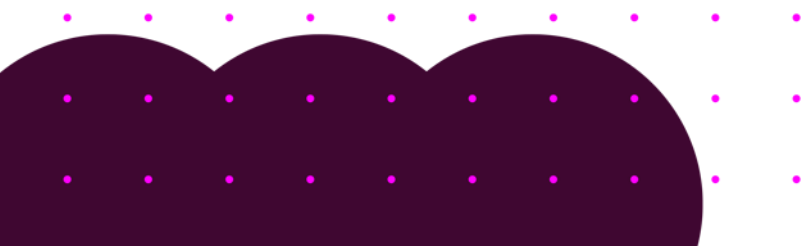


SSEP Developer Workshops 2026

Wednesday 15th &
Friday 17th April

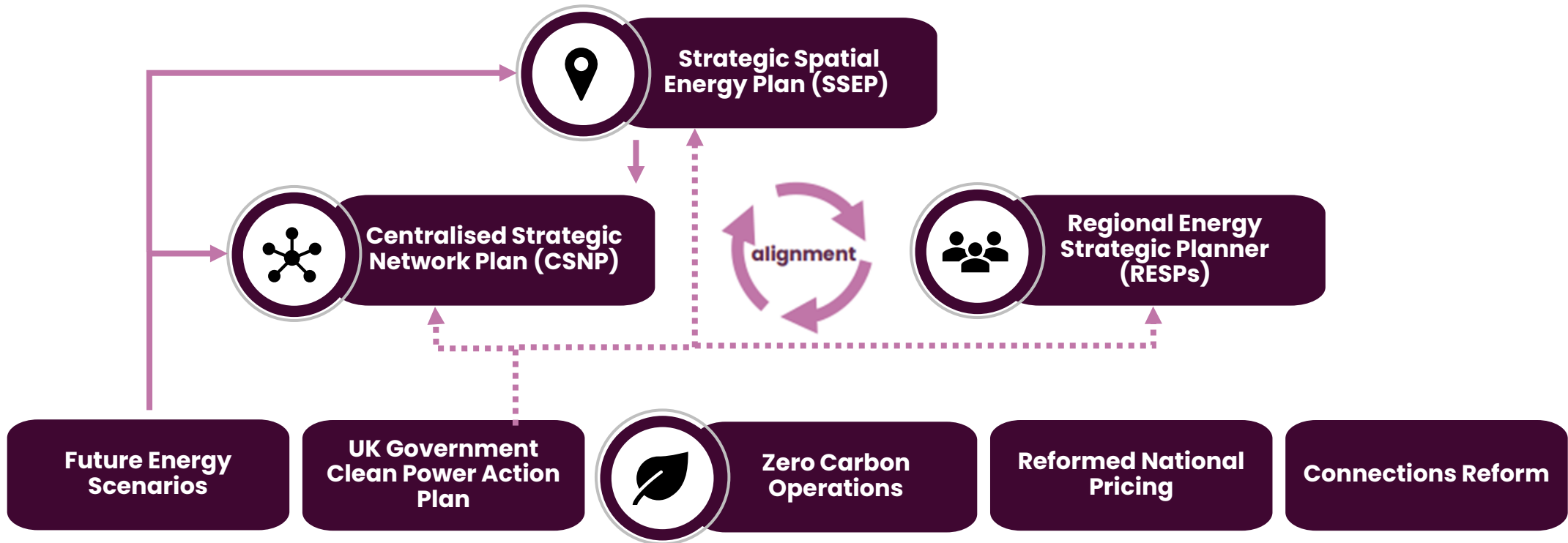
Purpose of Today

- Build a shared understanding of the SSEP
- Share early modelling insights and assumptions
- Gather practical, real-world feedback
- Ensure the SSEP reflects industry deliverability and on-the-ground experience



Strategic Spatial Energy Plan (SSEP)

The Wider Context

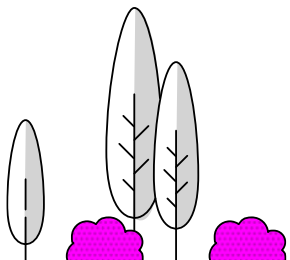
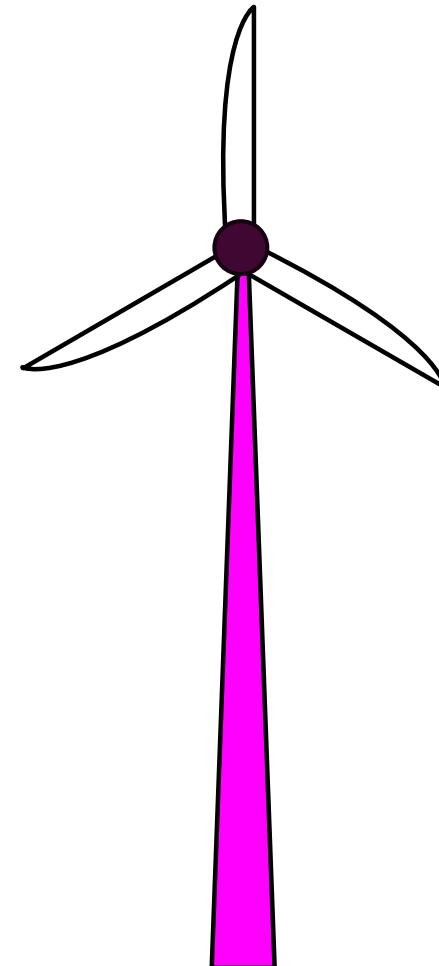


Strategic Spatial Energy Plan

The SSEP will accelerate **clean, affordable and secure energy** through greater certainty.

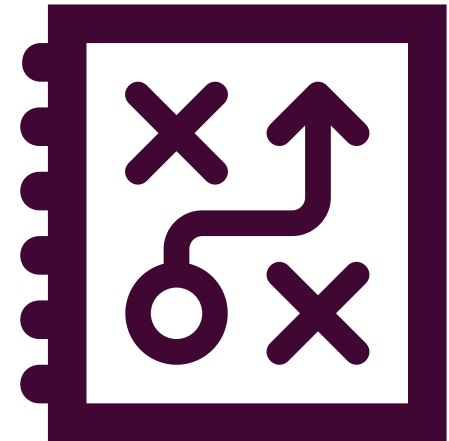
The plan will assess the **locations for electricity generation, and storage of electricity and hydrogen** on a zonal basis.

This will provide **a government and Ofgem-endorsed plan** that firmly sets the context for the nation's energy requirement.

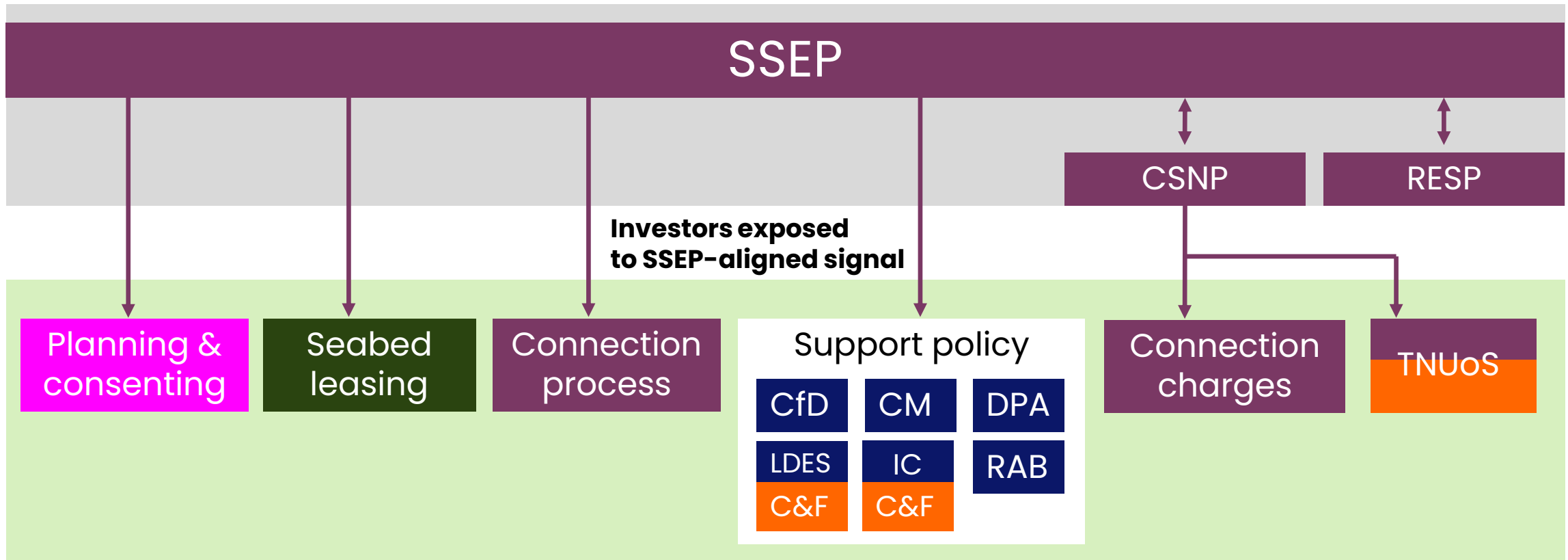


What does this mean for industry?

- **Clarity** on government direction for the energy system
- **Alignment with local decision-making** through RESPs
- **Support through consenting** through SSEP's status in planning system
- **Better coordination** with network planning
- **Alignment** of regulation and support schemes (e.g. reformed national pricing)
- **Site-specific choices remain with industry and local actors**



Reformed National Pricing puts SSEP at the heart of investment



Lever owners

NESO	DESNZ	Ofgem	The Crown Estate/Scottish Government	Governments & Councils	Other
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SSEP Delivery



Stakeholder engagement



Environment

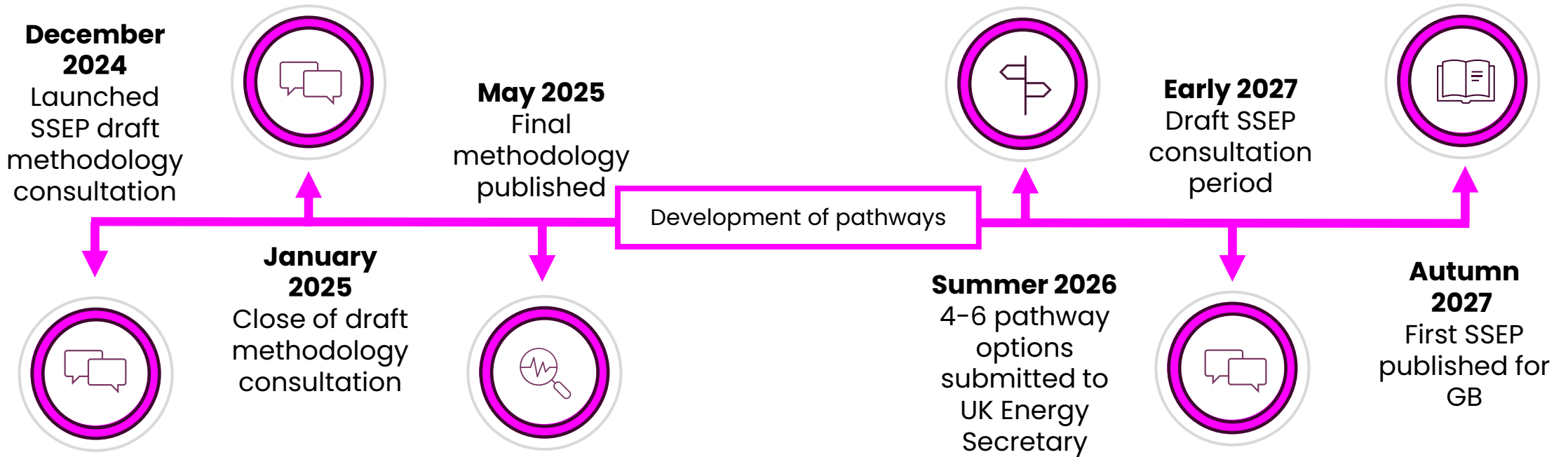


Assurance



Governance

SSEP key dates and milestones



Building on our 2025 workshops

In November, the decision was made to **re-run the SSEP modelling** using refreshed data from DESNZ to ensure the SSEP is as robust, resilient and transparent as possible.

The significant stakeholder feedback already received informed our remodelling work.



Improving transparency and access:

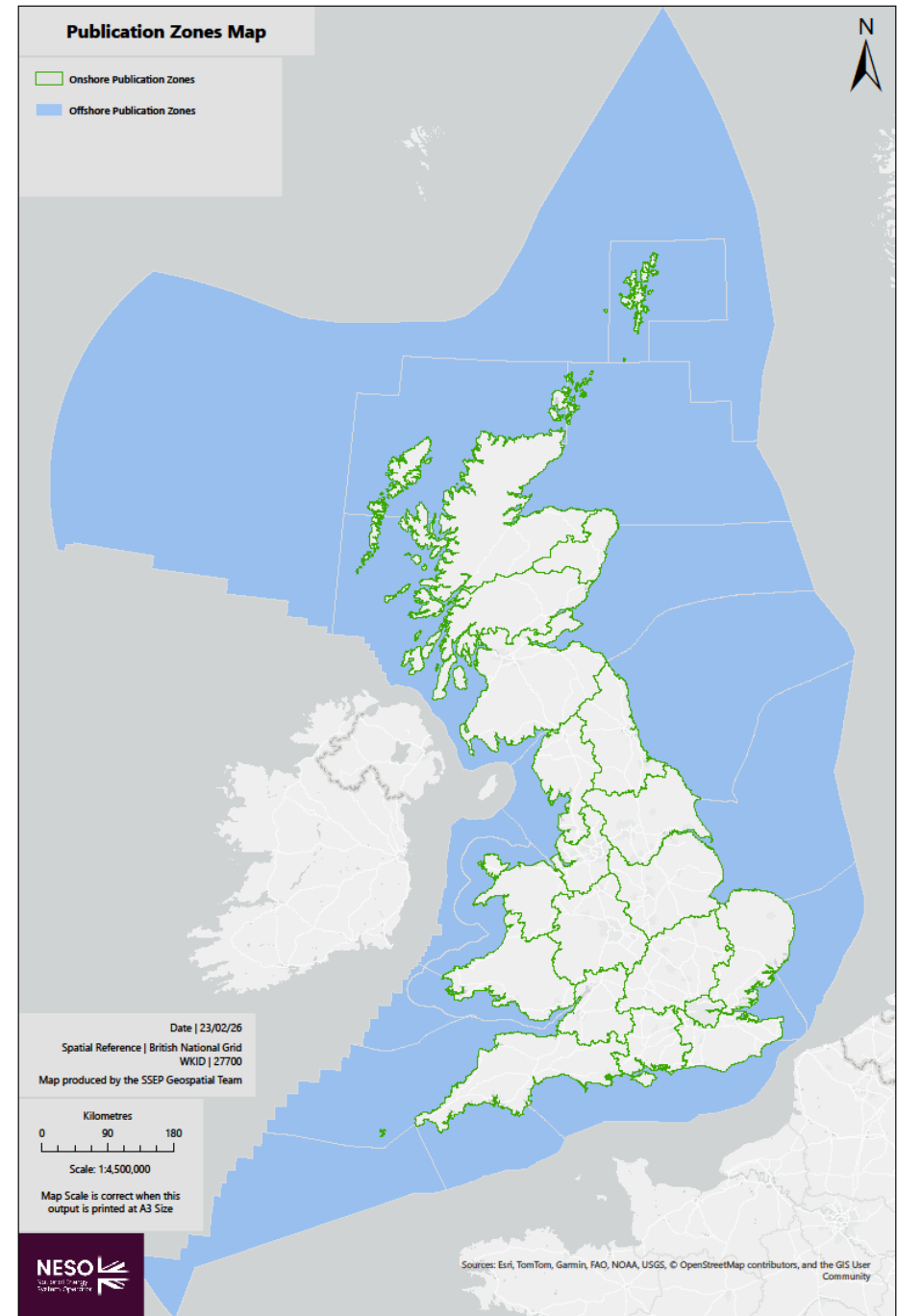
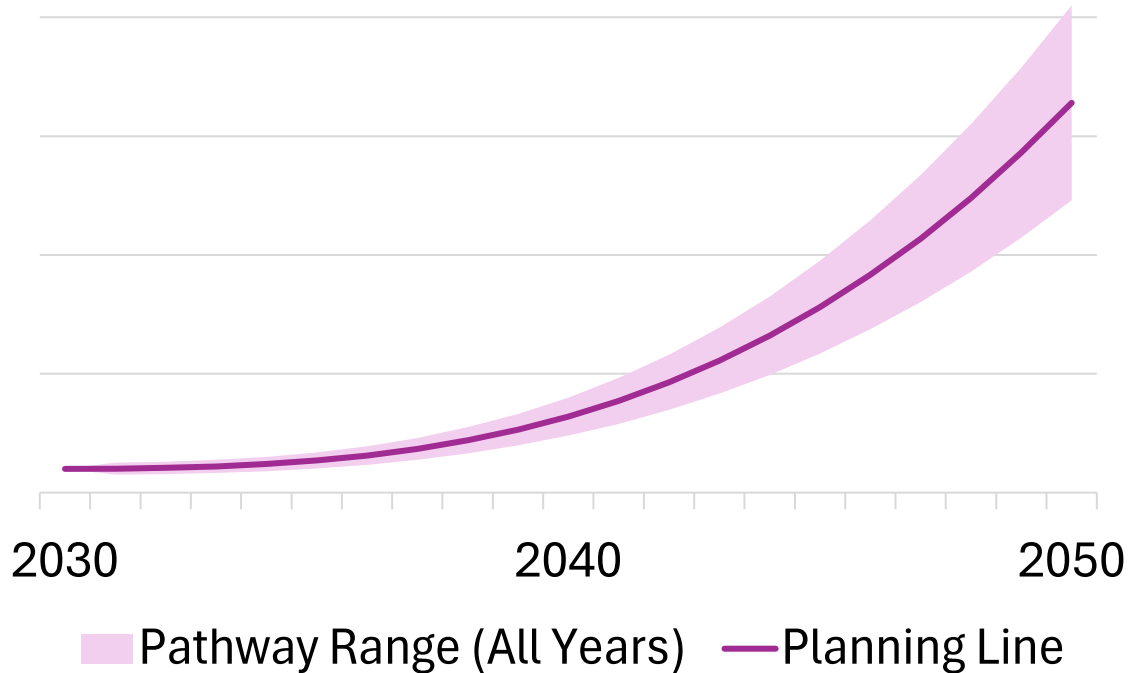
Since our last workshops:

- We're publishing regular **SSEP Transparency Updates** with information on the input data
- Held a deep dive **webinar** on the emerging modelling insights
- We're **working closely with trade associations**, making it easier for them to share clear, consistent content with members.

What will the SSEP look like?

19 Onshore and 19 Marine Publication Zones

SSEP planning line with pathway ranges:



How are we developing the SSEP?

Our economic and
geospatial modelling



Modelling in the SSEP

The SSEP uses economic modelling and geospatial assessments to assess the best parts of GB to develop new electricity and hydrogen generation and storage technologies.

Economic

Simulates and analyses the operation and evolution of the energy system based on cost.

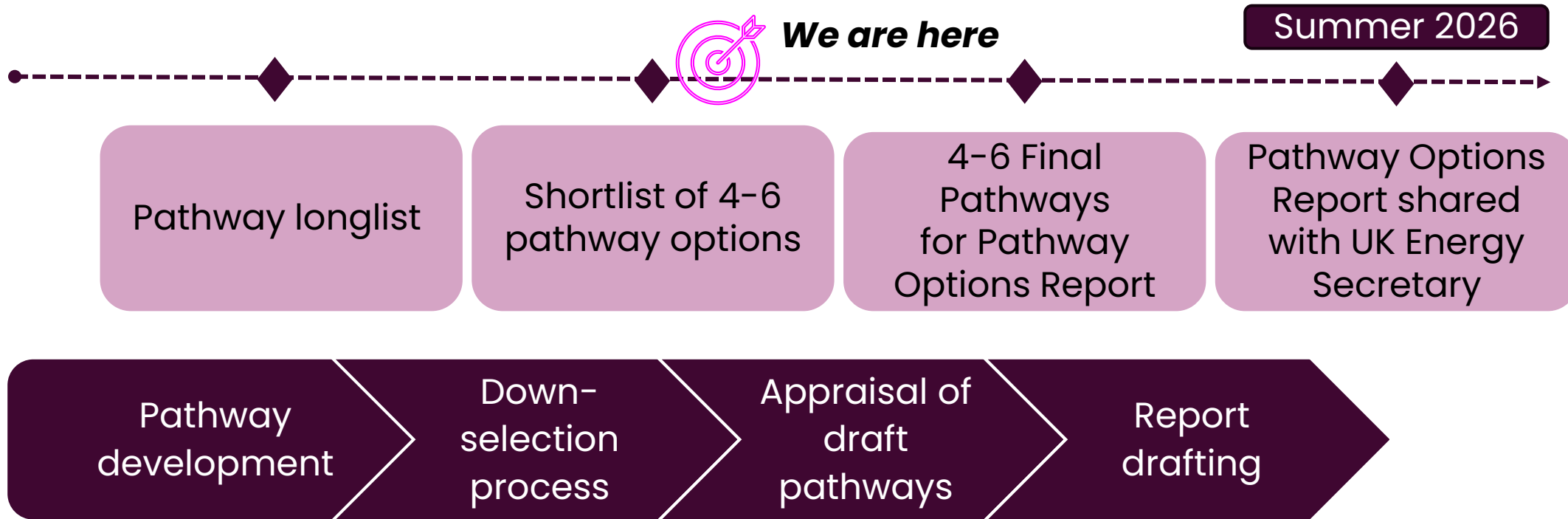
Geospatial

Mapping spatial exclusions, constraints and opportunities to identify potential developable areas.

Throughout the modelling process, economic and geospatial assessments are iterated to deliver a balanced outcome.

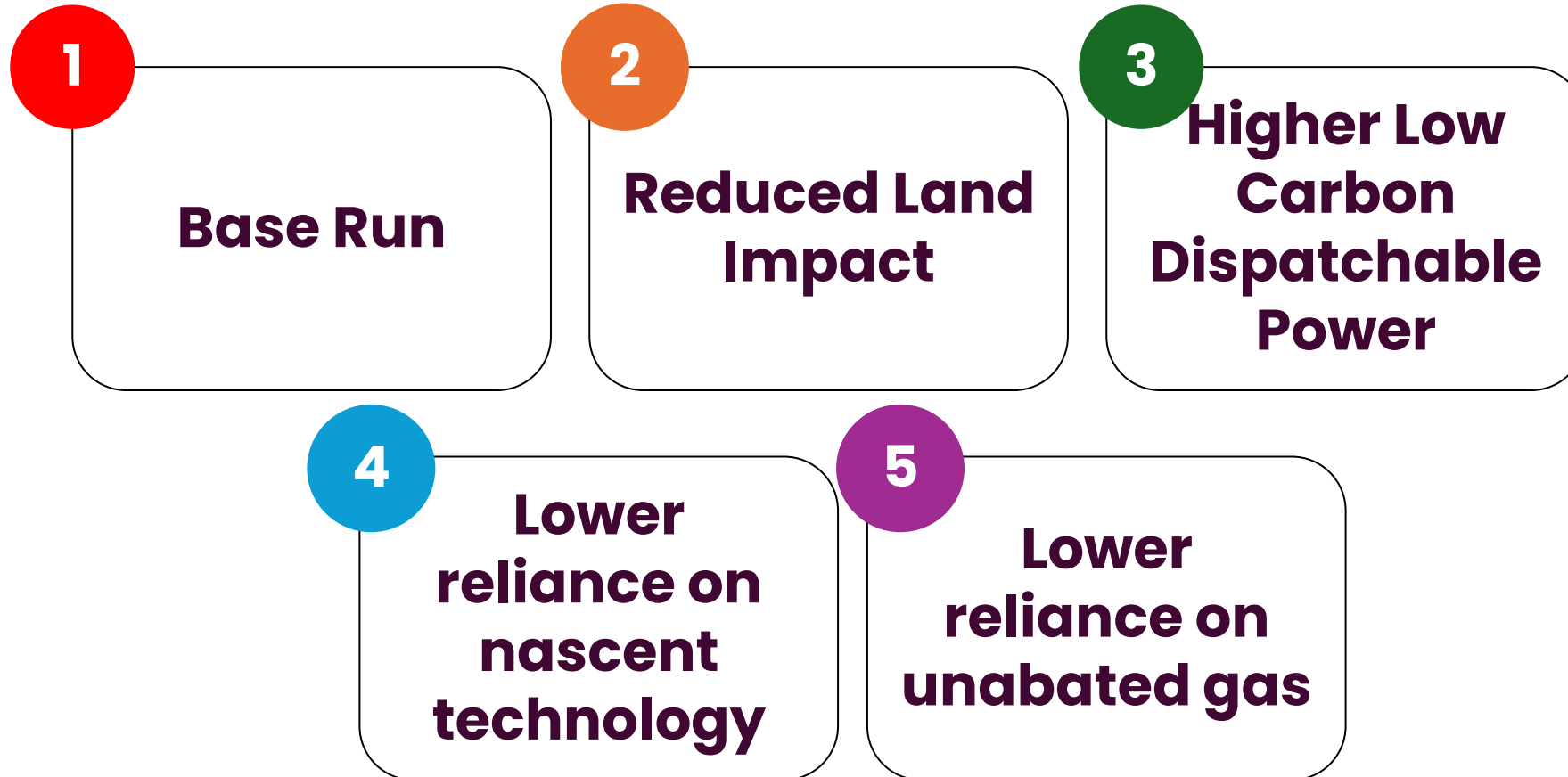
Pathway Development

Modelling and Pathways Process

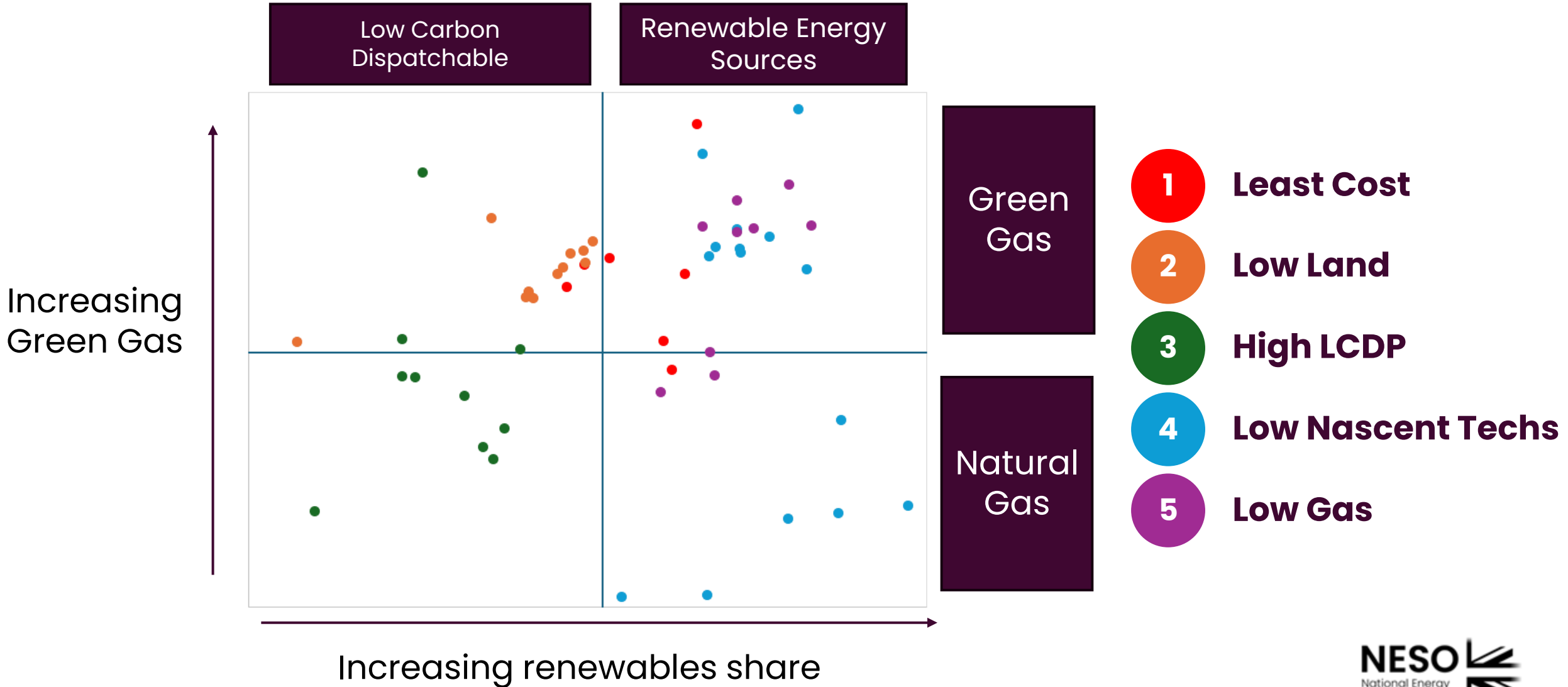


Initial Pathway Themes

Evolved based on stakeholder feedback and used to shape Pathway development.



Strategic spread of pathways



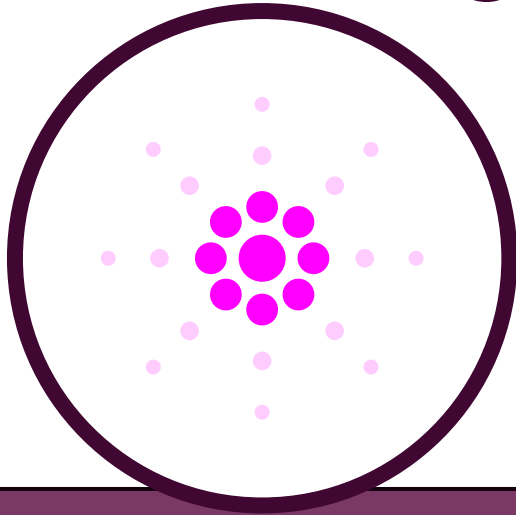
Spread of indicators across themes

Key:
Top 25%: Highest capacities of each technology type
Middle 50%: The typical range, where most capacities fall.
Bottom 25%: Lowest capacities of each technology type

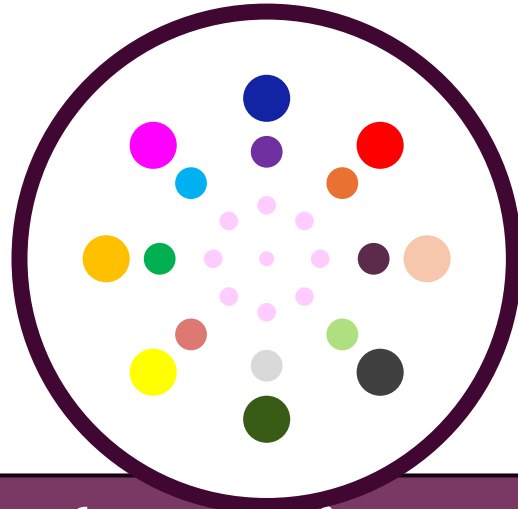


Note: values include baseline and expansion
LCDP includes Nuclear, all CCS (in power sector only), biomass, waste, hydro, H2P and biomethane; Nascent Gen includes Floating OFW, Nuclear SMR, all CCS, LDES and H2P

Modelling findings and insights



The **system has a common generation core**. This includes **renewables, batteries and nuclear** – the differences sit at the margins.

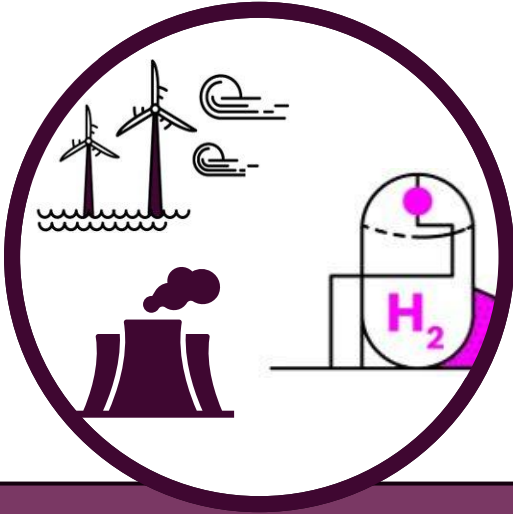


10% of generation comes from a diverse mix of more marginal generators. This includes long duration energy storage, hydrogen-to-power, Gas CCS

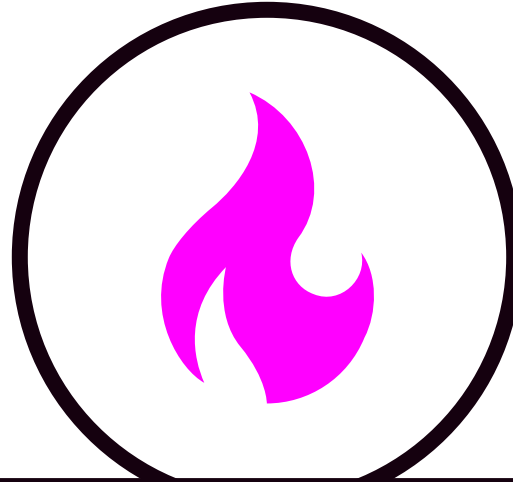


LDES begins to scale up through the 2030s, with **batteries** further expanding from the 2040s onwards to build on the baseline. **Salt cavern storage** expands alongside the H2P build-out.

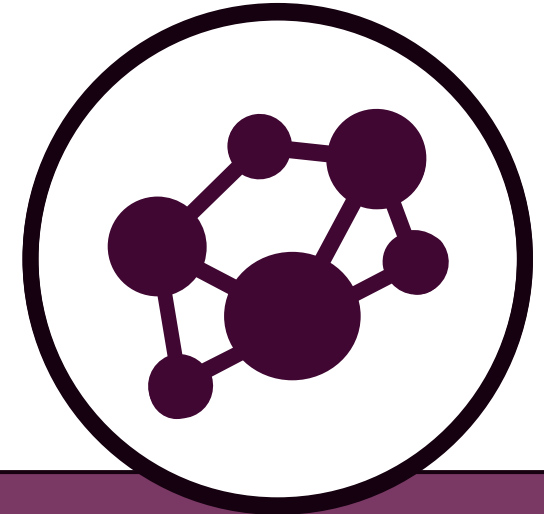
Modelling findings and insights



As existing **Gas units** retire they are replaced with new capacity to ensure security of supply, alongside other LCD sources of flexibility. **Nuclear SMRs and H2P** come online in early 2040s.



Lower **Interconnection** results in more build out of **H2P and Hydrogen infrastructure** to provide dispatchable power.



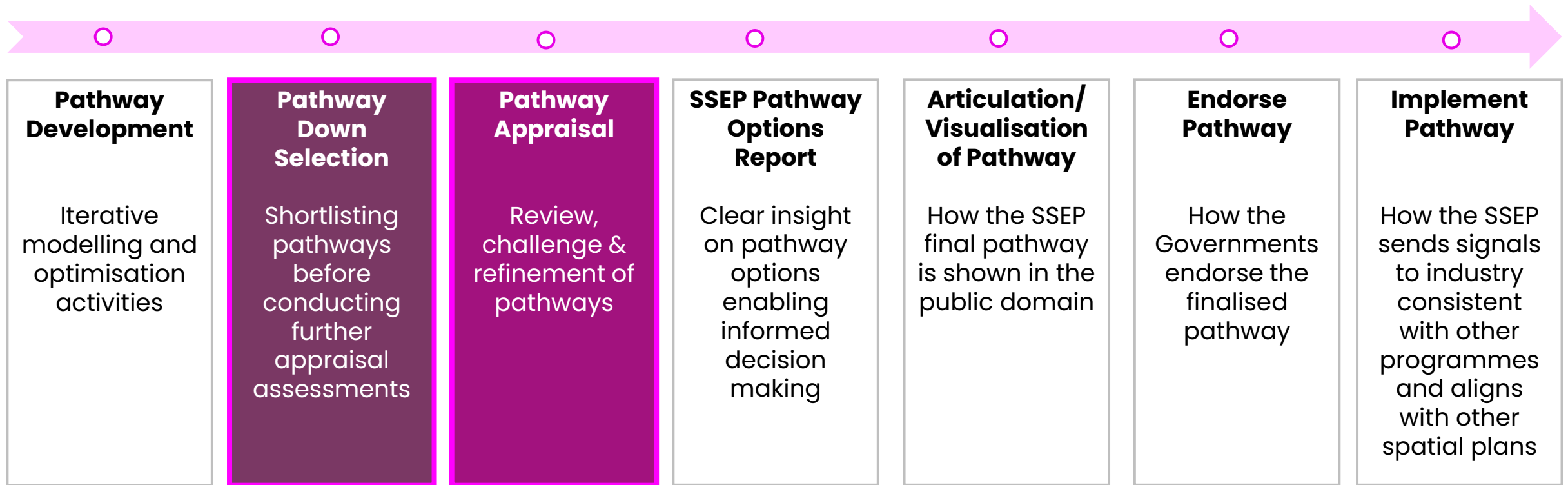
Lower reliance on **nascent** technologies and **imports** drives the highest level of power network build relative to other pathways.

Pathway Down Selection & Appraisal



SSEP Pathway Key Stages

To achieve a viable, deliverable and robust SSEP pathway multiple key stages need to be completed.



Down Selection Process

Down-Selection Process

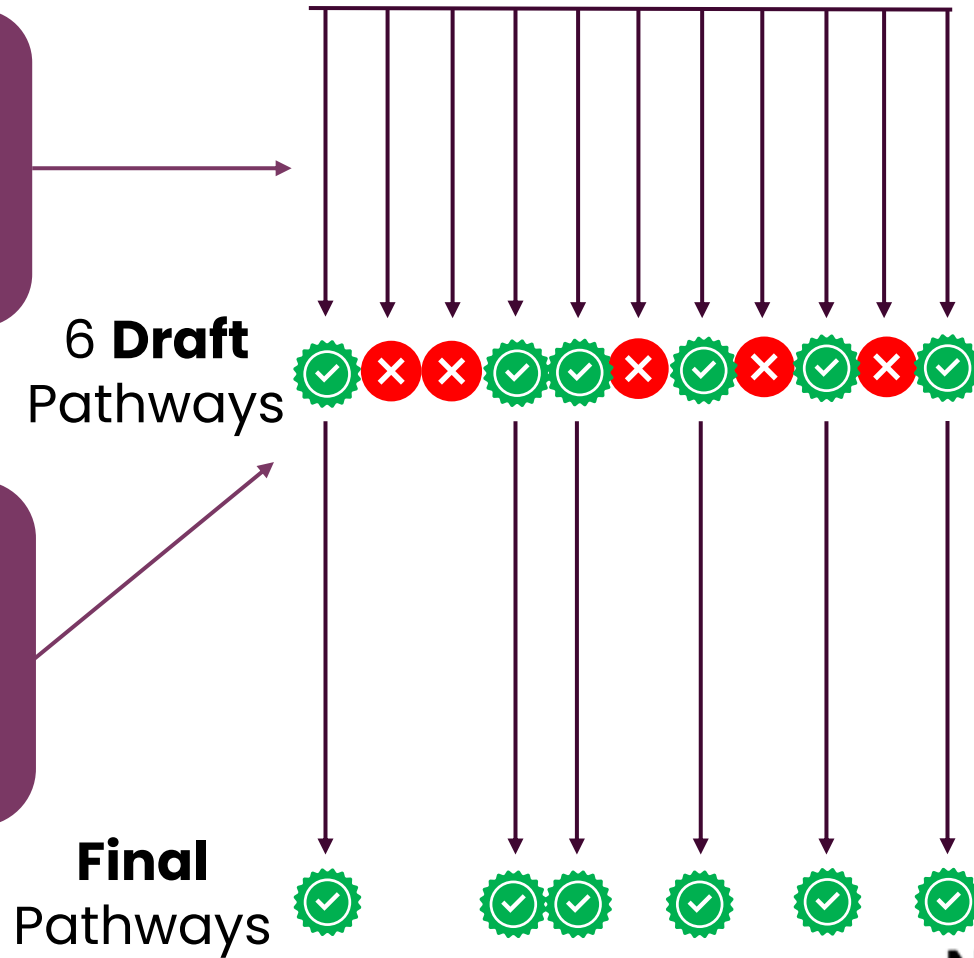
The **longlist**:
53 pathways

Down-Selection

Determines the shortlist of 6 Draft Pathways from a longlist of pathway options

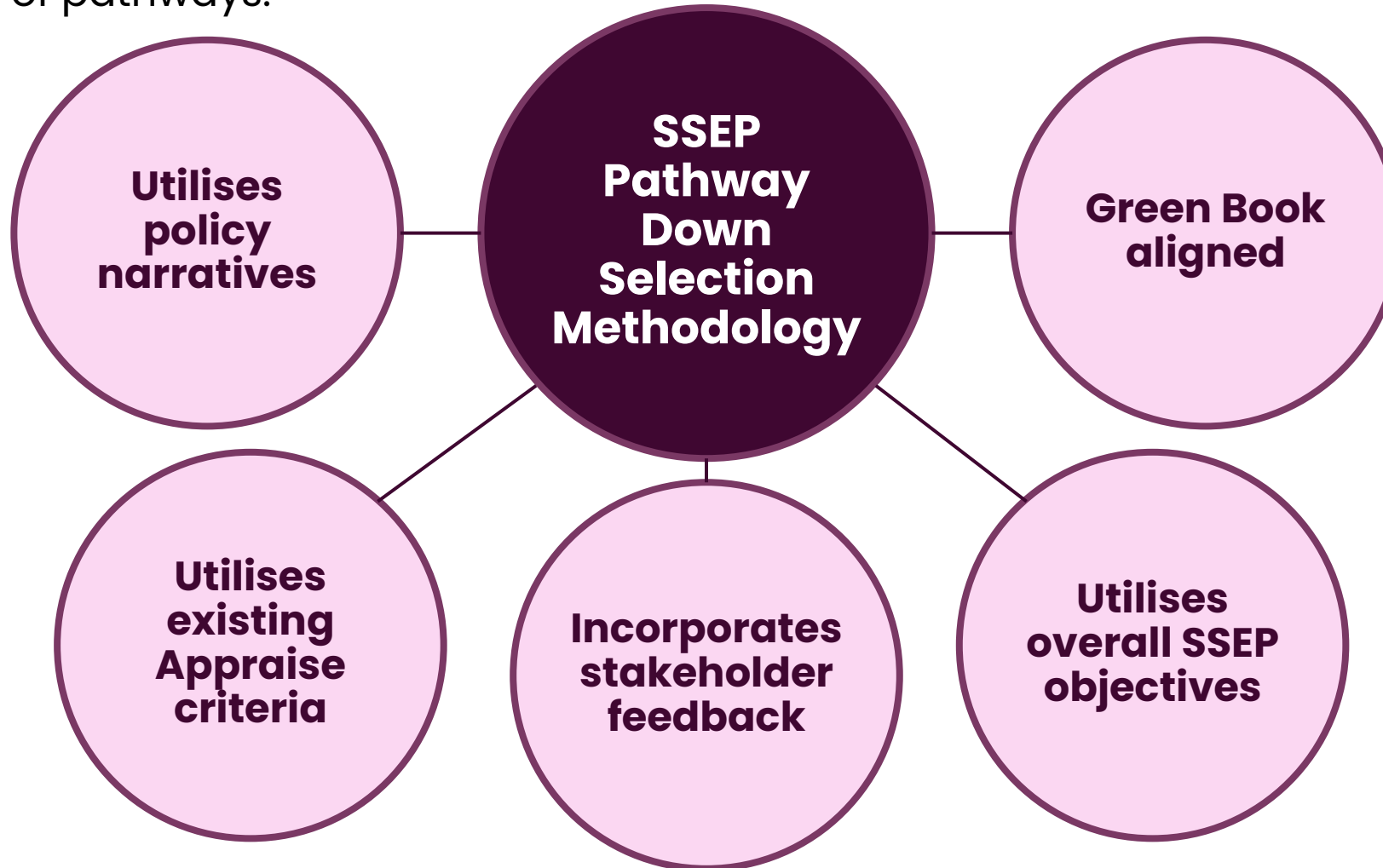
Appraise

Robust technical assessments allows us to adjust, improve and understand our Draft Pathways



Down-Selection Methodology

As part of the methodology, we also developed Critical Success Factors (CSFs) to assess the performance of pathways.



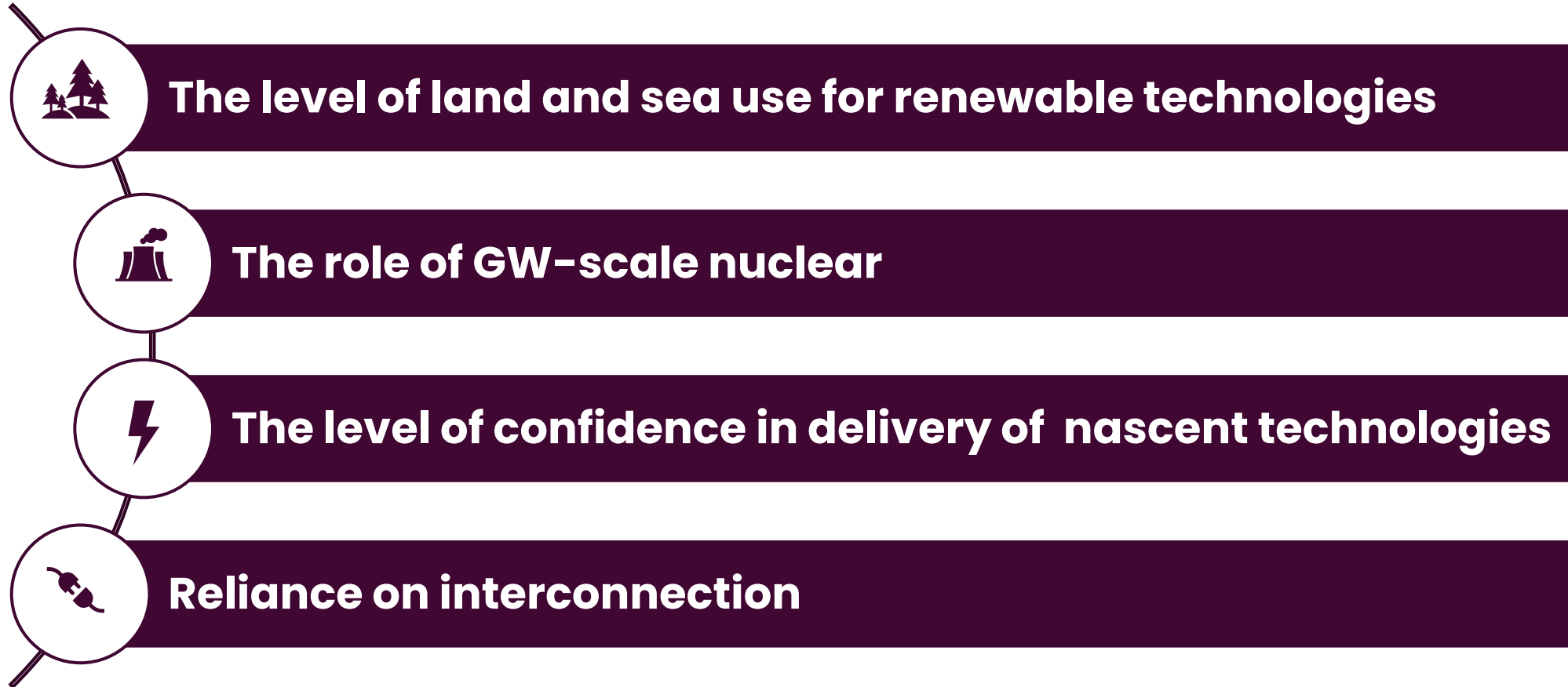
Critical Success Factors (CSFs)

Decision-making at down-selection was guided by the performance of longlist pathways against the CSFs.

Model Outputs	
Critical Success Factor	Quantitative output from the model
Technology Capacities and Distribution	The profile of technology capacities over time
	The spatial distribution of technologies for selected years (2035, 2040, 2045 & 2050)
Electricity Network Build	The profile of network build by boundary over time
	The amount of annual curtailment
Cost	Breakdown of cost categories
	The profile of cost over time, by category
Security of Supply	Annual unserved energy hours
	Annual interconnector imports/exports

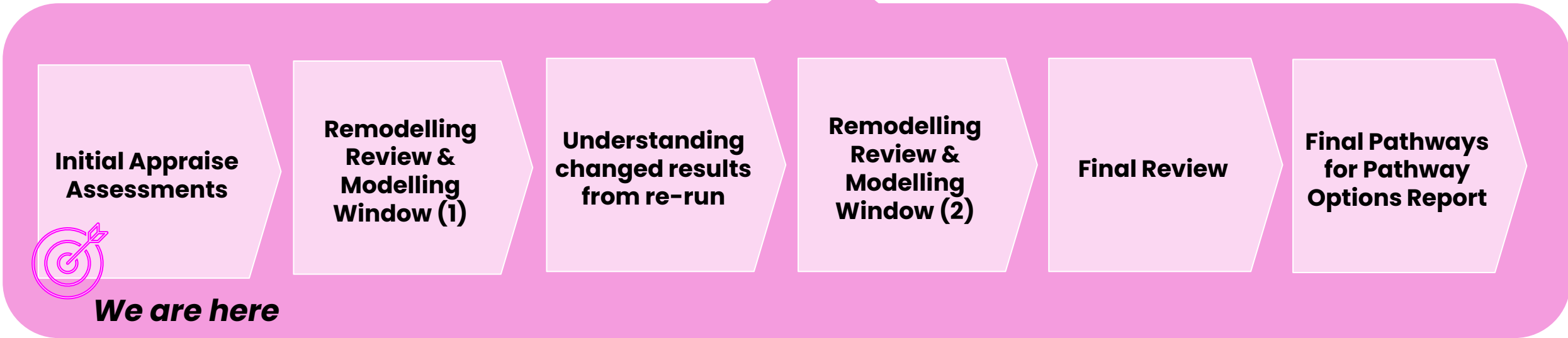
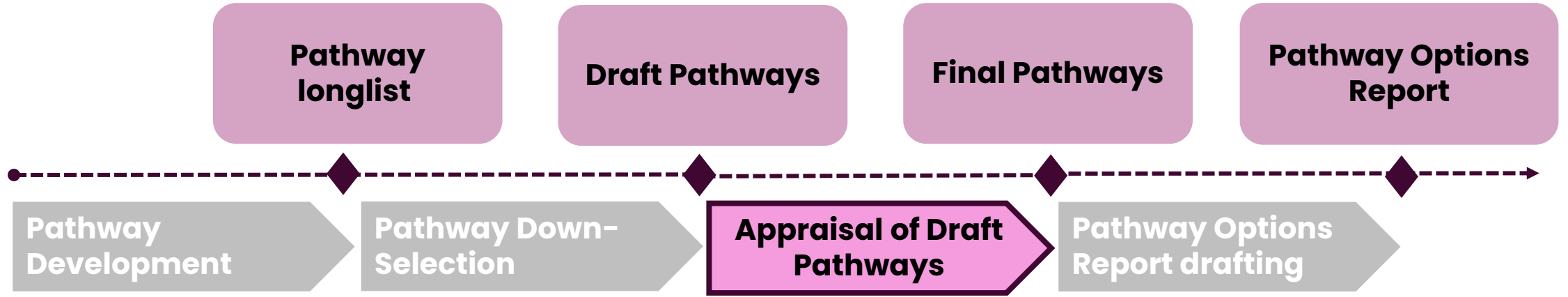
Assessment Outcomes	
Critical Success Factor	Scoring system applied (using a 1-5 scale)
Policy Assessment	An assessment to score each pathway on whether it meets minimum policy ambition.
Deliverability Risk Assessment	Assessment of deliverability risk, considering the risks and opportunities from a delivery lens, lead times for emerging tech, interdependencies etc.
Spatial Deliverability	Spatial Assessment
	HRA derogation requirement
	Societal sentiment using Societal Insights Index

The pathways aim to provide evidence for decisions on strategic questions whilst being credible and addressing stakeholder feedback



Appraise Process

Recap of Appraise milestones and status



Objectives of the Appraise Framework

The **Appraise** process includes **multiple assessments** to ensure that we:



Facilitate the development of **viable, deliverable and robust pathways**



Provide robust **evidence-based decision making** to improve pathways



Effectively **evaluate** and **compare** pathway options



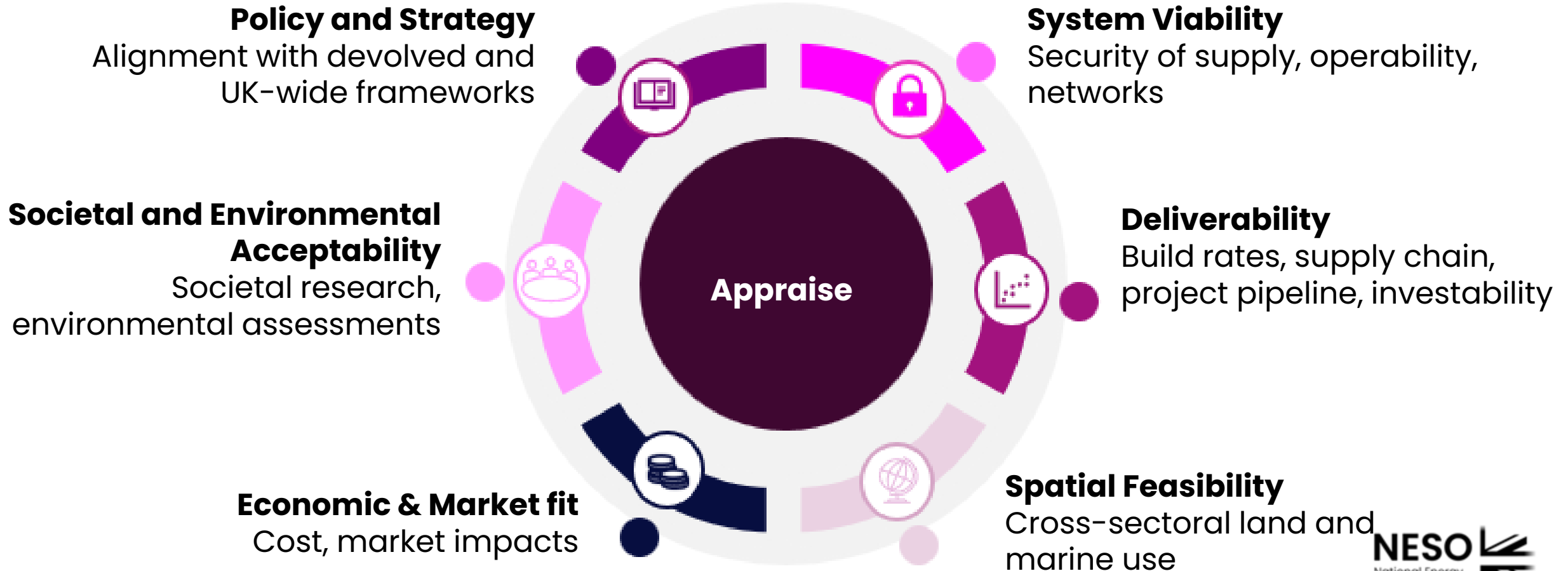
Enable the UK Energy Secretary to make **informed decisions** from the Pathway Options Report



Ensure compliance with the Commission's requirements of the SSEP

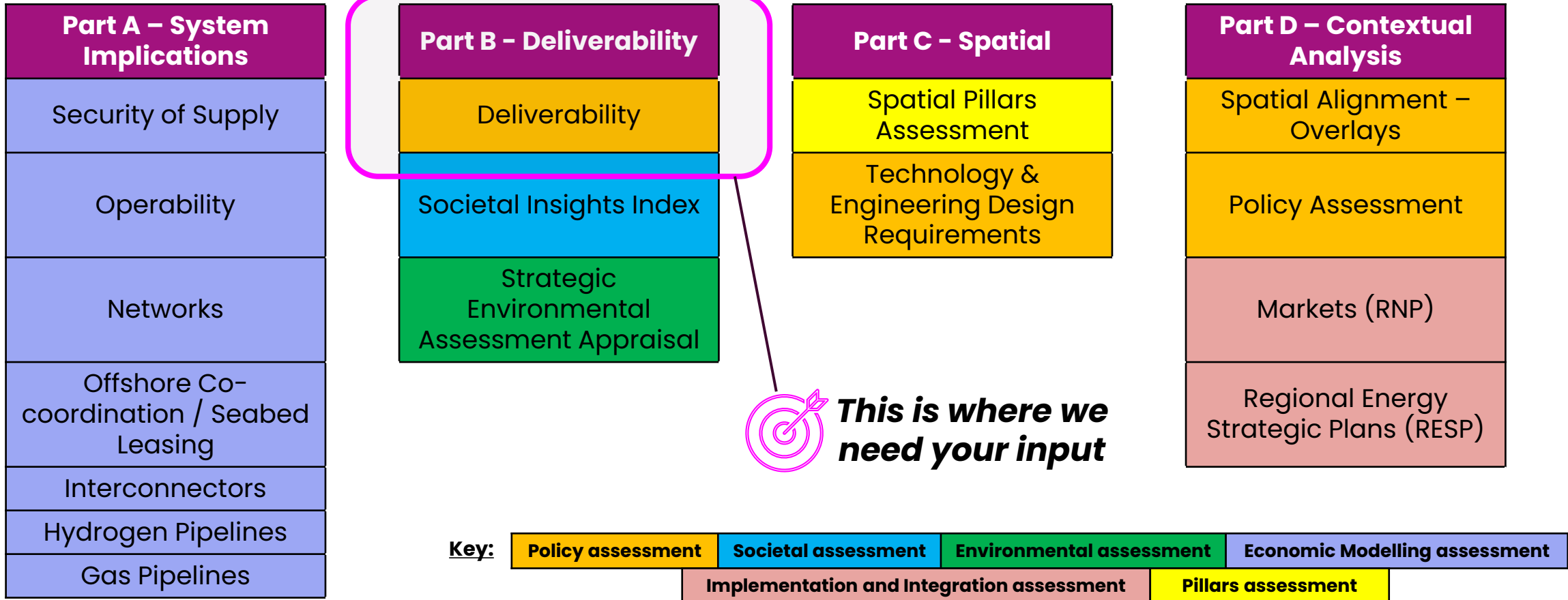
Pathway Appraisal

The 'Appraise' phase will further examine, test and refine our 6 Draft Pathways, ensuring that all Final Pathways consider:



Appraise Assessments and Your Role

There are **16 appraise assessments** that will be completed against the 6 SSEP Draft Pathways. These have been grouped into four main parts.



Appraise Assessments and Your Role

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Part B – Deliverability

Deliverability

We will perform detailed deliverability assessments on:

- supply chain
 - financing risk and investment
 - projects in the project pipeline
- reformed connections queue out to 2035.

This assessment provides confidence the Final Pathways are deliverable, financially credible and that implications are understood and managed.

Overlays

We have a range of plans currently included for the overlays assessment:

Scottish Government

- National Planning Framework 4 2023 (NPF4)
- Initial Plan Framework for Offshore Wind for Innovation and Targeted Oil and Gas Decarbonisation 2022
- Sectoral Marine Plan for Offshore Wind Energy (2020)

The Crown Estate

- Marine Delivery Route Map

Welsh Government

- Future Wales: The national plan 2040 and Policy 17 – Pre-assessed areas for wind energy
- Mapping for Strategic Resource Areas – Floating Offshore Wind Energy Resource
- Welsh National Marine Plan, 2019
- Tidal Stream Energy Strategic Resource Areas (SRAs)

MMO England and Wales

- MMO Marine Plans



What happens next:

We'll continue to review and reflect on the feedback shared today.

Your insights will help inform the final pathways and Pathway Options Report.



Upcoming engagement:

Over the coming months, we'll continue to share updates and seek targeted input as the SSEP develops.

Our next **SSEP Transparency Update** is planned for July.

Thank you!

.box.SSEP@NESO.energy

