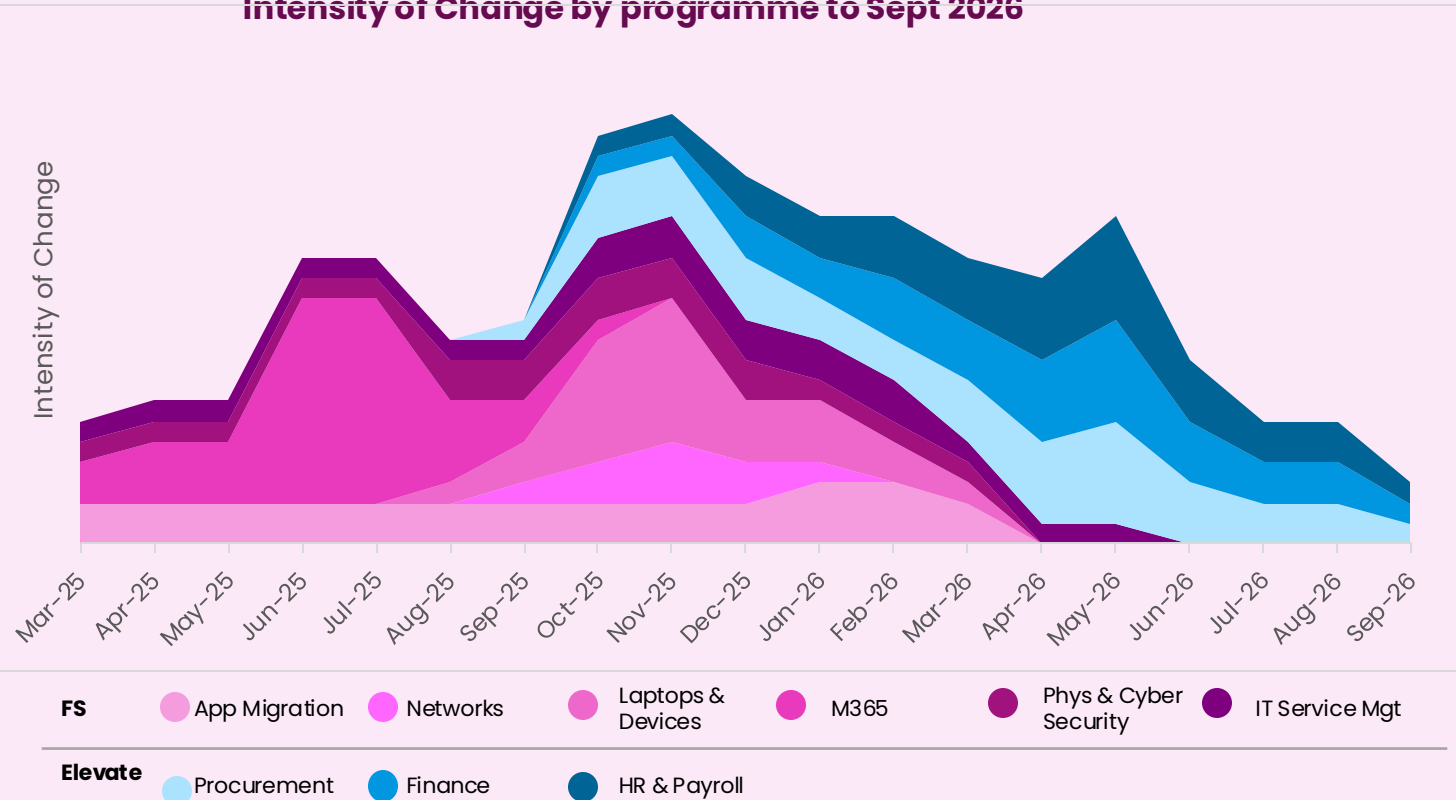
The Roadmap to deliver change

 App Migration wave



The Case for Effective Change Management

Intensity of Change by programme to Sept 2026



Key Takeaways

- 1 Changes will impact all of our colleagues, and in some cases external NESO stakeholders.
- 2 Signification changes to both systems and services.
- 3 We have front-loaded system-based changes such as M365, laptops and ITSM.
- 4 Our established plans and TSA exit commitments restrict our flexibility to make adjustments.
- 5 Other programmes outside of separation will also impact elements of the user community

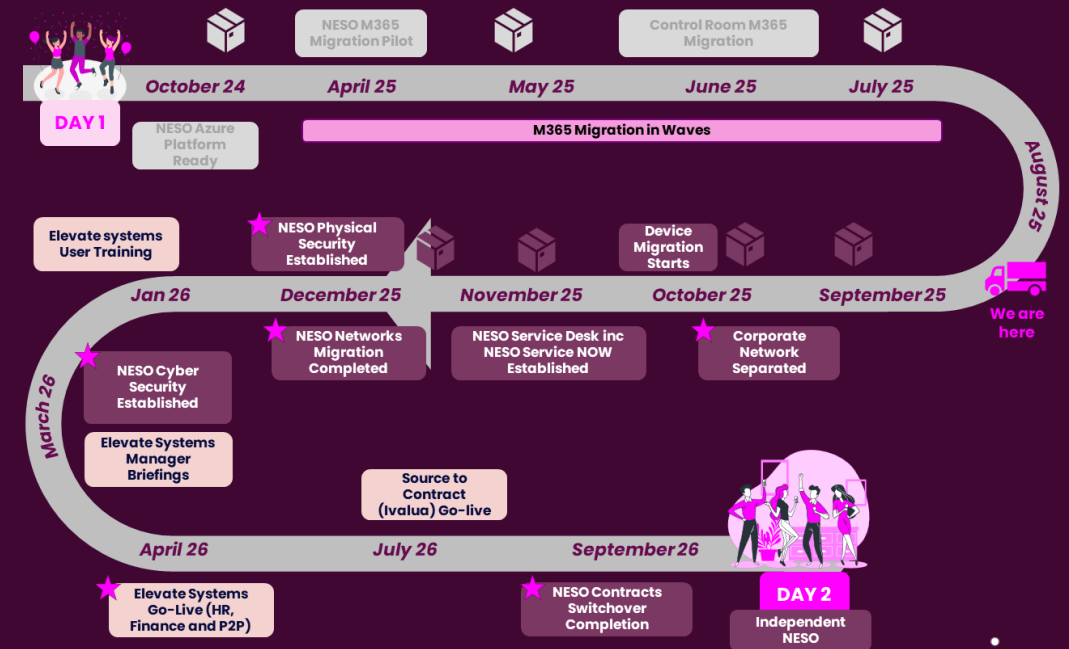
Our approach to change is built on three key components: strategy, pillars, and a structured framework



What's next for Day 2 transformation

- We enter a second period of high-intensity change, with change fatigue already setting in
- The impact of complex migrations will be felt around the organisation through device roll out, networks transition, and core HR, Finance and procurement system implementation

KEY QUESTION: How can we strike a balance between delivering at pace and minimising change fatigue to ensure sustained engagement and minimal disruption to core business throughout the process?



Break

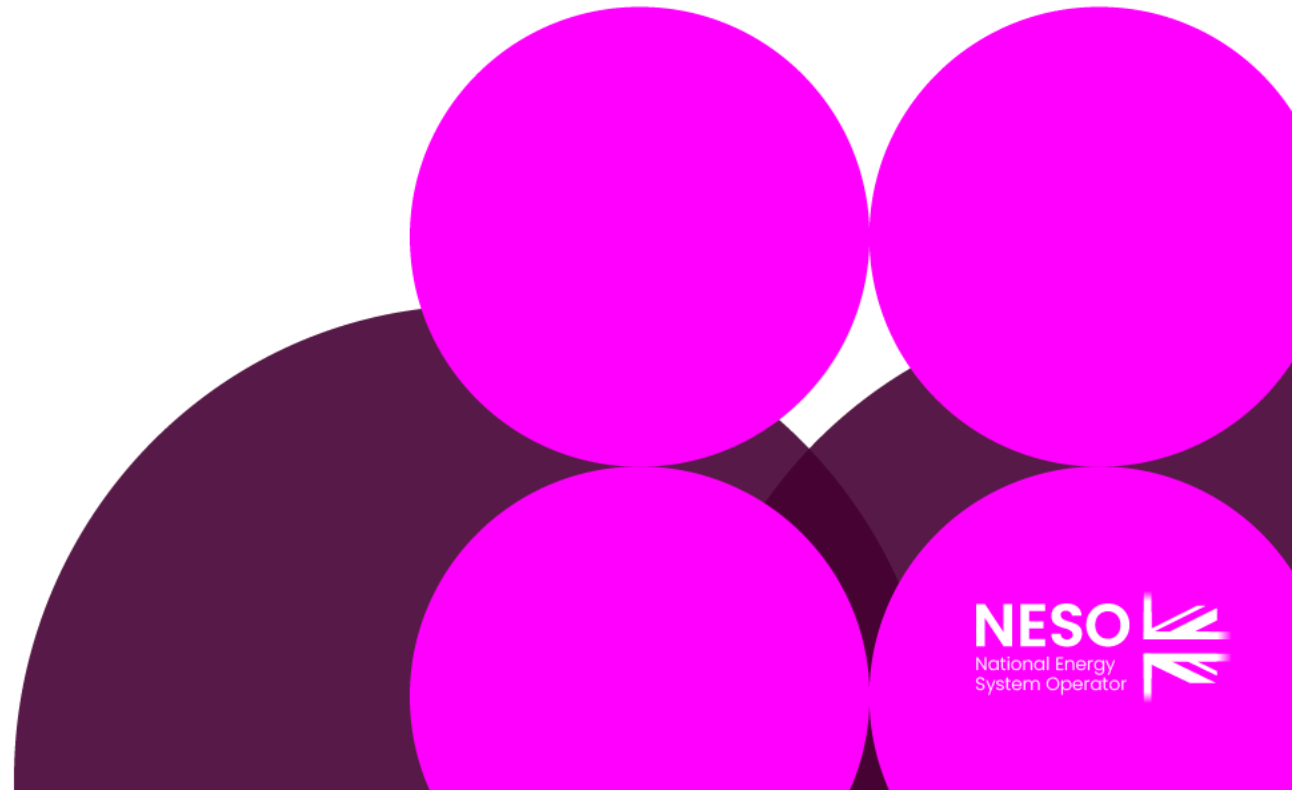
10:55 – 11:10

Innovation showcase

Item 8

Carolina Tortora

The Innovation portfolio and showcasing some of our transformational projects



Innovation Portfolio 2024/2025

8.38/10

Average stakeholder and customer satisfaction score

83

Innovation ideas generated

59

External big ideas received

31

Big ideas developed into projects

57%

Big ideas approved

33

days from submission to initial decision*

74

Project Partners

*Average length of time

Figure 2: Portfolio Overview by Energy Networks Association (ENA) Theme in 2024/25

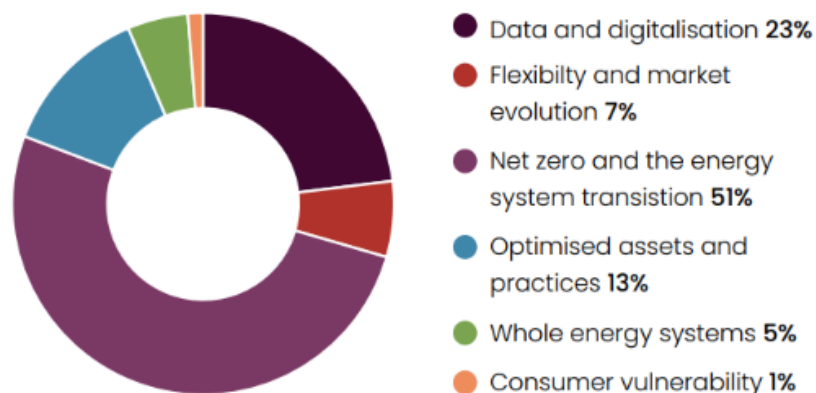


Figure 3: TRL Overview in 2024/25

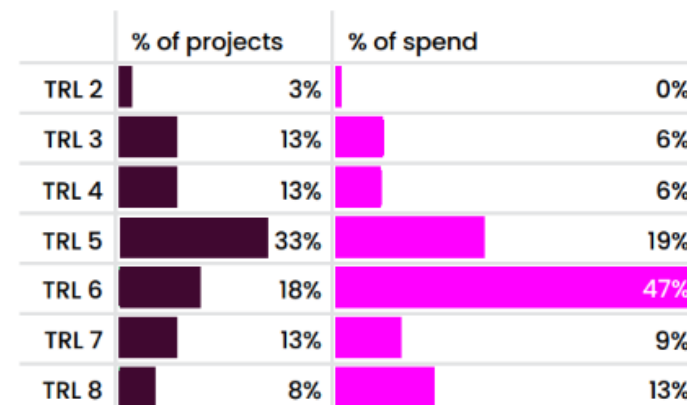


Figure 4: Partner Network in 2024/25

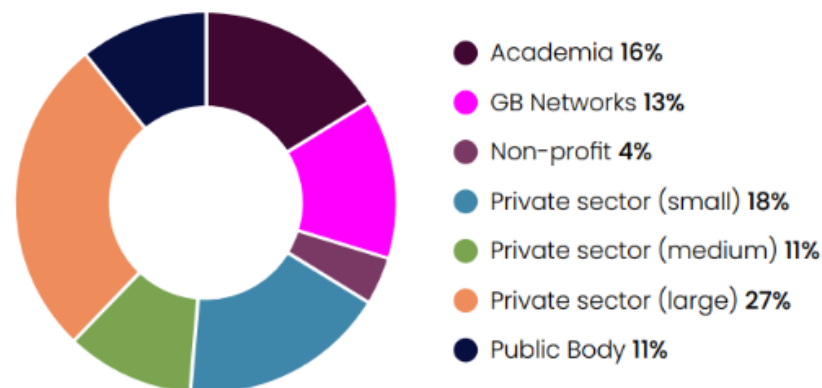
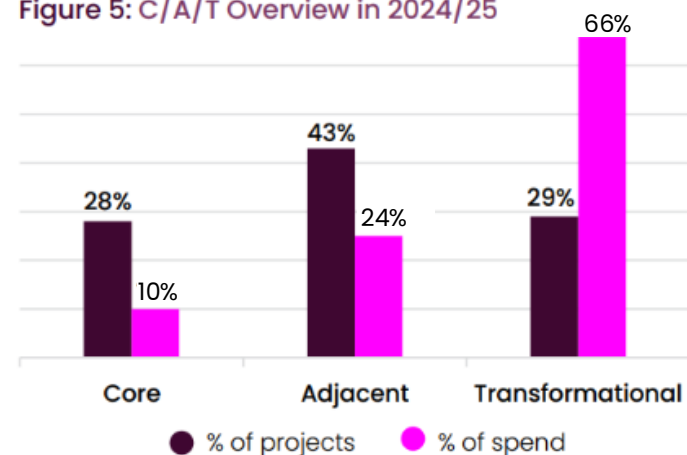


Figure 5: C/A/T Overview in 2024/25



REVEAL

Driver

The need to accelerate the testing and launch of new capabilities, given the pace of transition from traditional generation sources to emerging technologies and flexible assets. For example, communications signals and balancing tools.

Purpose

Develop a new technology capability to enable NESO and our partners to independently create and test innovative concepts, services and market solutions, without impacting our existing critical national infrastructure systems.

Key Deliverables

1. Build a secure, digitally-ringfenced and cloud-hosted environment to enable NESO to conduct trials. Proof of Concept has been delivered and been successful
2. Establish a continuous delivery cycle to identify new, innovative ideas and trial them
3. Revolutionise the trialling process for NESO, breaking down barriers to innovation and enabling cross-industry collaboration

Partner



Expected Benefits

- Provide the tools to make the trialling of new capabilities easier and faster, accelerating GB's development of new products and solutions
- Provide knowledge and experience which future products and services can leverage
- Streamline and standardise existing processes (e.g. trialling and governance processes, trial prioritisation etc.)

CrowdFlex – Beta

Drivers

- Increasing non-dispatchable renewable energy generation
- Flexibility moving from supply-side to demand-side
- A smart, flexible energy system is increasingly needed to balance the electricity system

Purpose

Establish domestic flexibility as a reliable energy and grid management resource by identifying the technology capability, understanding the statistical nature of flexibility and aligning NESO and Distribution Network Operator (DNO) requirements.

Key Deliverables

1. Large-scale randomised control consumer trials to collect data used to develop demand and consumer flexibility prediction models using common APIs
2. Cost-benefit for flexibility services and NESO system impact analysis
3. Customer surveys and developing consumer insights via recruitment methods and understanding behaviours
4. Go-to-market commercialisation strategies for Flexibility Service Providers and a roadmap to BAU for NESO and DNOs

Partners



Expected Benefits

- Understand the statistical nature of domestic flexibility, accelerating its growth and leading to savings in grid costs and consumer bills
- By year 10, it's calculated that CrowdFlex could help enable domestic flexibility to provide a total direct and indirect net benefit of £472m annually, by reducing balancing costs and the need for additional capacity and network reinforcements
- Reduce the need for thermal generation equating to a cumulative 10-year benefit of avoided CO₂ emissions of 6.3MtCO₂eq

Volta Programme

Drivers

In a clean power world, the control room will need to manage increased complexity and uncertainty due to:

- An increase in distributed intermittent renewable resources being connected to the grid
- Changes in customer behaviour due to EVs and smart home controls

Purpose

Utilise machine learning and AI in the control room to optimise forecasting and dispatch decisions, leveraging cutting-edge technologies and flexible demand and storage assets to unlock the control room of the future.

Key Deliverables

1. Probabilistic adaptive forecasts for generation, demand and interconnector trades
2. Real-time scenario builder to aid decision making
3. Novel grand optimiser, capable of real time analysis
4. Integrated performance monitoring and a user interface focused on decision transparency

Partners



Expected Benefits

- Optimised forecasting and dispatch by leveraging flexible demand and storage technologies, reducing balancing costs
- Management of increasingly complex grid operations through adaptive input models, probabilistic scenarios and optimisation
- Improved performance monitoring, evaluation and feedback of the system through machine learning and operator education

Dynamic Reserve Setting

Drivers

Britain's energy grid must balance supply and demand. To safeguard against unexpected fluctuations, NESO holds reserves of energy. Previously, reserve levels were set biannually and manually adjusted by control room engineers, an approach that's increasingly inefficient in today's dynamic grid featuring unpredictable energy sources such as wind and solar

Purpose

- Network Innovation Allowance (NIA)-funded project to explore moving to dynamic day-ahead reserve setting
- Machine learning algorithms will be developed to more accurately predict reserve requirements
- Project could improve efficiency of system operation and value for consumers

Key Deliverables

To develop a proof-of-concept machine learning model which will use predictor variables, such as temperature and wind forecast data.

Partners

The logo for the Smith Institute, featuring a stylized 'S' in a square followed by the text 'Smith Institute'.

Proven and expected Benefits

- Within 2 hours of being trialled, the DRS model advised engineers to cut 1GW of excess reserve, reducing system operating costs significantly, and therefore consumer bills.
- Financial benefit: Potential savings of millions of pounds per week in reduced reserve procurement costs.
- Recommendations to be provided 24/7, 365 days a year. DRS generates 17,520 reserve recommendations per year to provide the control room with greater insight into reserve requirements.

NESO Network Innovation Allowance

We have agreed with Ofgem that our NIA ask will cover a 5-year period as recognised in the NESO Enduring Regulatory Framework:

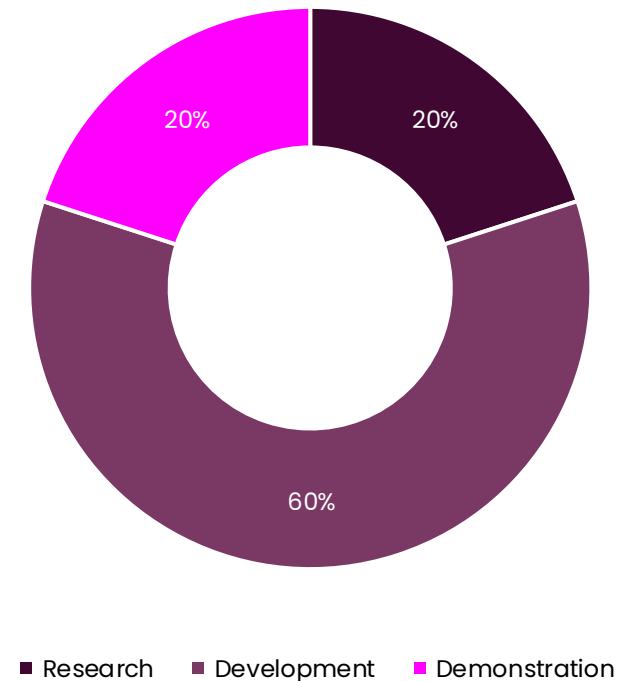
"For other innovation funding (NIA) we will use the same mechanisms, process and timings as other network companies for RIIO-3."

Our assumptions for the RIIO-3 NIA funding request are as follows:





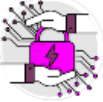

- **The volume of NIA projects will remain consistent** – In RIIO-2, we supported 130 projects with an average uptake of 30 new projects per year
- **We will deliver a higher proportion of Development and Demonstration project** as our portfolio has matured since the beginning of RIIO-2 and we are now seeing projects progress towards productionisation and BaU
- **We will prioritise projects in alignment to our 25/26 Whole System Innovation Strategy** – we've developed a blueprint for the volume of projects required against each of our priority areas to deliver our objectives effectively
- **We will continue supporting transformational projects that are exploratory and ambitious in scope and scale.** These projects will focus on creating entirely new capabilities and challenge existing paradigms across the whole energy system. Innovation on this scale is high-risk and high reward, often involving unproven technologies, novel processes or disruptive models

Based on our RIIO-2 delivery and our growth in transformational projects, this request is proportionate to our RIIO-2 NIA funding request

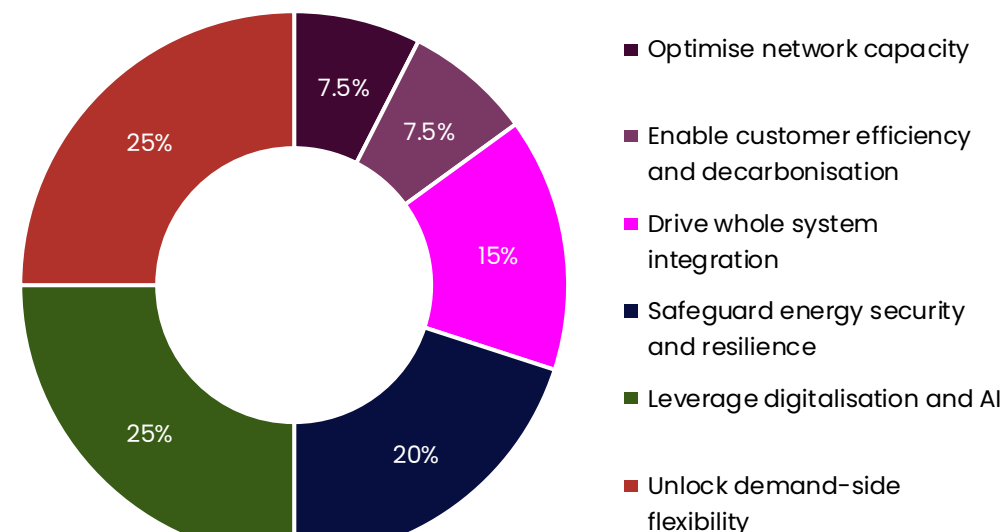
RIIO-3 Anticipated Funding split by Project Type



25/26 Whole System Innovation Strategy

	Innovation Priority	Challenge Areas	NESO Operational Priority	Whole System Priority for CP30
	Unlock demand-side flexibility	<ul style="list-style-type: none"> Increased understanding of demand-side flexibility Reducing barriers to entry 	Core	Yes
	Optimise network capacity	<ul style="list-style-type: none"> Optimising existing network assets Increasing visibility of network conditions Faster customer integration 	Core and supporting	Yes
	Enable customer energy efficiency and decarbonisation	<ul style="list-style-type: none"> Delivering greater energy efficiency Increasing the adoption of low-carbon technology Preparing for future electrification 	Supporting	Yes
	Drive whole system integration	<ul style="list-style-type: none"> Exploring multi-vector solutions Improving whole system integration 	Core	Yes
	Safeguard system security and resilience	<ul style="list-style-type: none"> Maintaining resilience in a net zero energy system Climate adaptation Cybersecurity 	Core	Yes
	Leverage digitalisation and AI	<ul style="list-style-type: none"> Integrating digital technology Enhancing control room decisions System planning and interoperability 	Core	Yes

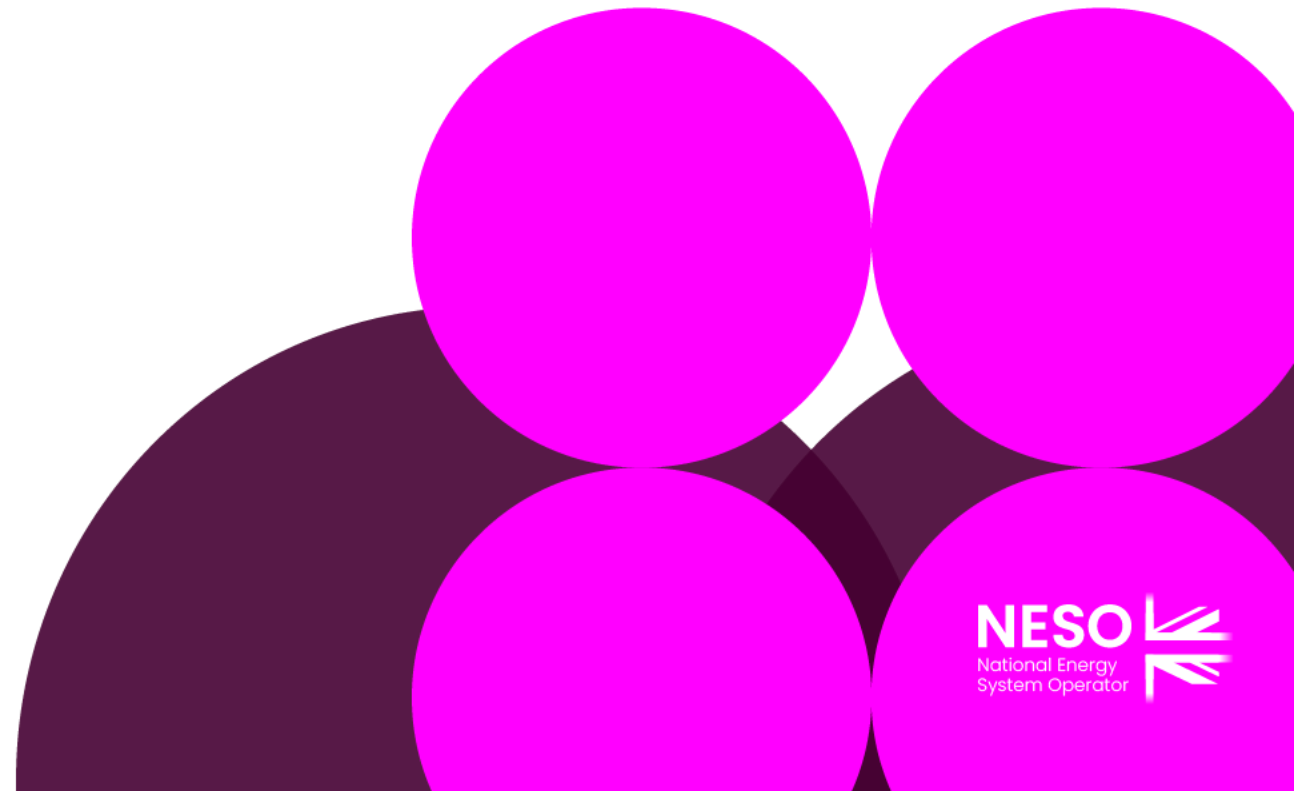
RIIO-3 Anticipated Funding Split by Priority Areas



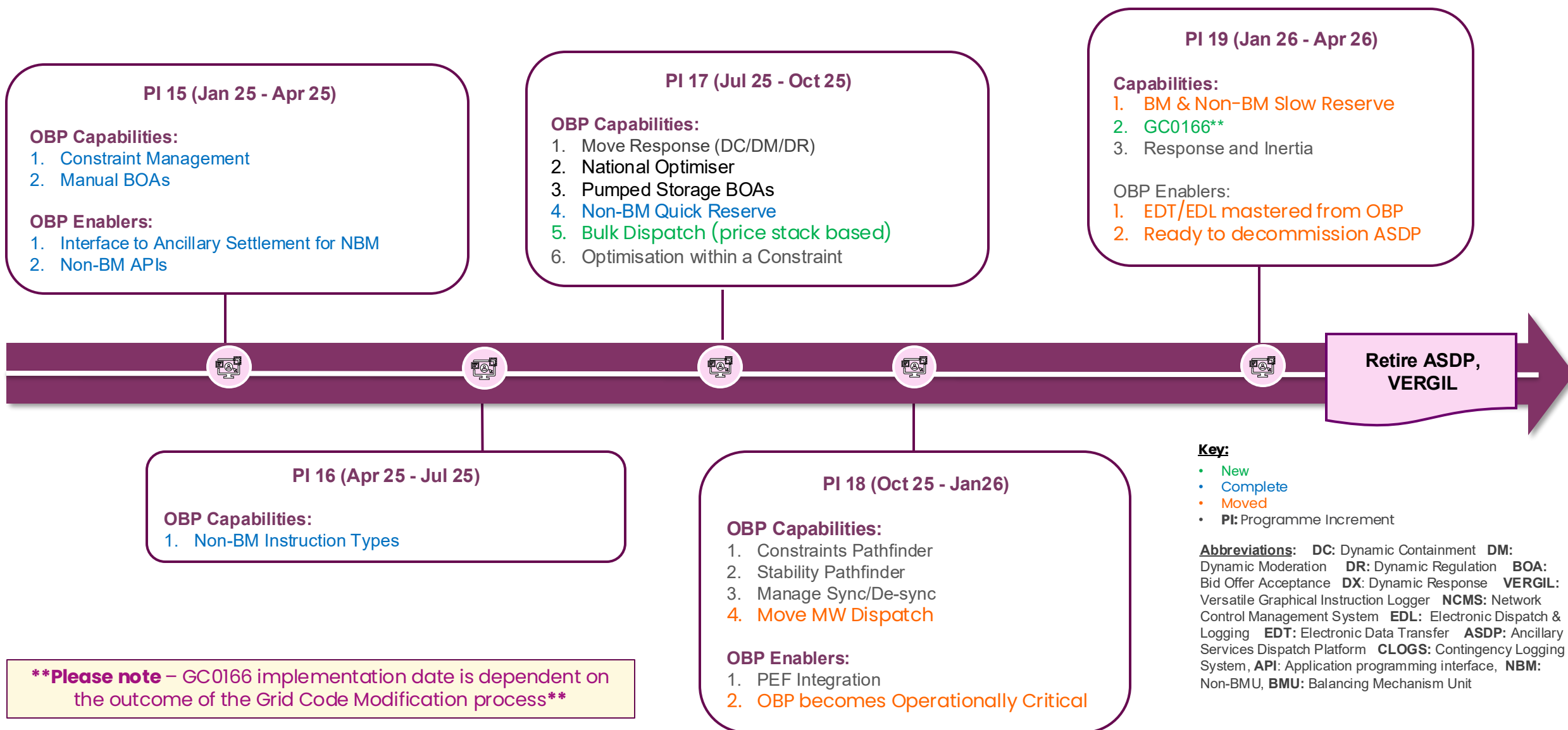
Open Balancing Platform Update

Item 9

Brendan Lyons



OBP Roadmap – Upcoming Delivery FY 25/26



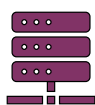
Changes to the Balancing Systems Release Plan



Non-BM Quick Reserve: Moved by one month to allow for additional security testing. Market Participants are now completing testing in readiness for operational go-live on 3 Sep.

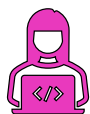


Bulk Dispatch (Price Stack Based) : Previously this only covered Wind dispatch. Following requests from the control room scope has been extended to cover all BMUs and non-BMs and to allow different sub-sets of units to be covered (such as those behind a particular constraint, or covering a specific geographic area).



Move MW Dispatch: We have been co-ordinating our work plans with those of the DNOs. To get better alignment we are proposing to move MW Dispatch to the period Oct 2025 to Jan 2026.

OBP becomes operationally critical: Additional testing is required to prove all fail-over scenarios and so we have moved the take-over period to accommodate this.



BM and non-BM Slow Reserve: We expect our OBP dispatch solution for SR to be ready for the original planned date. However, to fully utilise this new service we have a need to develop further our scheduling capabilities so that we can identify the location of SR in our planning timescales. To complete this work, we have decided to move the introduction of the new service into 2026.



GC0166: Grid Code change GC0166 introduces new parameters for storage devices. Assuming Ofgem approval in Oct 2025 we will implement the change on our strategic platform with the transition of EDT/EDL.

EDT/EDL Mastered from OBP: Moved following feedback from Market Participants so that all parties can be ready for the start of the new transition date in Jan to Mar 2026.



Ready to decommission ASDP: Non-BM STOR is hosted on the ASDP platform. Because we have changed the date of "Slow Reserve" the time for decommissioning ASDP has also changed. (please note – the service moves first and then the hardware is taken out later).

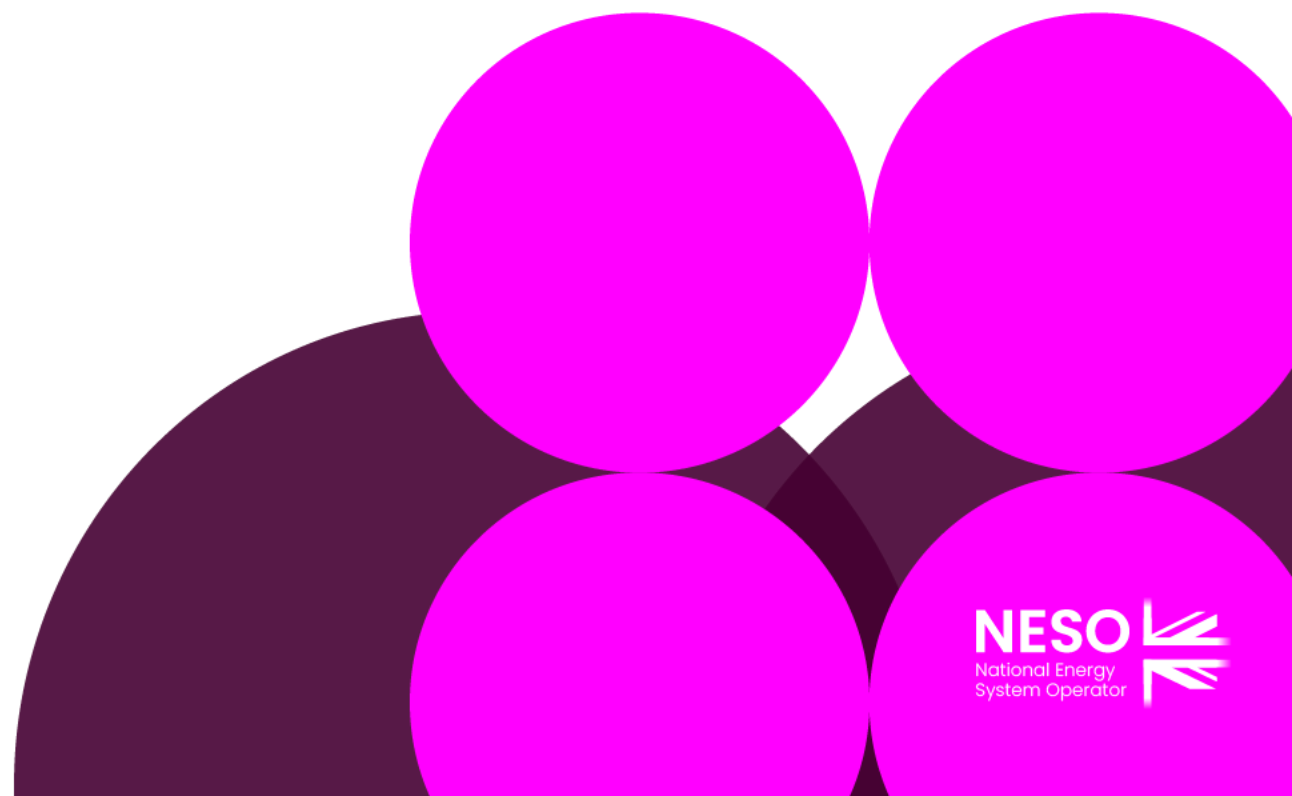


Interface to NCMS for constraints: Based on business priorities the interface to NCMS has been moved to summer 2026

Subgroups update

Item 10

Joseph Stepney



Subgroups update

Digital and Data Strategy held 11th July

- Data and Analytics Strategy & AI Roadmap
- NESO Digitalisation Strategy Action Plan
- Next meeting 10th October 2025.

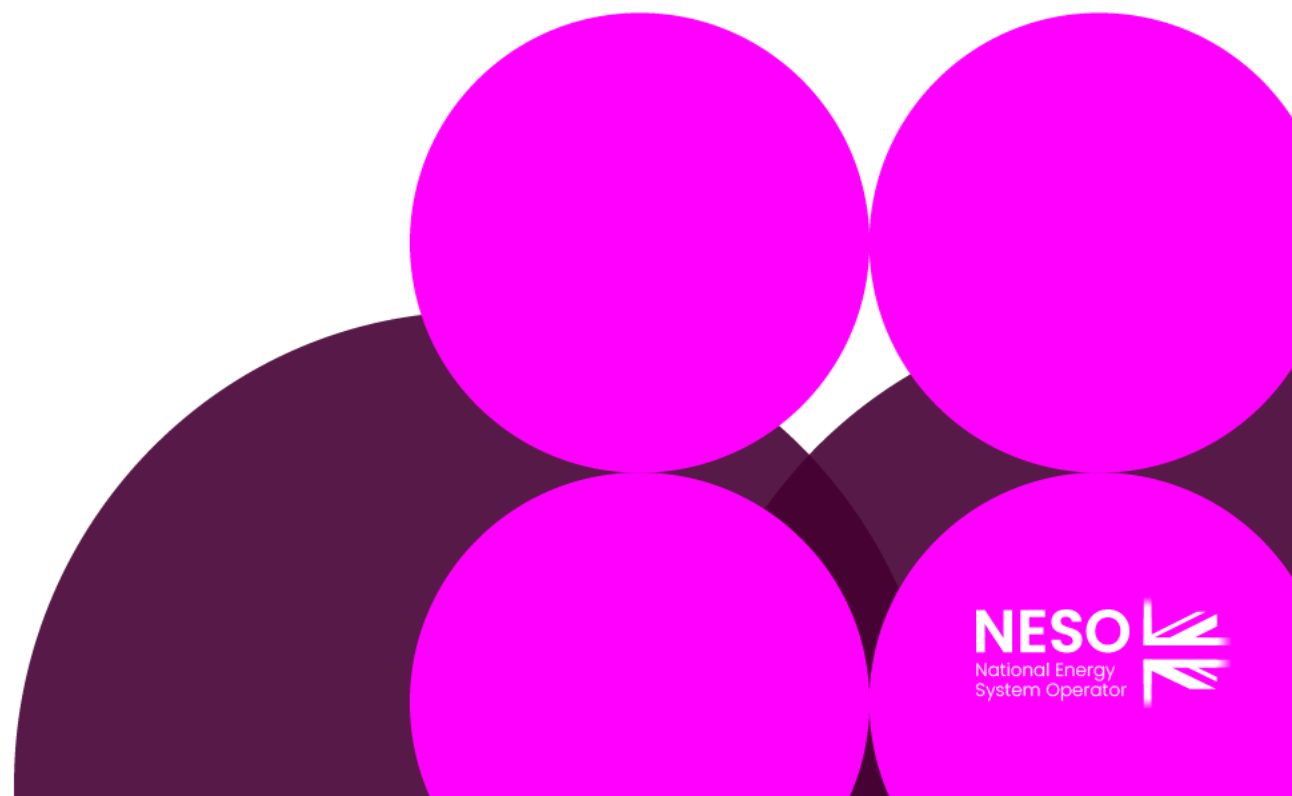
Control Room of the Future held 23rd May

- Data management
- Interoperability of systems and processes
- Achieving comprehensive visibility of assets
- Effective use of Distributed Energy Resources
- Primacy and Market Services design
- Next meeting date end of October exact date TBC.

Next meeting

Item 11

Eric Brown



Next meeting

Meetings are every quarter for a half-day on the first Friday morning of the month, 9am-12.30pm.

- 5th December 2026

AOB

Item 11

Eric Brown

