Public

Strategic Spatial Energy Plan

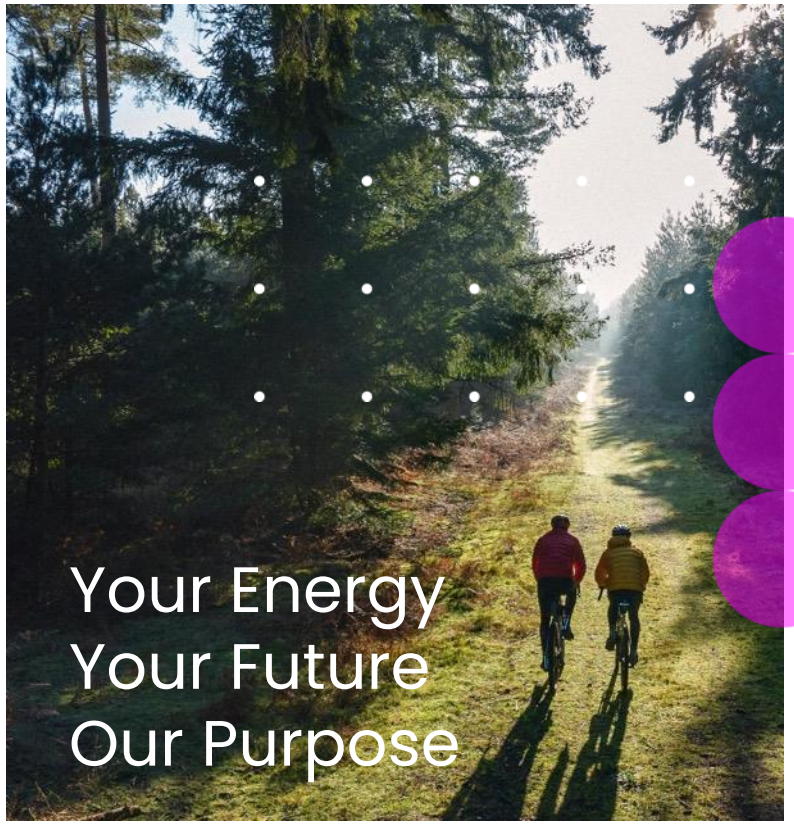
Mapping the future

NESO
National Energy System Operator

The National Energy System Operator

The National Energy System Operator (NESO) is an independent, public corporation at the centre of the energy system.

We take a whole system view to create a world where everyone has access to reliable, clean and affordable energy.



NESO
National Energy System Operator

Our duties

Primary duties

Net Zero

Efficiency & economy

Security of supply

Secondary duties

Facilitating competition

Consumer impacts

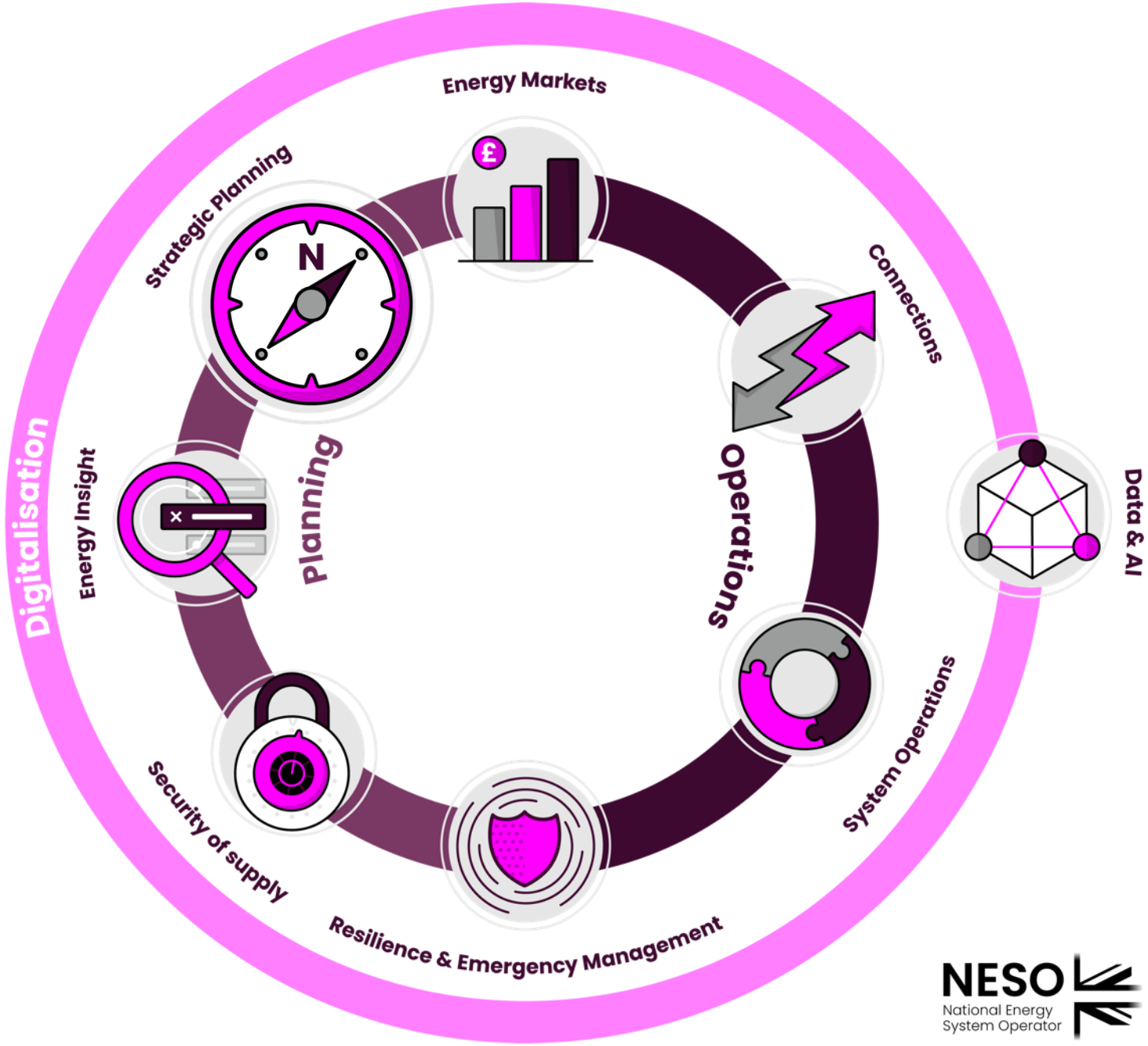
Whole system impacts

Facilitating innovation

NESO
National Energy System Operator

Public

What we do



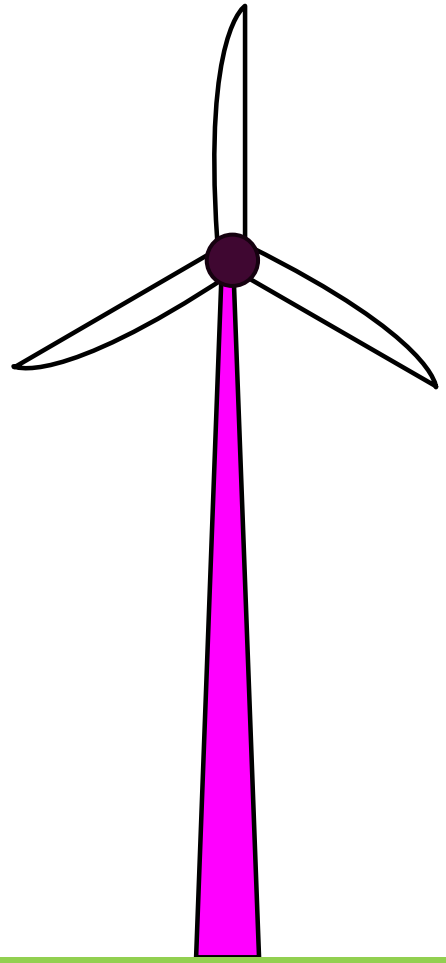
NESO
National Energy System Operator

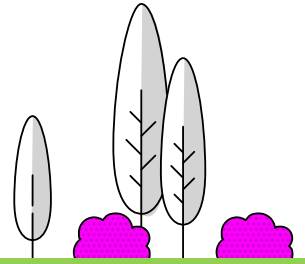
Strategic Spatial Energy Plan

The Strategic Spatial Energy Plan (SSEP) will accelerate clean, affordable and secure energy through greater certainty.

The plan will assess the best locations for 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.





NESO
National Energy System Operator

Parameters

Scale

A strategic energy infrastructure plan for land and sea across Great Britain

Purpose

High-level, zone based; sets out future capacities for technologies

Process

Mix of evidence and assessment to develop robust general proposals

Outlook

Long-term and adaptive, monitored and updated

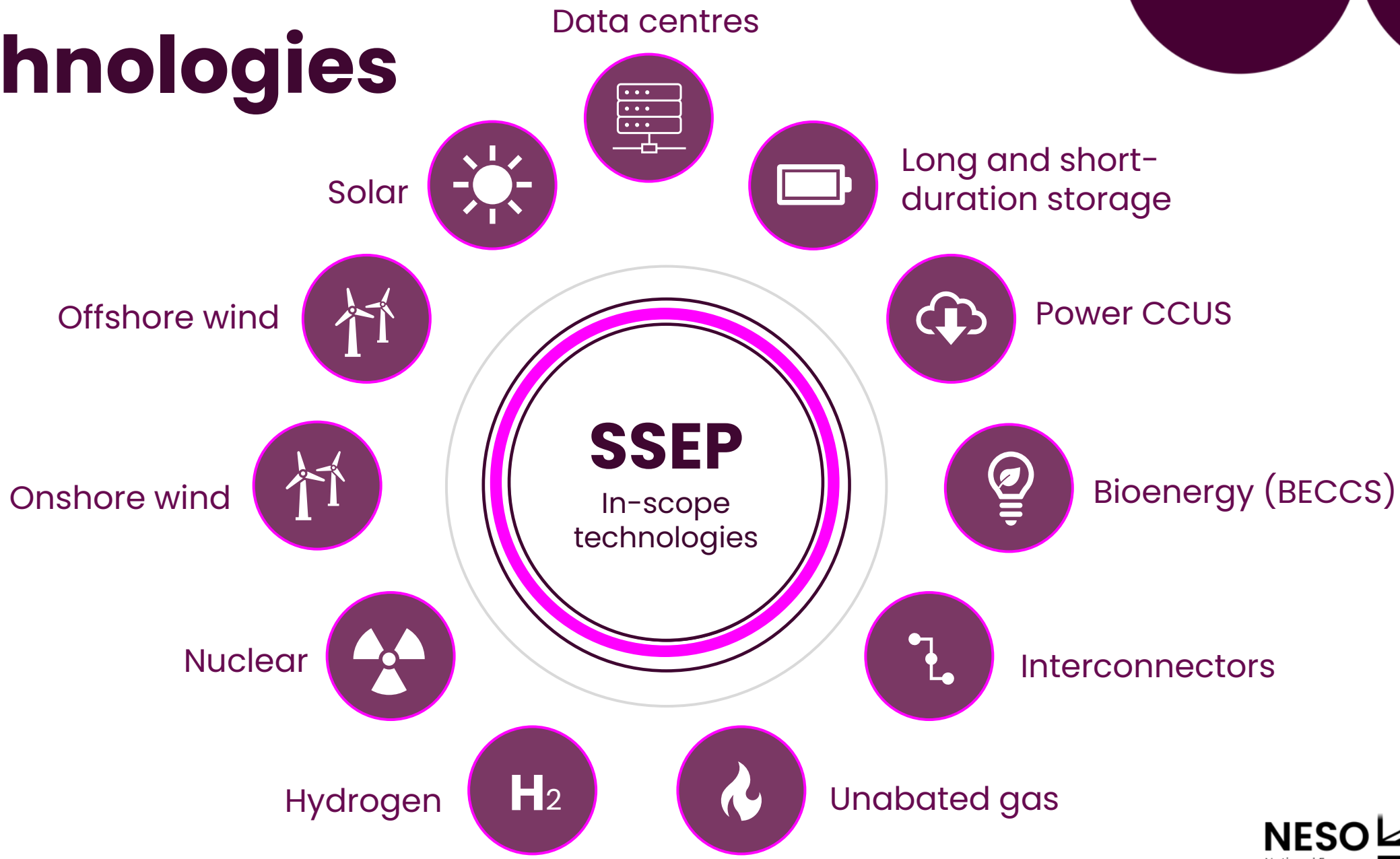
NESO
National Energy System Operator

What the SSEP will consider

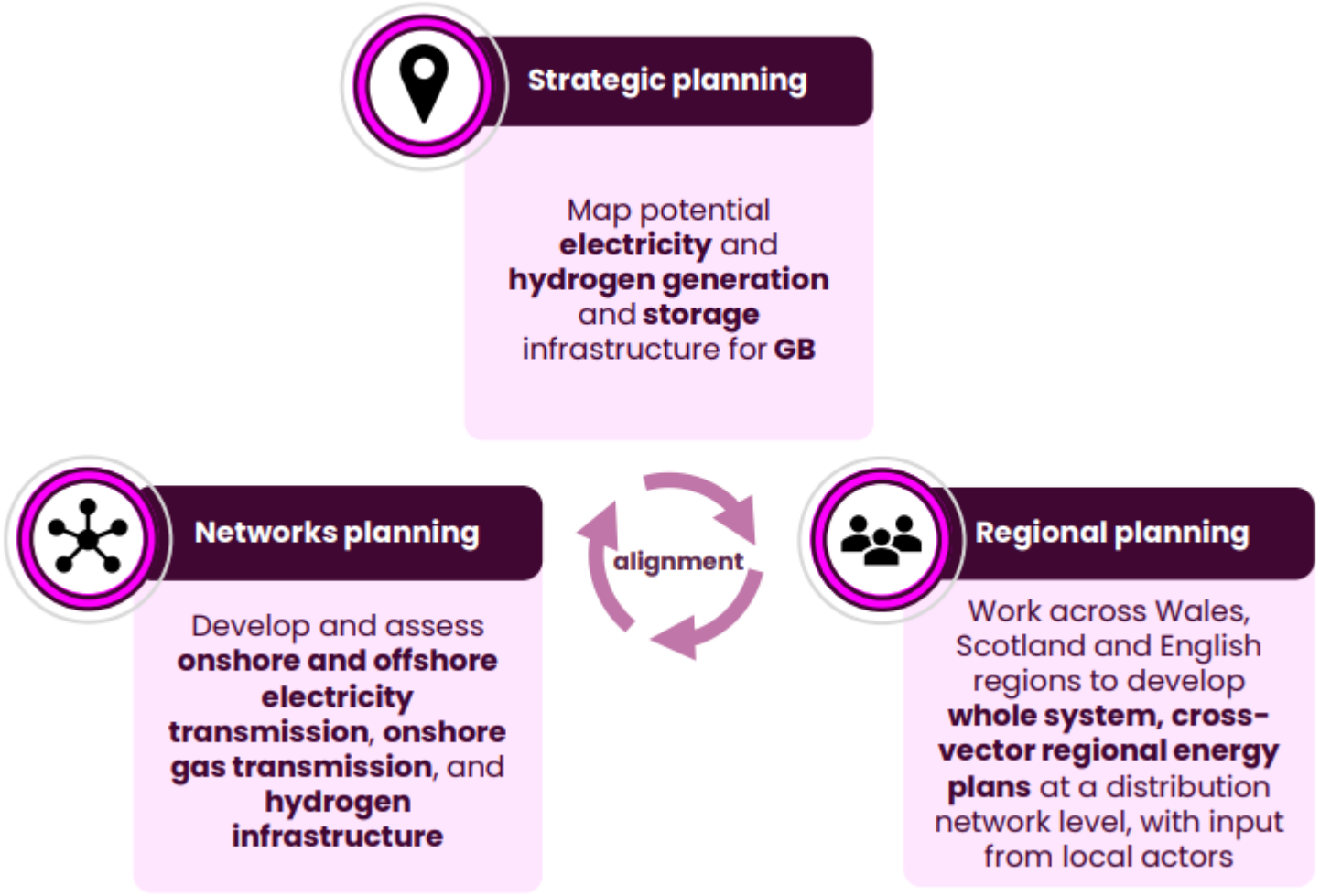
- Community/societal views
- Decarbonisation targets
- Economic costs
- Environmental protection
- National priorities
- Network needs and operability
- Other sea/land uses
- Practical delivery
- Secure supply

NESO
National Energy System Operator

Technologies



Strategic energy planning (SEP)



NESO
National Energy System Operator

Delivery

Prepare | Model | Appraise | Consult | Refine | Publish

Stakeholder engagement

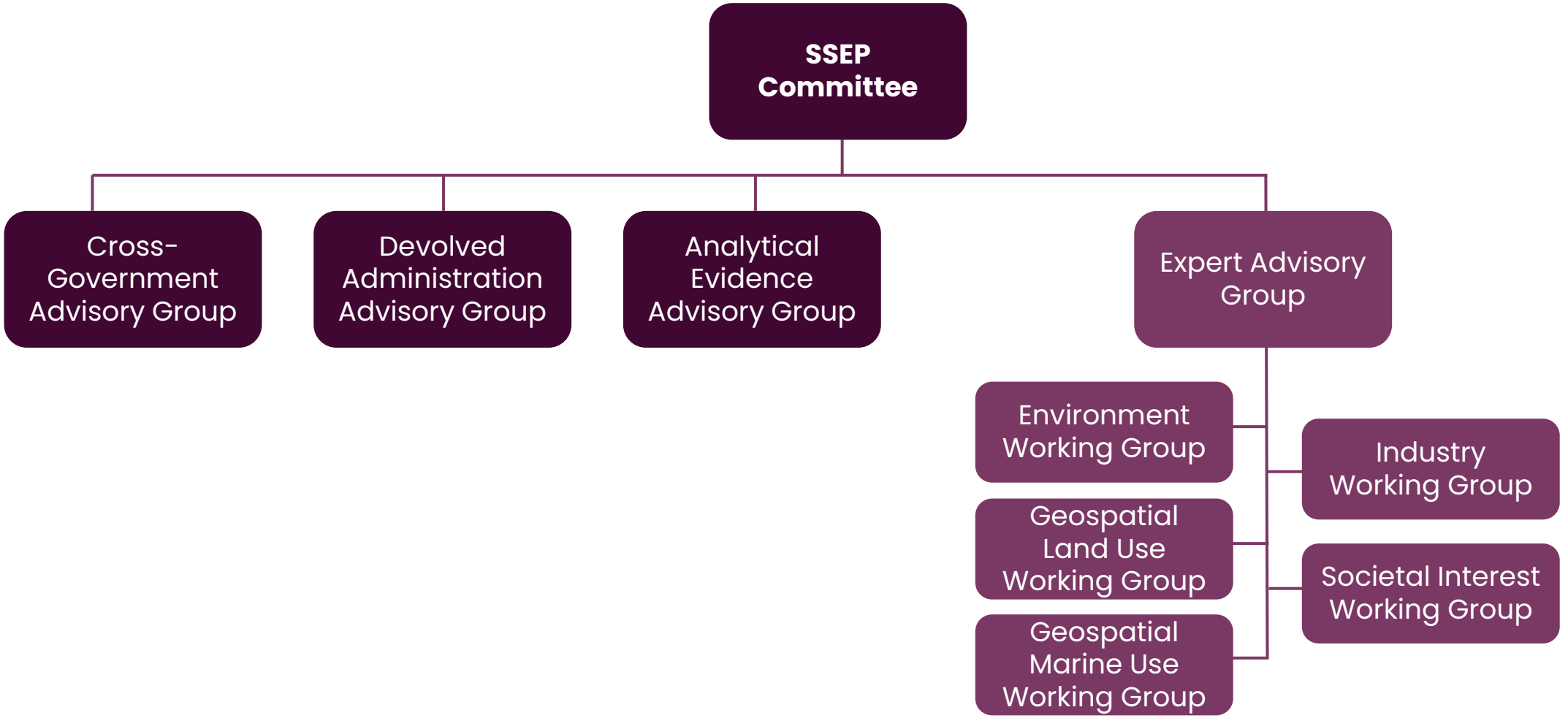
Environment

Assurance

Governance

NESO National Energy System Operator

Governance



NESO National Energy System Operator

Prepare

Baseline
UK Government's Clean Power 2030 Action Plan and projects with regulatory funding

Policy framework
- Agree key questions to explore
- Model options to optimise

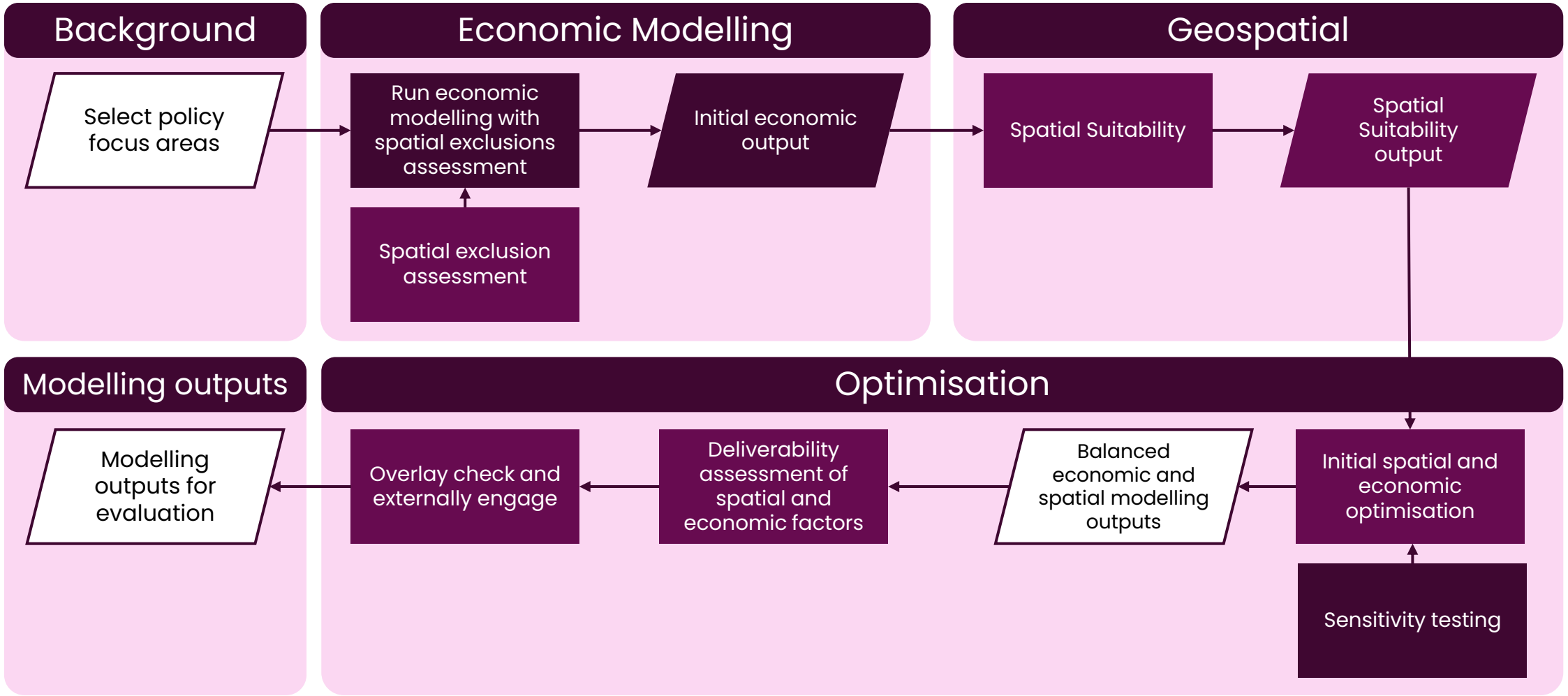
Data
- Determine datasets to use
- Decide use of technologies

Economic modelling and spatial suitability assessments

- Develop the spatial evaluation approach
- Stakeholder engagement
- Environmental assessments
- Policy scenarios and data inputs
- Testing and sensitivity analysis

NESO National Energy System Operator

Model



Prepare | **Model** | Appraise | Consult | Refine | Publish

SSEP and the environment

Strategic Environmental Assessment (SEA)

Assessment of SSEP output

Habitats Regulations Assessment (HRA)

Assessment of likely SSEP effects on European designated sites

Spatial Evaluation Framework

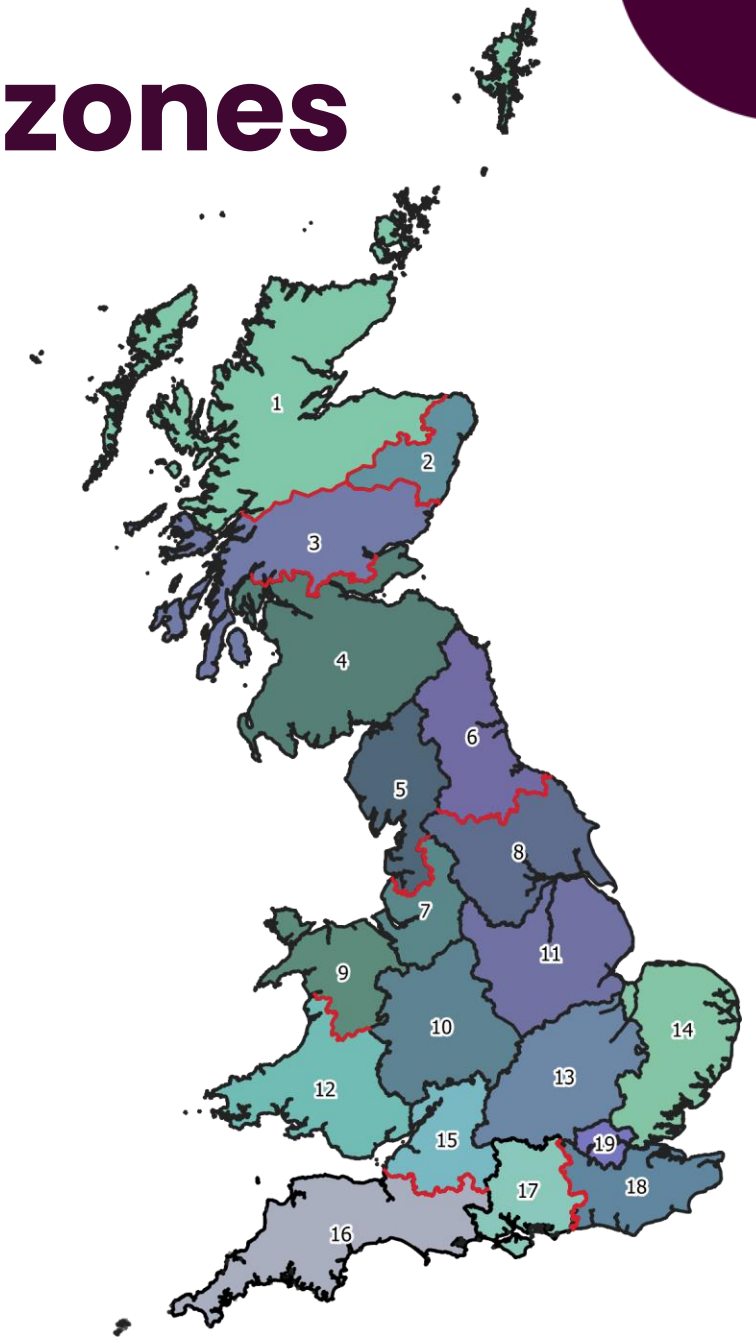
Identifying and scoring relevant environmental constraints to determine the best location for in-scope energy infrastructure

NESO
National Energy System Operator

Onshore publication zones

The SSEP will be split into 19 zones for publication

This takes a balanced view of the planning principles and energy system principles



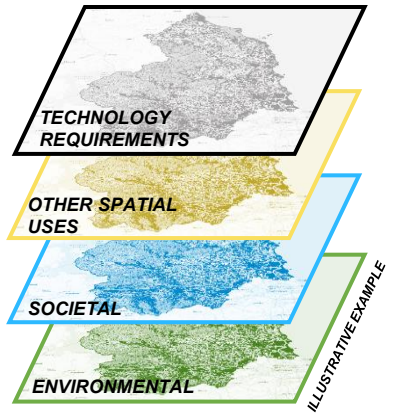
NESO
National Energy System Operator

Spatial evaluation - exclusions

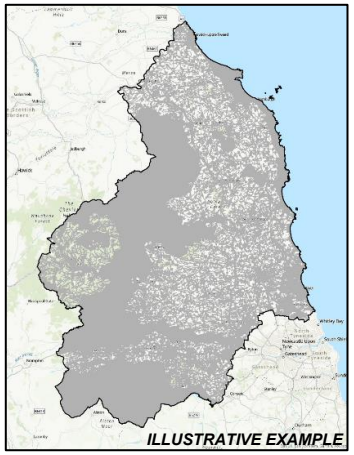
Identify relevant indicators within four spatial "Pillars"

- Technical Design Engineering Requirements
- Other Spatial Uses
- Societal
- Environmental

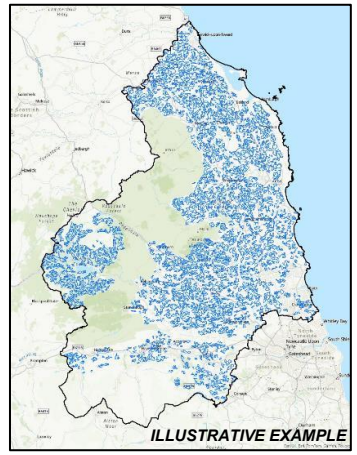
Gather spatial data representing indicators



Map spatial exclusions for each technology



Calculate potential developable area



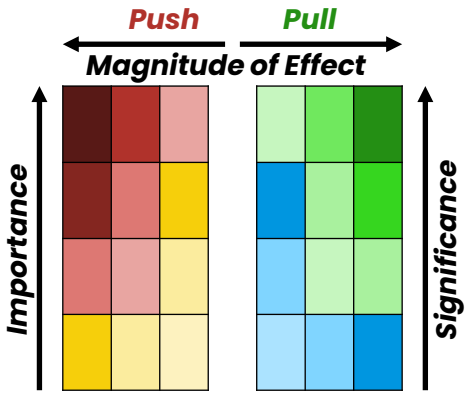
Prepare | **Model** | Appraise | Consult | Refine | Publish

Spatial evaluation - suitability

Identify relevant indicators within four spatial "Pillars"

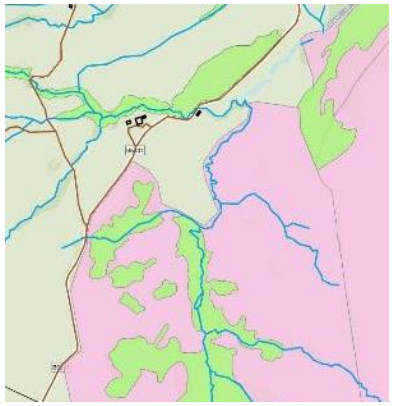
- **Technical Design Engineering Requirements**
- **Other Spatial Uses**
- **Societal**
- **Environmental**

Score indicators as constraints (push) or opportunities (pull)



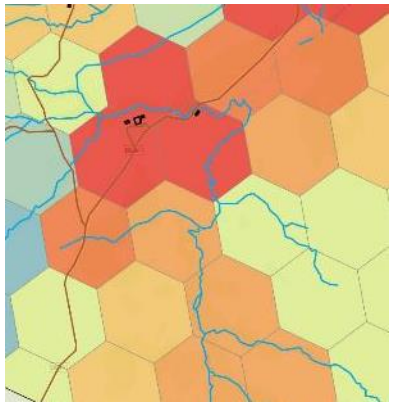
Multi-criteria analysis scoring approach

Gather spatial data representing constraints and opportunities



ILLUSTRATIVE EXAMPLE

Apply and aggregate scores into spatial suitability heat maps



ILLUSTRATIVE EXAMPLE

Prepare | **Model** | Appraise | Consult | Refine | Publish

Appraise

Principles and process guiding the SSEP pathway options

Consult

Developing the SSEP through conversations

Industry engagement

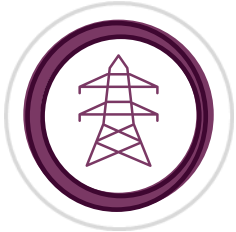
Industry Working Group, workshops, webinars, surgeries and bilaterals

Societal engagement

Opinion survey, focus groups, society-based 1:1s and topic-based forums

Host areas

Conversations with political, developer and community stakeholders



Environmental assessment

Scoping, evidence gathering, consulting on and reporting the HRA and SEA

Formal consultation

Overview of the chosen pathway development, and what it means for GB

Prepare | Model | Appraise | **Consult** | Refine | Publish

Refine and Publish

Refine

- Evaluate options
- Evaluate changes
- Stakeholder feedback
- Governance forums
- Lessons learned

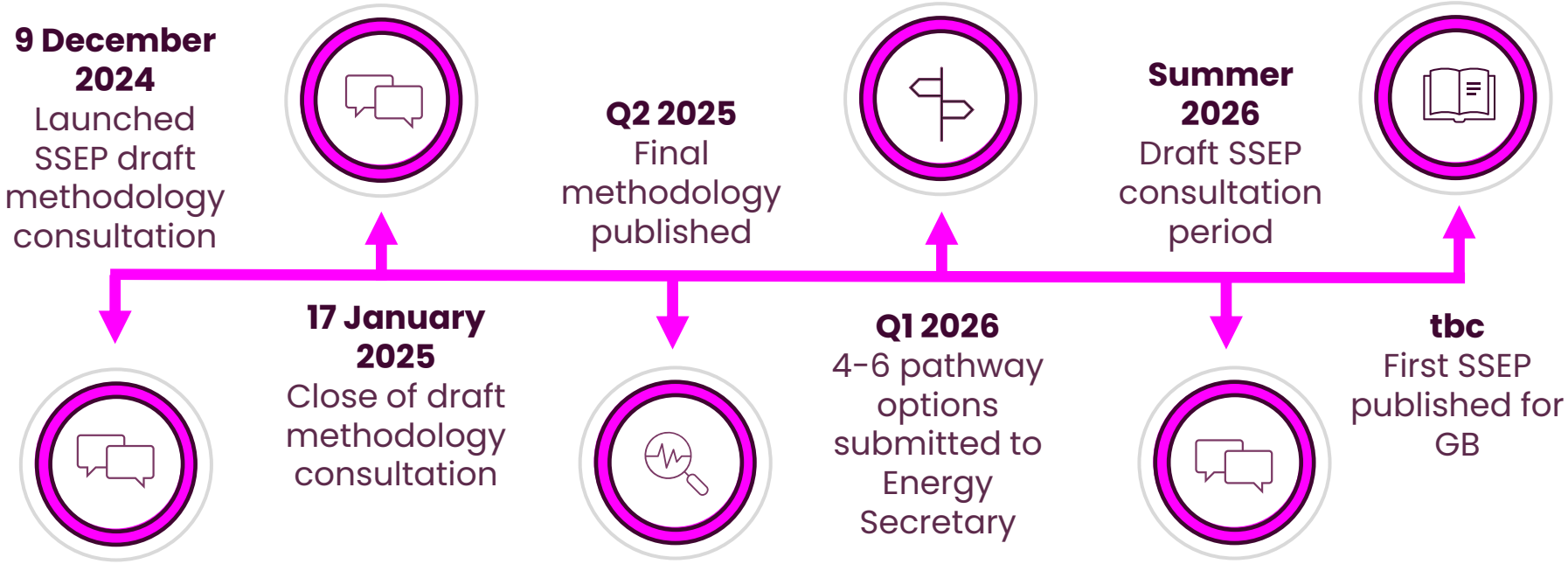
Publish

Submission to:

- UK Energy Secretary
- Scottish Government
- Welsh Government
- Ofgem

Prepare | Model | Appraise | Consult | **Refine** | **Publish**

SSEP key dates and milestones



Public

NESO
National Energy System Operator