



Scottish & Southern
Electricity Networks

TRANSMISSION

Project TReNDS

Digital Substations

Mini Nambiar

Innovation Project Manager



TReNDS (TRansmission Network Digital Substation) Vision

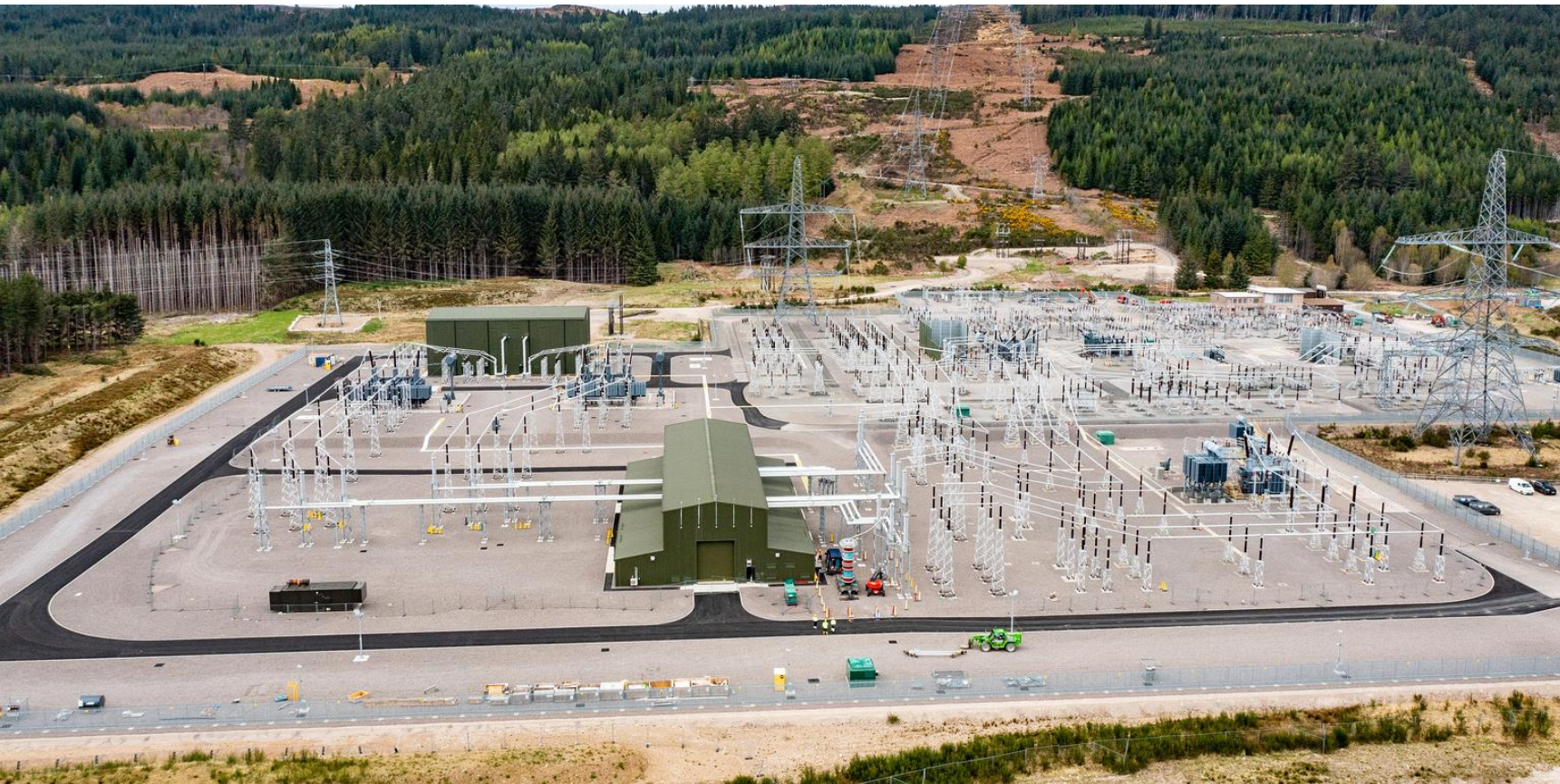
- A substation where information & control signals are transferred digitally (using fibres)

Standardise delivery

Multi-vendor

Interoperability

Cyber Secure



- Project Benefits
 - CAPEX savings
 - Faster Construction
 - Increased Standardisation
- Operational Benefits
 - Improved Safety
 - Improved Data
 - Risk Based Asset Management

Funding – Ofgem Non-Operational IT Reopener

TReNDS (TRansmission Network Digital Substation)

What is a Digital Substation?

- There are many different interpretations based around BS EN 61850 standards

**Digitises Signals
within the control
building?**

**Digitises Signals
between the plant
and the control
building?**

**Uses Low Power
Instrument
Transformers?**

**Digitises Signals
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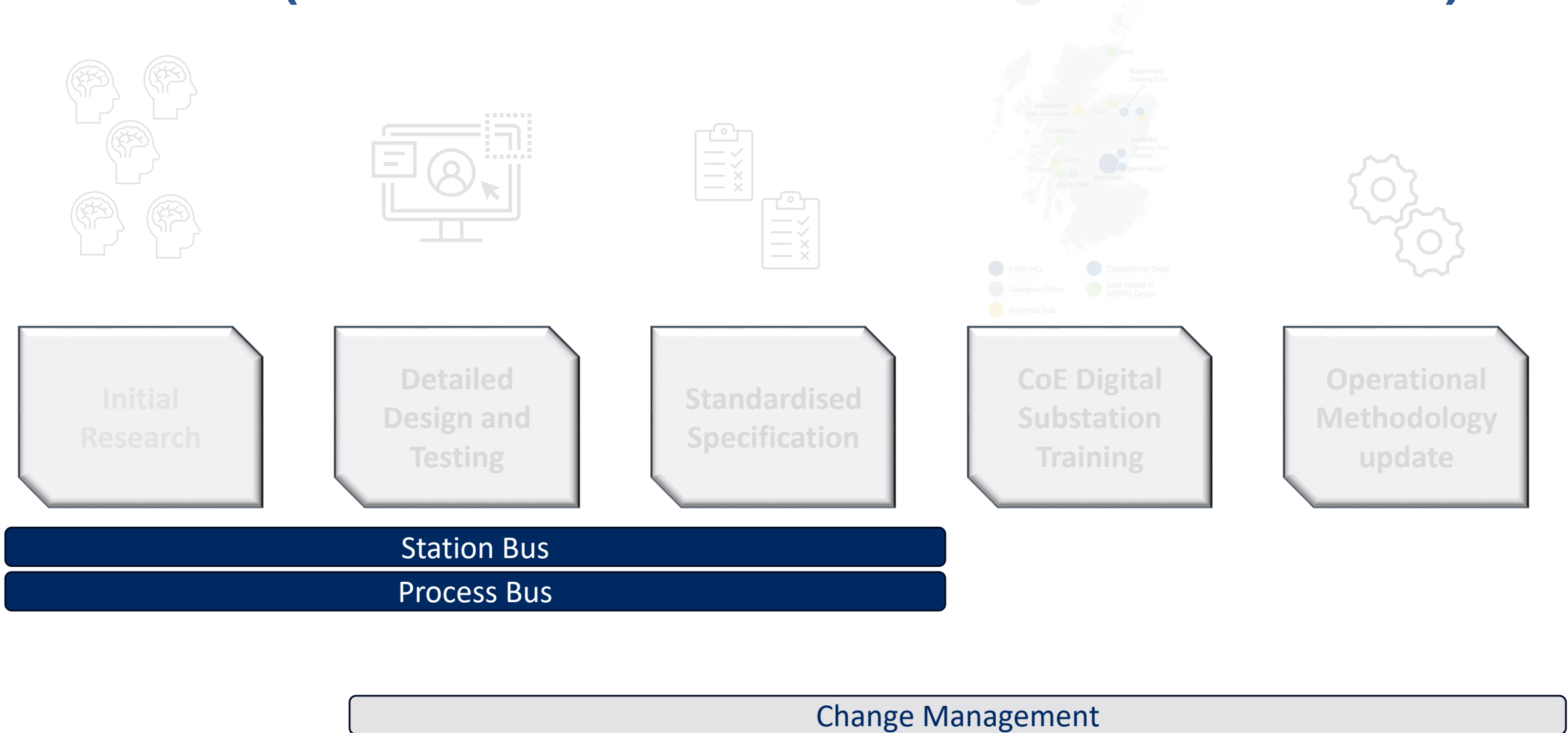
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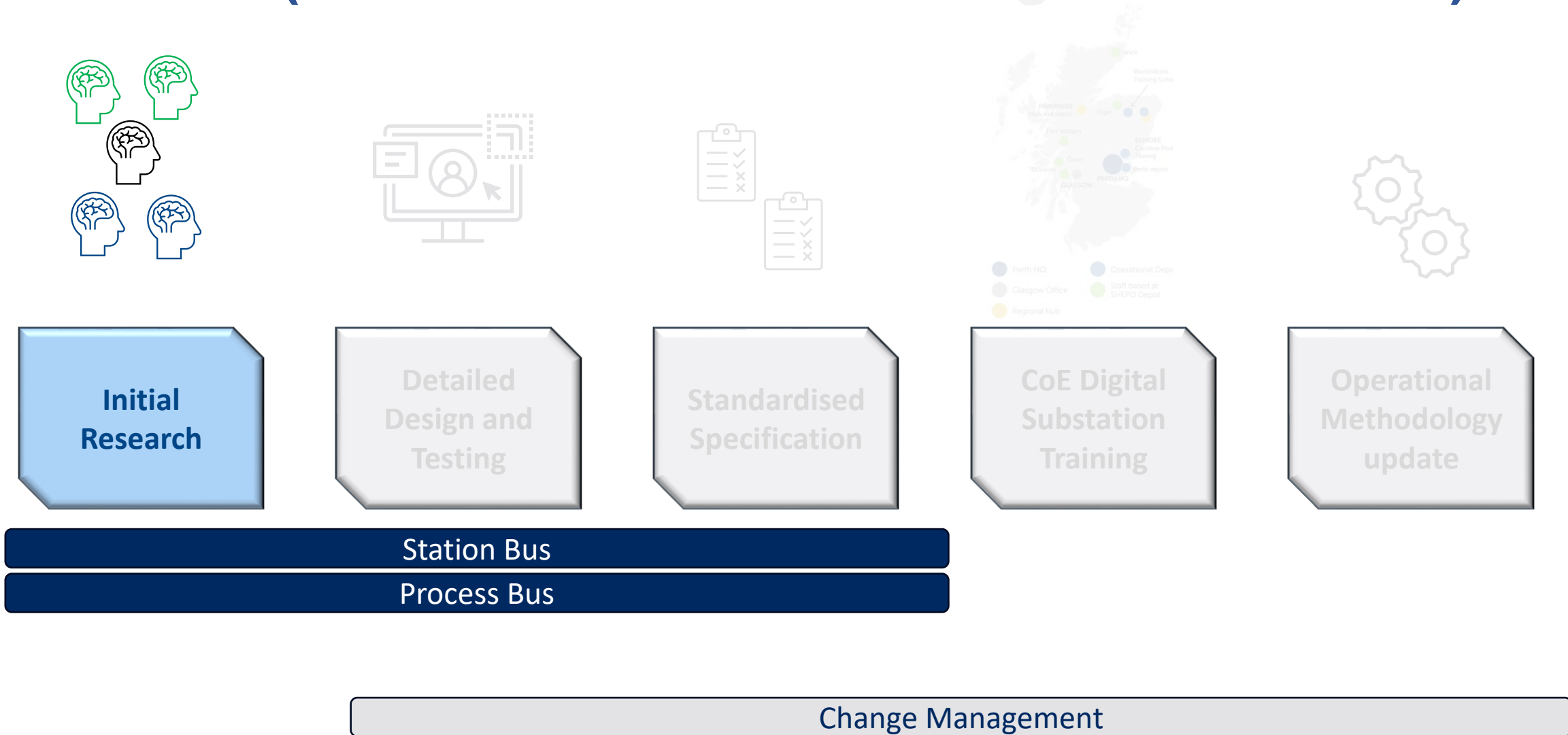
TReNDS

Independent

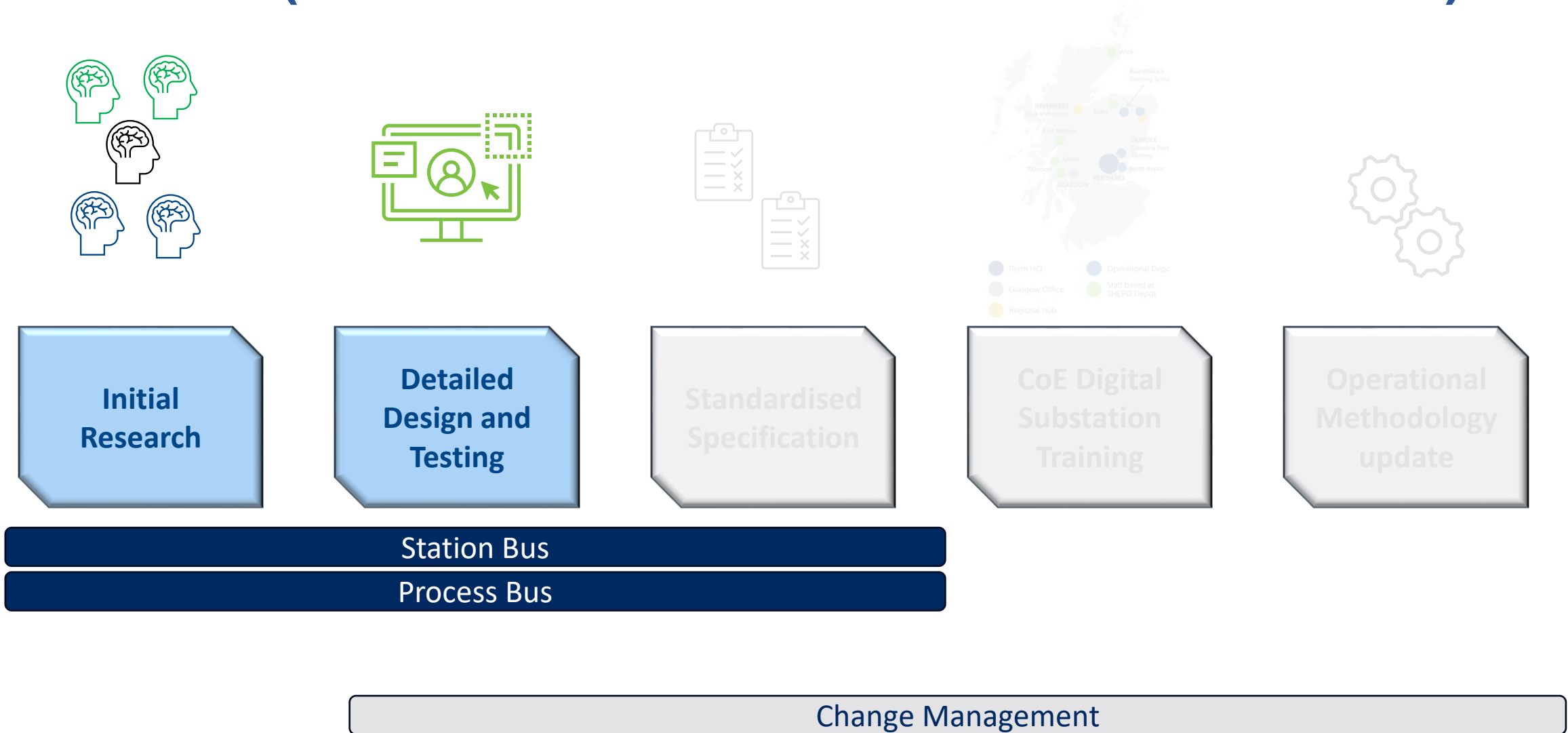
TReNDS (TRansmission Network Digital Substation)



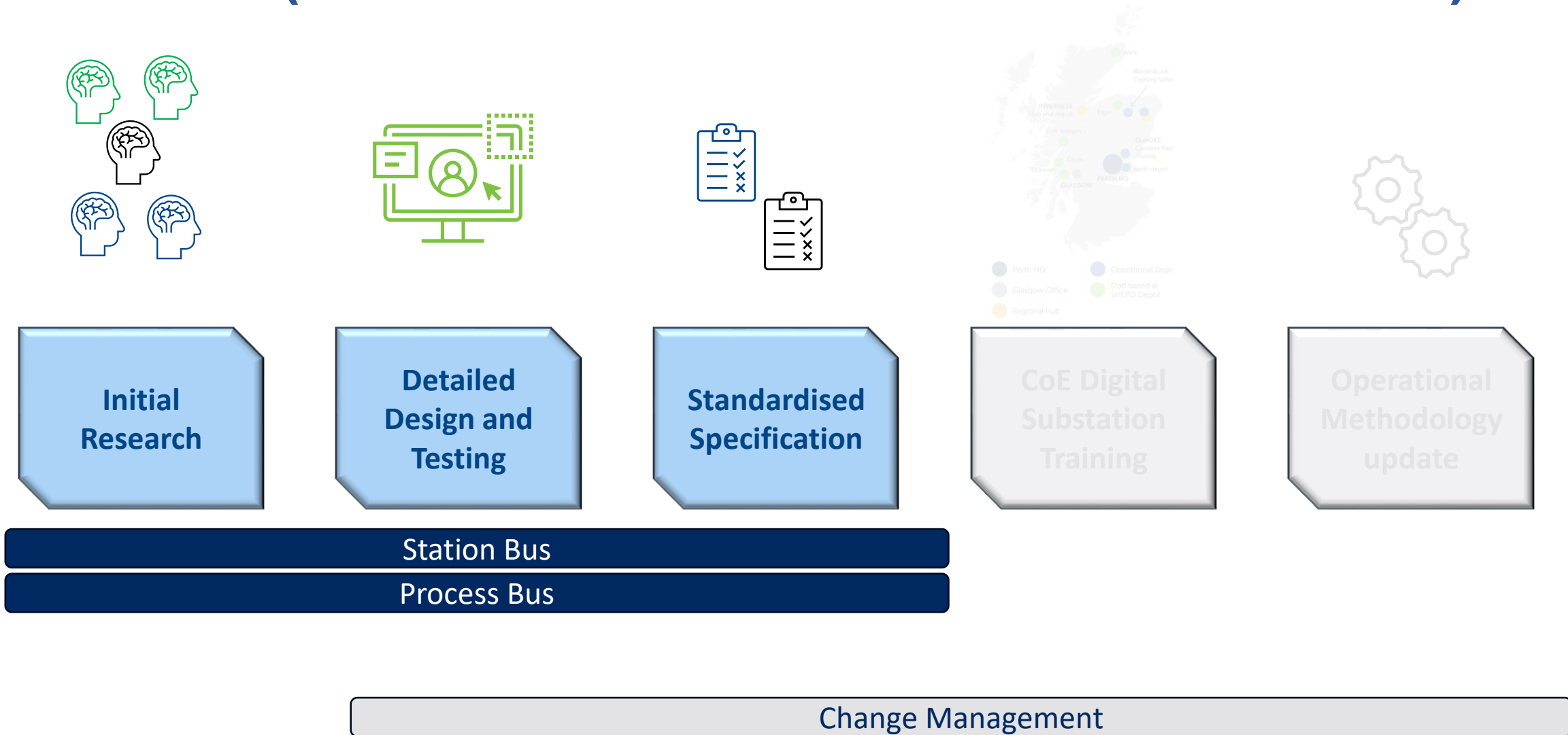
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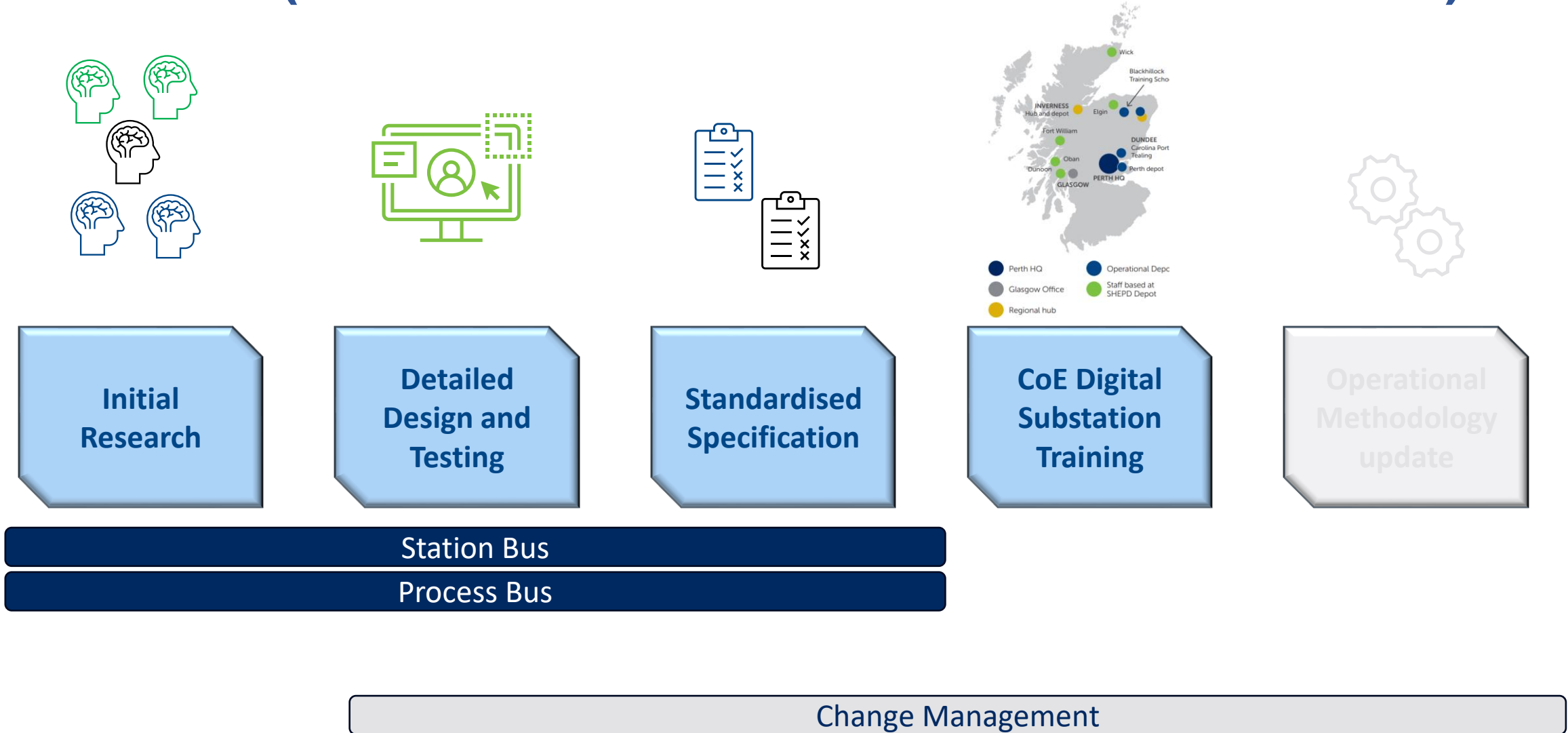
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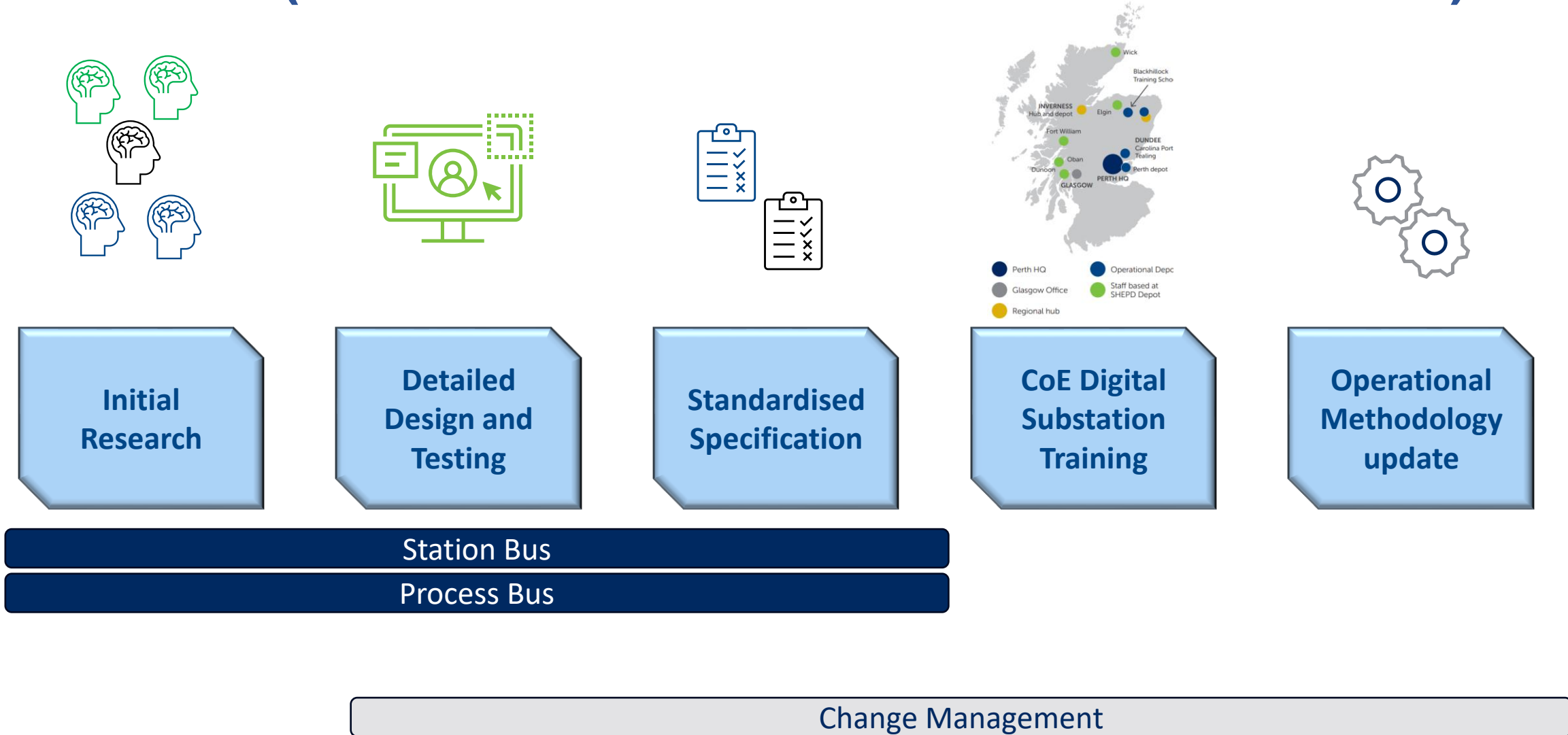
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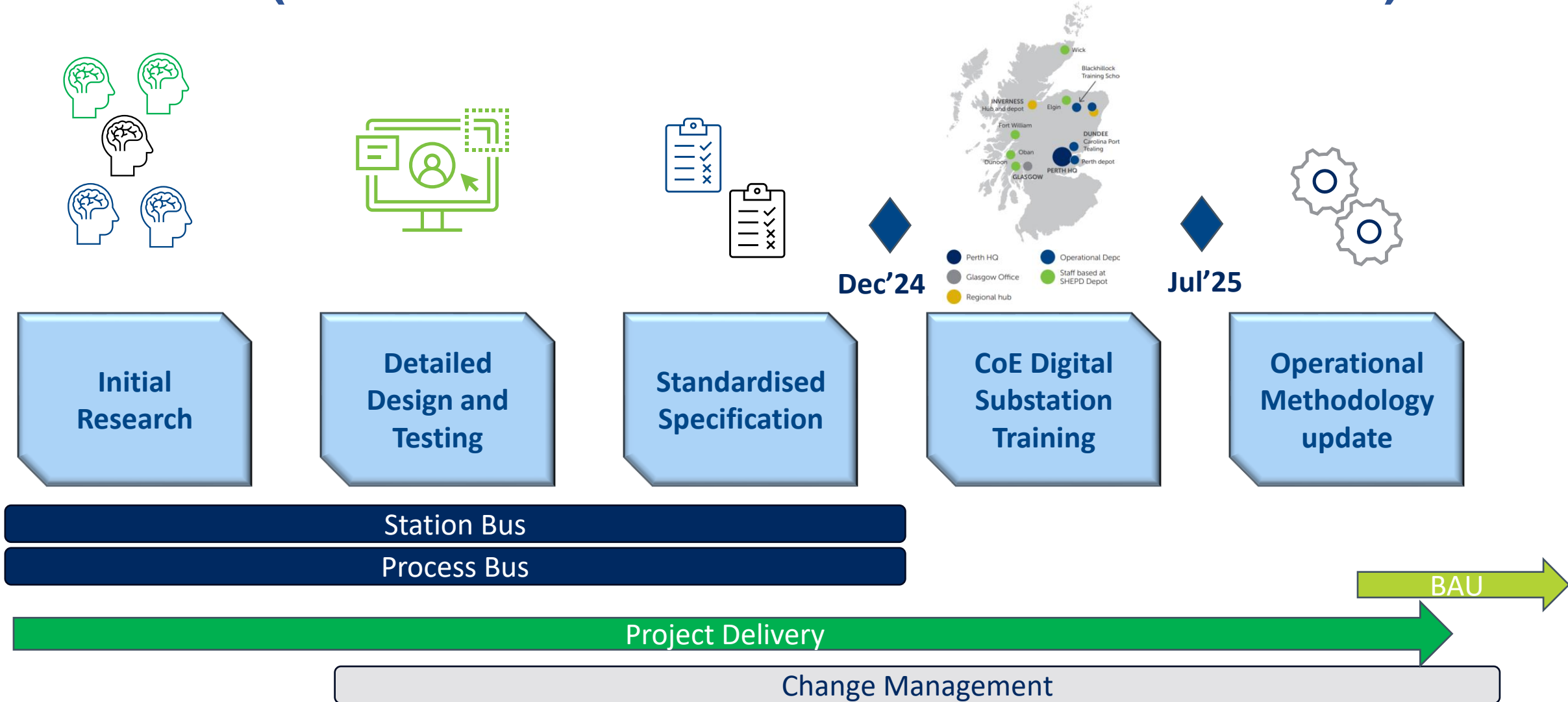
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