SSEN INVESTMENT OPTIMISER

Copperleaf Utilities Conference Mar 2025

Scottish & Southern Electricity Networks

WHO WE ARE

How it all fits together

The SSE Group

Valuable mix of related businesses focused on low-carbon electricity

... with a commercial corporate centre which adds value

SSE Renewables

Wind, solar and battery generation

Hydro and storage power-to-X

SSE Thermal

Hydrogen production and storage

Energy Portfolio Management

SSEN Transmission

Transmission links transporting growing renewable output

SSEN Distribution

Smart, flexible distribution grid

SSE Energy Solutions

Low carbon customer solutions

SSE Enterprise

Distributed Energy: BtM solar and battery, EV infrastructure, heat networks, private networks and digital

Corporate Centre:

Disciplined capital allocation and financing

Efficient shared services

Shared skills and expertise

Talent management and development

Governance

Over **3.8** million homes and businesses served by our networks

Over **3,700** employees across the country

More than **770,000** customers on our Priority Services Register

130,000km of overhead lines and underground cables

106,000 substations

100+ subsea cables powering island communities

THE CASE FOR CHANGE

Customer expectations

- Customers demand more value and data
- The regulator demands better performance and efficiency
- Shareholders want return on investment

Changing network

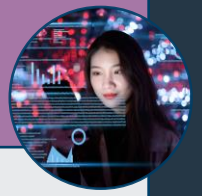
- Integrating distributed generation
- New assets will be technologically different
- Coping with technological change
- Model impact of climate resilience

Increasing demand

- Net Zero targets drive electrification
- Customer technology changes (data centres, EV chargers, smart meters, heat pumps)
- Constraint impacts for new connections

Push for digitalisation

- Concurrent review of work systems and processes
- Scanning across the utilities for best practice
- Undertaken proof-of-concept optimisation



The solution isn’t going to be another spreadsheet

PROJECT OBJECTIVES

Overall Aim

Enhance current investment optimisation capabilities for SSEN Distribution

Transitioning from manual output-based process to using a mathematical optimiser, with multi-capital value appraisal of investments.

Objectives of project scope

Implement an investment optimisation solution within 7 months that generates additional **value for the ED2 portfolio** either through:

- reduced cost to achieve the same outputs and/or outcomes; or
- increases the value of the portfolio for the same cost input.

Upskill SSEN planners and leaders in use of the investment optimiser and new business processes,

so that…

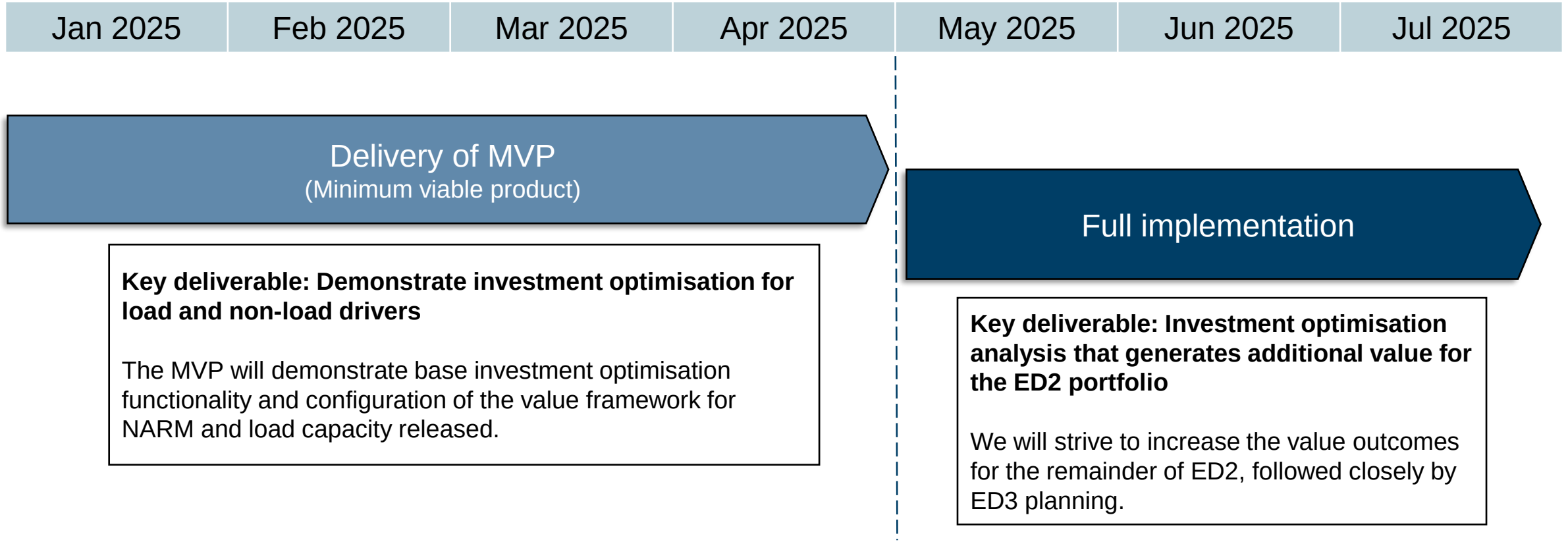
the **ED3 business plan can be built self-sufficiently**, without the need for third-party support to use the solution itself.

Identify a **future processes**, **changes required**, and the **roadmap** to embed value-based decision-making and the optimiser into **BAU.**

This includes, for example, updates to the current SSEN Distribution Governance Investment Framework.

PROJECT TIMELINE

The Investment Optimiser will be run as an agile project, with two-week sprints and monthly steering group updates. Wider stakeholder engagement with Directors and senior leaders are planned, plus a showcase event for the MVP outcomes.



ANSWERING THE EXAM QUESTIONS IN MVP

- The MVP scope focuses on the first two exam questions and allows SSEN to experience investment optimisation capability. These two scenarios were chosen as they are achievable within the 12 weeks, apply a focus on critical value drivers, and give an opportunity to test a wide variety of functionality in the system.

Maximise Value (Monetised Risk Reduction) w/ funding constraint (CV7a & CV9):
What are optimal NARM asset volumes to replace to maximise risk reduction, or how much less I can spend to achieve same target.

Maximise Value (Capacity Released) w/ resource constraint (CV2):
If I needed to give/take resource from Load drivers to asset replacement, which projects would I stop/add and what's MVA benefit.