



**Welcome to Eastern Region Capital Delivery
Midland Mainline (MML) Electrification Programme
Market Briefing Event**

15th June 2022

Venue: Riverside Centre

10:00am – 13:00pm

THIS IS NOT A CALL FOR COMPETITION





Welcome

Lisa Webb

Principal Portfolio Manager

Housekeeping

Lisa Webb

Principal Portfolio Manager

Housekeeping & Ground rules

- ❖ Please switch off or silence your mobile phones
- ❖ Fire alarms – none expected today
- ❖ Slides and recording will be shared via email following this session
- ❖ This event is for the benefit of those looking to bid for the frameworks in scope – it is not a general information event
- ❖ Questions at the end - we will only take questions related to the scope of the event
- ❖ More complicated / multi-faceted questions may be answered in a post-event communication
- ❖ Responses will be shared transparently



Purpose of today

The purpose of this Market Engagement Briefing Event is to:

- ❖ Brief you in preparation for the forthcoming Market Sounding Questionnaire (MSQ) which will inform our procurement strategies
- ❖ Introduce you to our ambition for the MML Electrification Programme
- ❖ Highlight Network Rail's aspirations, including the vision, mission and outcomes
- ❖ Provide you with important context around intended operating and delivery models

PLEASE NOTE THAT THIS IS NOT A CALL FOR COMPETITION

- Network Rail does not guarantee that it will incorporate all or any feedback received at or following this launch event into any subsequent procurement event(s).
- Relevant launch event material (including any relevant Q&A) will be made available as part of the forthcoming procurement event documentation for background information.
- However, attendees should not rely on the contents of any launch event information (including any Q&A) for the purposes of participating in and responding to any future procurement event or otherwise; the formal procurement documentation issued as part of the relevant procurement event will take precedence over any launch event information (including any Q&A).

Today's agenda

10:00 Welcome: Lisa Webb

10:10 Introduction & Context of the Programme:
Patrick Bateson, Rob McIntosh (video), Rob Cairns

10:40 Strategic Brief & Operating Model: Lisa Webb

11:00 Delivery Model: Mike Heptonstall & Narad Bhandari

11:20 Contracting Strategy Partnership: David McBride

11:40 Partnership Framework: David McBride

11:50 Incentivisation: David McBride

12:00 Procurement Plan: David McBride

12:10 Market Sounding: David McBride

12:20 Q&A open session: All

13:00 Event Close

Introduction and Context

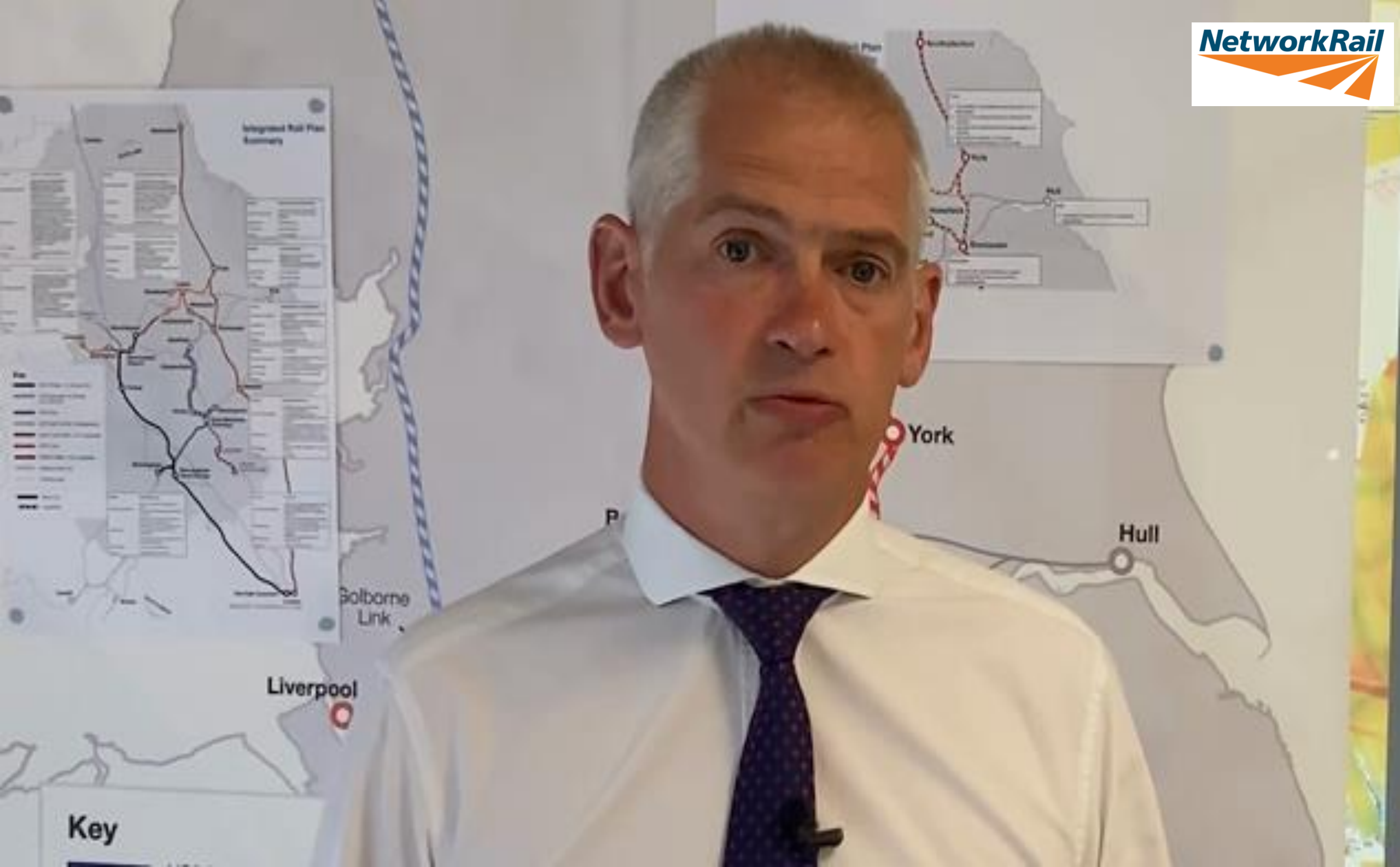
Patrick Bateson

Programme Director - Inter City

Introduction and Context

Rob McIntosh

Managing Director – Eastern Region



Key

Liverpool

York

Hull

Bolborne Link

Introduction and Context

Rob Cairns

Capital Delivery Director – Eastern Region

Strategic Brief and Operating Model

Lisa Webb

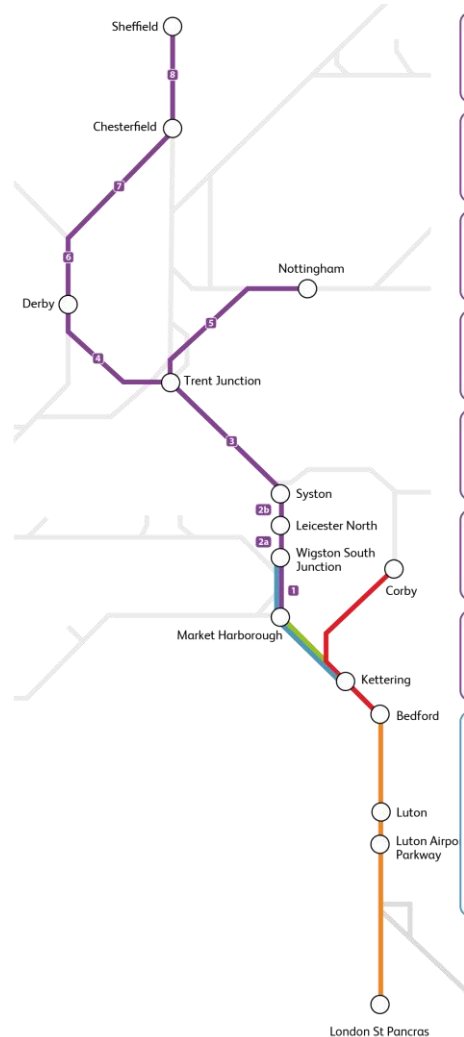
Principal Portfolio Manager, Midland Mainline Electrification

MML Programme & Key Deliverables

SOUTH OF BEDFORD	London to Corby Electrification	Next Stage MML Electrification
80.0km	50.4km 47 structural interventions	153.56 km 82 structural interventions

London to Corby
COMMISSIONED
 Capacity, journey time and performance improvements for passengers and freight
 - Electrification Bedford to Corby with connection to National Grid;
 - Fourth track between Bedford and Kettering
 - Stations and route clearance to accommodate 240m trains at Bedford, Wellingborough, Kettering and Corby
 - Kettering stabling facilities

Electrification south of Bedford
 Adjustment of OLE from 100 to 125mph



- Section 8**
London Road Bridge to Sheffield North Throat
- Track length: 2.5km
- stk: 9.5km
- Section 7**
North of Toadmoor Tunnel to London Road Bridge
- Track length: 43.3km
- stk: 98.5km
- Section 6**
Chaddesden Sidings to North of Toadmoor Tunnel
- Track length: 16.7km
- stk: 42.9km
- Section 5**
Trent Sidings to Nottingham
- Track length: 13.1km
- stk: 38.2km
- Section 4**
Sheet Stores to Chaddesden Sidings
- Track length: 15.7km
- stk: 37.0km
- Section 3**
Syston North Jn to Sheet Stores Jn
- Track length: 28.7km
- stk: 106.2km
- Section 2**
Wigston South to Syston Nth Junction
- Track length: 17km
- stk: 48.9km
- Kettering to Wigston South (KO1a plus RS1)**
Including power for 6 long distance, high speed services per hour run electrically
- Kettering to Wigston South Junction electrification.
- Track length: 36kms
- stk: 74kms
- Connection to Braybrook power supply, power upgrade south of

Enable electric operation of a 2040 future timetable including:

- Works for the Overhead Line Equipment (OLE) extension to Sheffield & Nottingham;
- Route clearance to accommodate OLE extension, including major track and civil works; and
- Increased power supply to support electric passenger services to Sheffield and Nottingham.

London to Corby electrification has recently been completed. Electrification between Kettering and Wigston has recently been procured. The next stage of procurement is for further electrification between Wigston and Nottingham / Sheffield.

Our Vision, Mission and Outcomes

On the side of passengers and freight users

Easy to engage with, efficient & dependable partner

Proud to work for Network Rail

Instinctive industry leader

Vision

MMLE - The catalyst to a decarbonised national railway




Mission

To create a step change in the delivery of electrification by challenging convention and relentlessly seeking best value solutions

Outcomes				
	<p>Reduction in greenhouse gas emissions and improvements in air quality along the route and around stations</p>	<p>Improved passenger experiences</p>	<p>Reduced train operating costs</p>	<p>An affordable and efficient template for further electrification</p>

Our Values and Behaviours



Values

Empower our people

Always be safe

Care about the railway, its users and each other

Put teamwork at the heart of what we do



Behaviours

Challenge everything

Beat the target

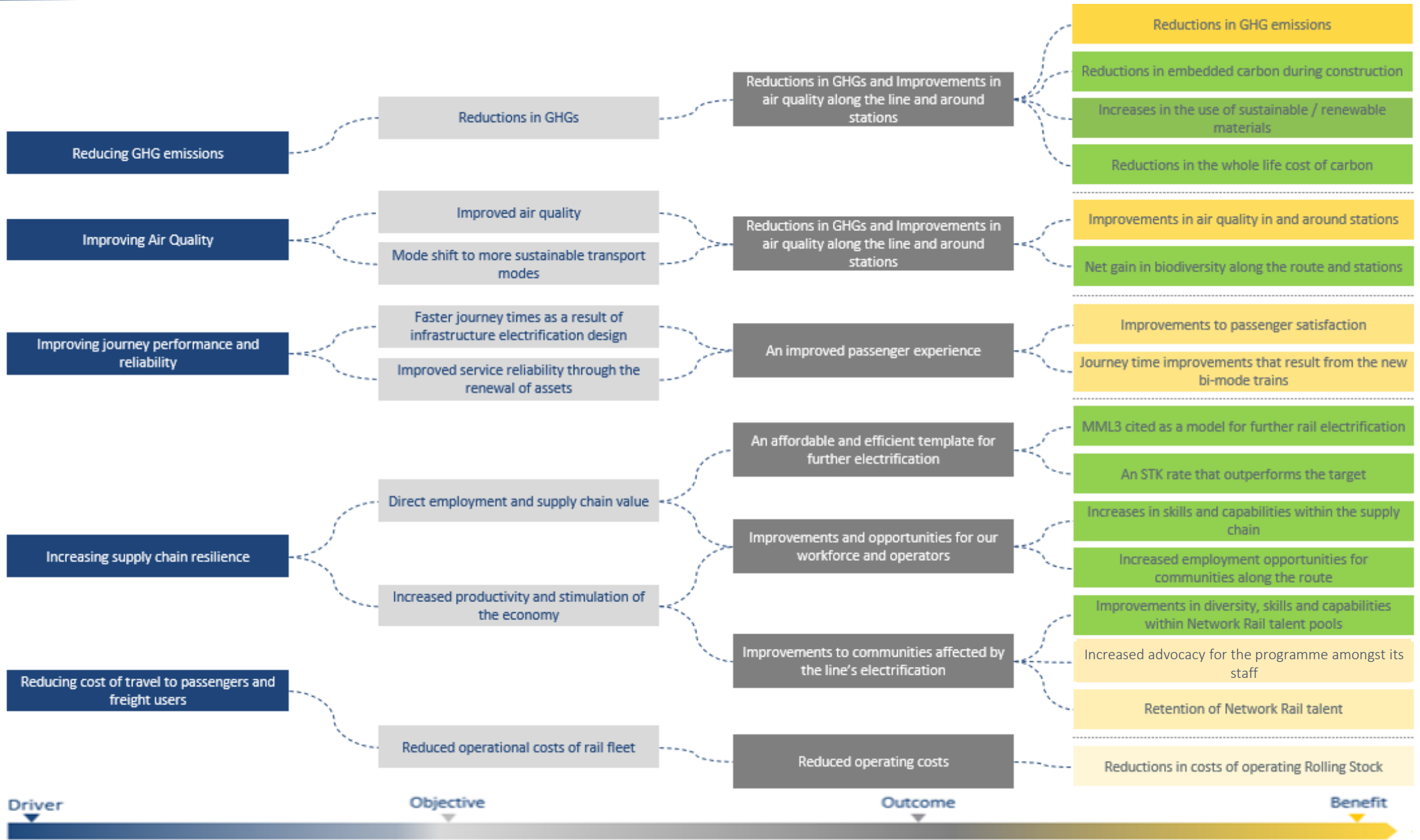
One Team

Leave a legacy

Resilience



MML Electrification Benefits Plan Mapping



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Operating Model

Lisa Webb

Principal Portfolio Manager

Preliminary Market Engagement & Industry Feedback

Programme level approach

Production line methodology to deliver Rail Systems

Defined Pre-production & Production split

Upfront design and integration

Partnership approach – efficient and effective working

Simple performance-based incentivisation approach

Drive continuous improvement and STK rate efficiencies

Overall general positive support for the Partnership Framework Delivery Model

From National Electrification Efficiency Panel (NEEP) and Rail Electrification Programmes Market Event in July 2021



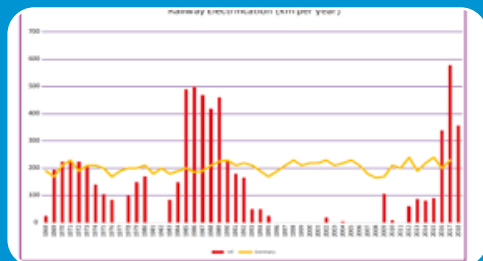
Create Certainty

- Fix scope and requirements
- Multi-disc design to optimise individual packages (integrated / client Led)
- Firm up master schedule & access plan in advance (deconflicted)
- Not seek to pass on strategic risk that is best managed by the client



Reduce Complexity

- Standardise (work types, then products) – package similar works
- Productionise (repeatability – safer, higher quality, factory model)
- Reduce interfaces; separate work disciplines and deconflict
- Design to avoid existing asset deficiency issues – MVP driven across all aspects of operations



Optimise Scarce Resources

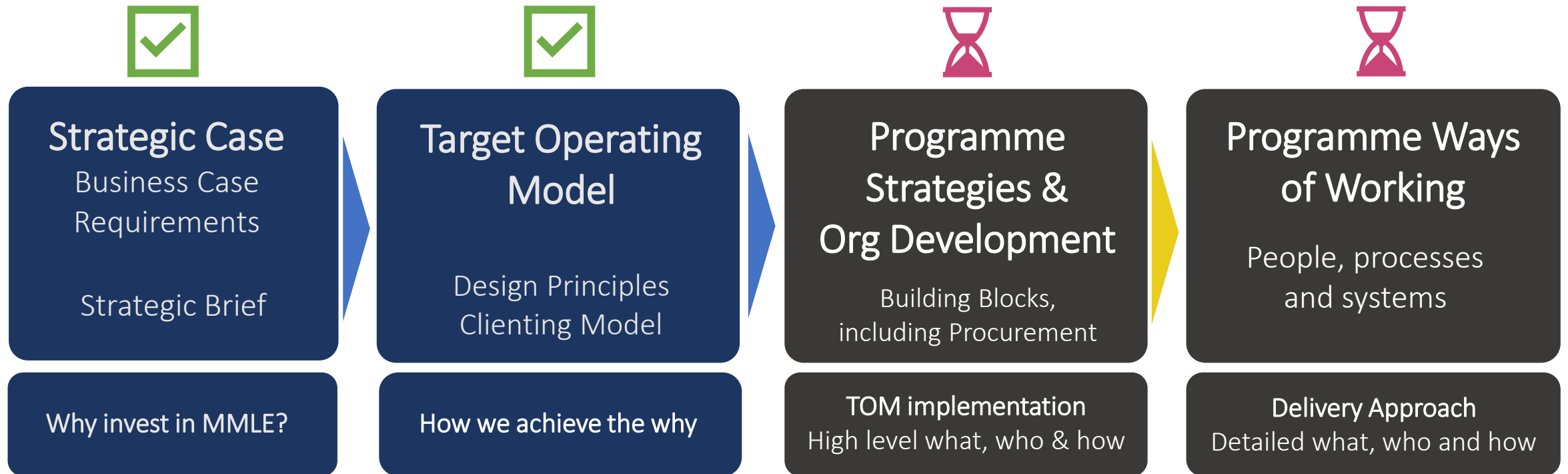
- Access; Plant; Skilled Resources; Materials – level the plan & secure in advance
- Play to Strengths in the supply chain – no square pegs in round holes
- Invest in technology to drive innovation and outperformance of productivity and methods
- Incentivise and support supply chain performance, creativity, innovation and productivity



Relentless focus on cost drivers (internal and external)

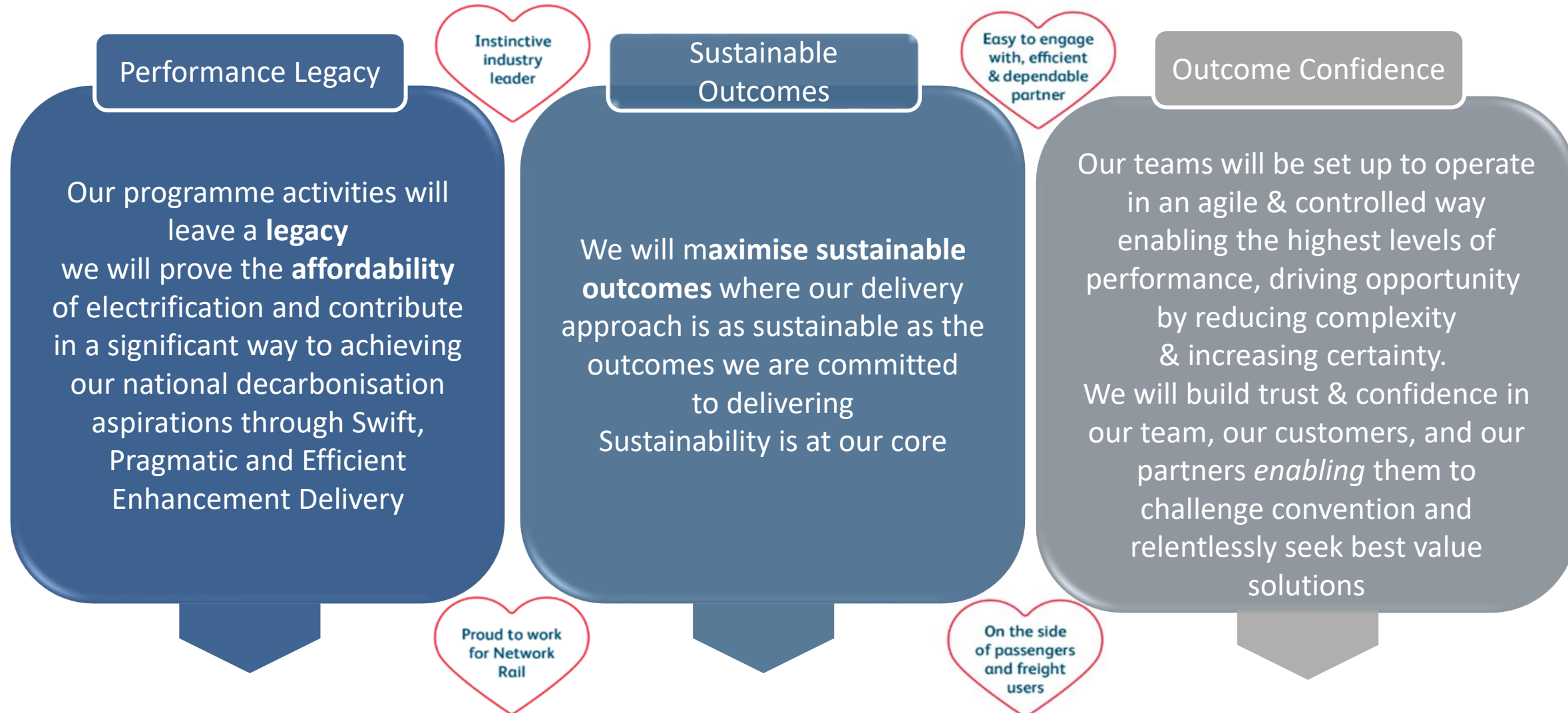
- Access; Complexity; Uncertainty; Complacency; Change; Overheads; Appropriate Risk Allocation; Quickest and Safest way of doing repeatable tasks; Enabling Productivity, Lean Focus; “Touch it once”
- Understand cost base – RMM cost reporting and industry benchmarking; live real time updates to the cost plan for cost to complete certainty - Slash the indirect cost burden

Operating Model Context: Strategy - Golden Thread

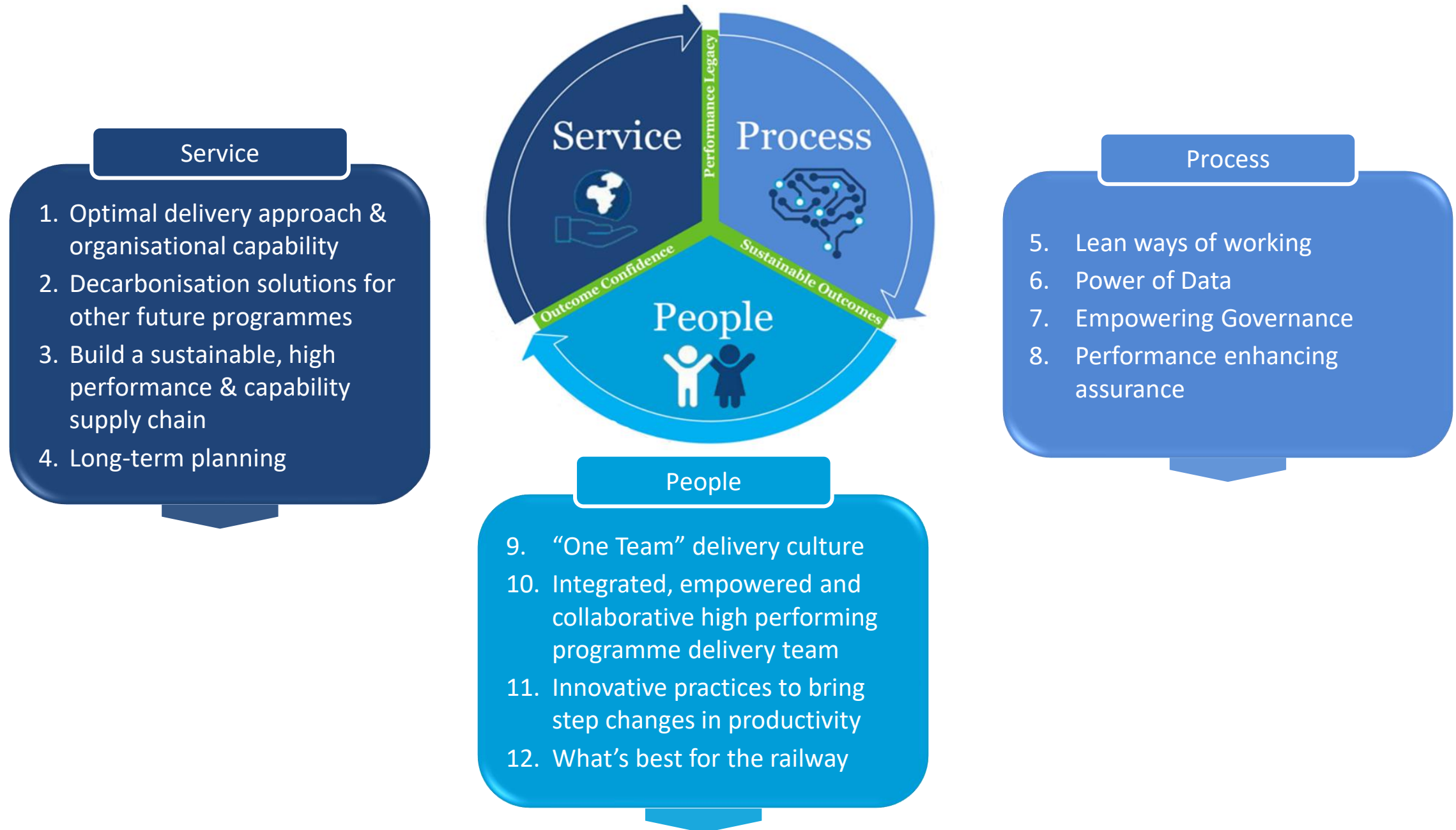


MMLE Value Propositions

“value proposition” - the value our programme promises to deliver to our customers



Operating Model – Three Core Pillars

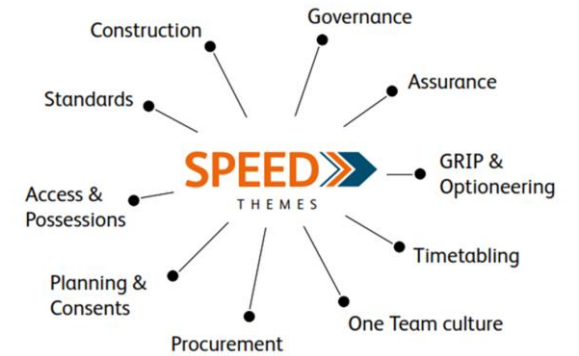


Delivery Model

Mike Heptonstall, Head of Production Integration

Narad Bhandari, Programme Engineering Manager

Looking Forward – Our Challenge



Industry leading Single Track Kilometre (STK)



Benchmark for future electrification



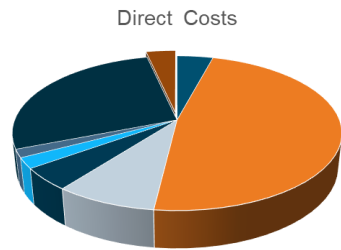
Doing things differently - a production line methodology

MML3 – Current STK Position

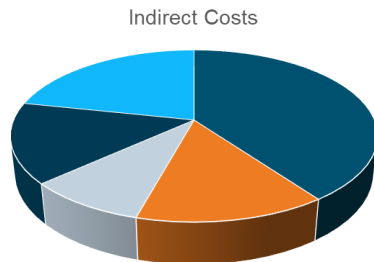
Discipline	£
Railway Control Systems	57,810
Train Power Systems	665,588
Electric Power and Plant	119,010
Permanent Way	64,750
Telecommunication Systems	31,083
Buildings and Property	23,833
Civil Engineering	383,612
Enabling Works	48,133
Sub-total	1,393,819

Indirect Costs	£
Preliminaries	691,281
Design	245,095
Project Management	155,426
Other Costs	260,257
Risk	373,998
Sub-total	1,726,057

Total STK rate	3,119,876
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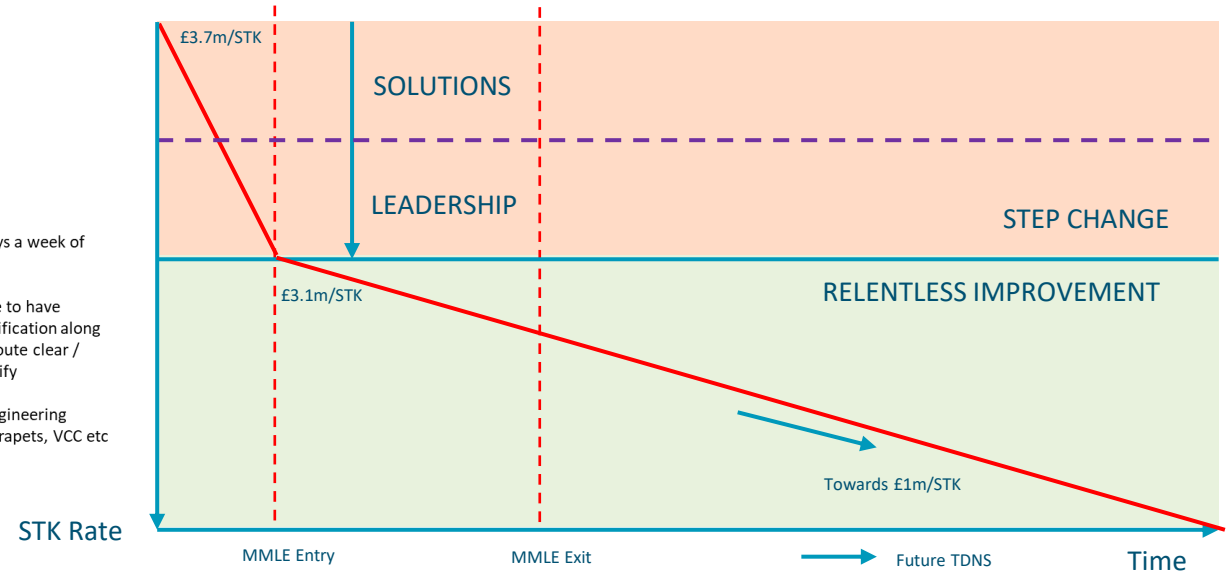
- Railway Control Systems
- Train Power Systems
- Electric Power and Plant
- Permanent Way
- Telecommunication Systems
- Buildings and Property
- Civil Engineering
- Enabling Works



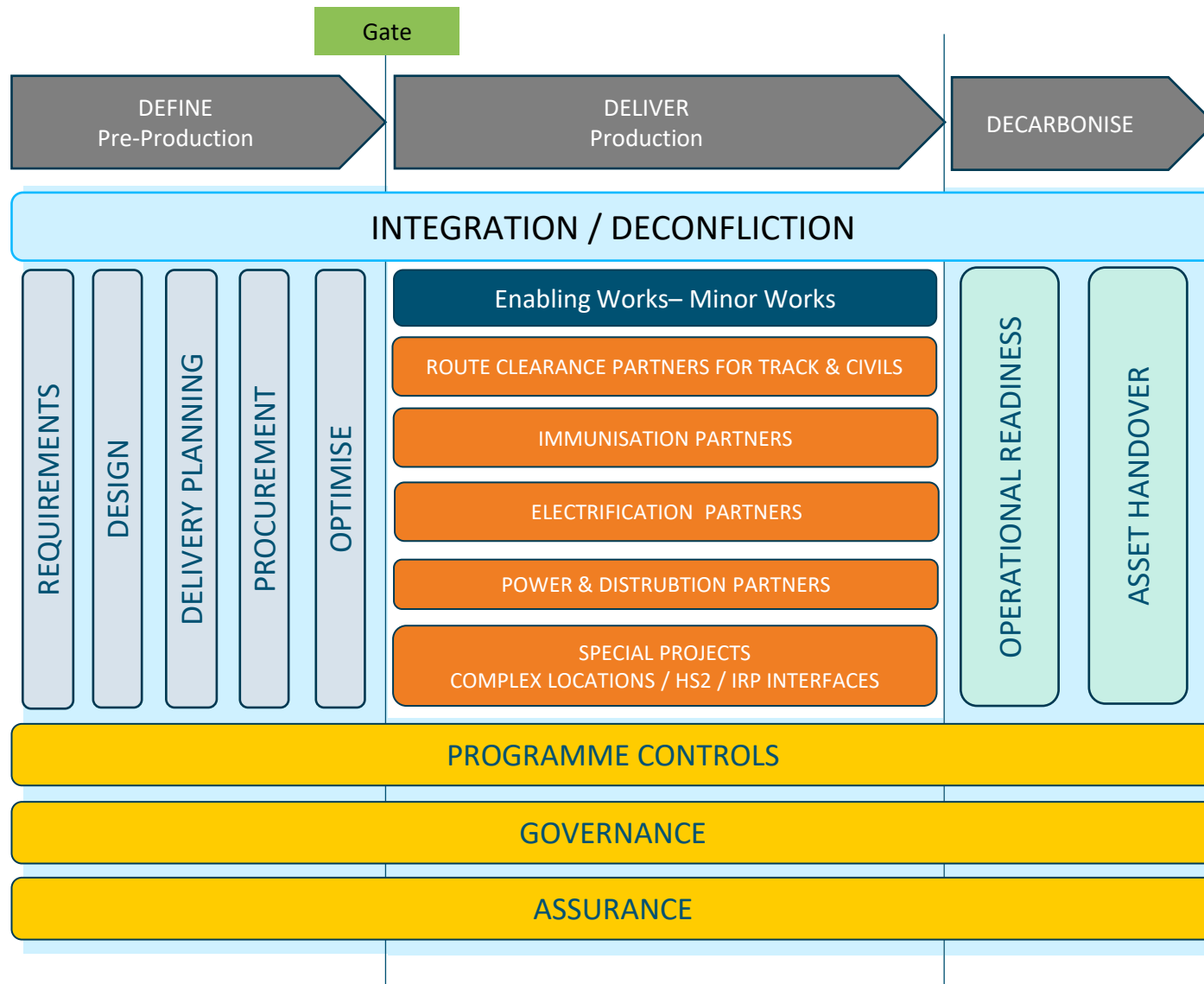
- Preliminaries
- Design
- Project Management
- Other Costs
- Risk

Key Assumptions

- Access to all 7 days a week of 8.5hrs ROTR
- Funded to be able to have continuous electrification along the principle of Route clear / immunise / electrify
- MVP across all engineering disciplines e.g. parapets, VCC etc



Proposed MML Integrated Production Model



Production Line Approach

i) Pre-Production

✓ Network Rail augmented function (integrator / designer) to "Define"

- 'De-risk, value engineer, optimise, innovate, integrate' to deliver the **'Overall Performance Outcomes'**
- Upon reaching maturity of design, cost and programme the **'Individual Performance Outputs'** are defined prior to proceeding into the Production phase.

ii) Production

❖ Partner (Contractor) to "Deliver"

- Procurement through a **Framework Agreement** for detailed design and delivery
- Delivery to **Individual Performance Outputs** linked to **Overall Performance Outcomes**.

MMLE Integrated Production Model

PROGRAMME INTEGRATOR

Owner RAM, Operations, Finance, HR, Legal

Production Integration –

- 1. Programme leadership**
- 2. Work package delivery and integration:** delivery planning, access management, work package management, operational readiness,
- 3. Safety and Wellbeing Leadership**
- 4. Production Services:** Programme controls including risk, schedule, cost, change and reporting, programme governance/assurance. Digital including system requirements and Information Management Consents management including TWAO and local requirements. Sustainability management. Communications and stakeholder management, programme performance
- 5. Commercial :** Procurement, cost planning, pre-contract management, post contract management.

6. Technical Integration – Functional Requirements, Scheme Guardianship, Design, System Integration, Principal Designer, BIM, LDO and Engineering assurance, EIS and Authorisation

Key Stakeholders in Programme Integrator

- Route Operations
- SCO
- National Grid
- Local Authority planning
- TOC's/FOC's
- Utility Companies

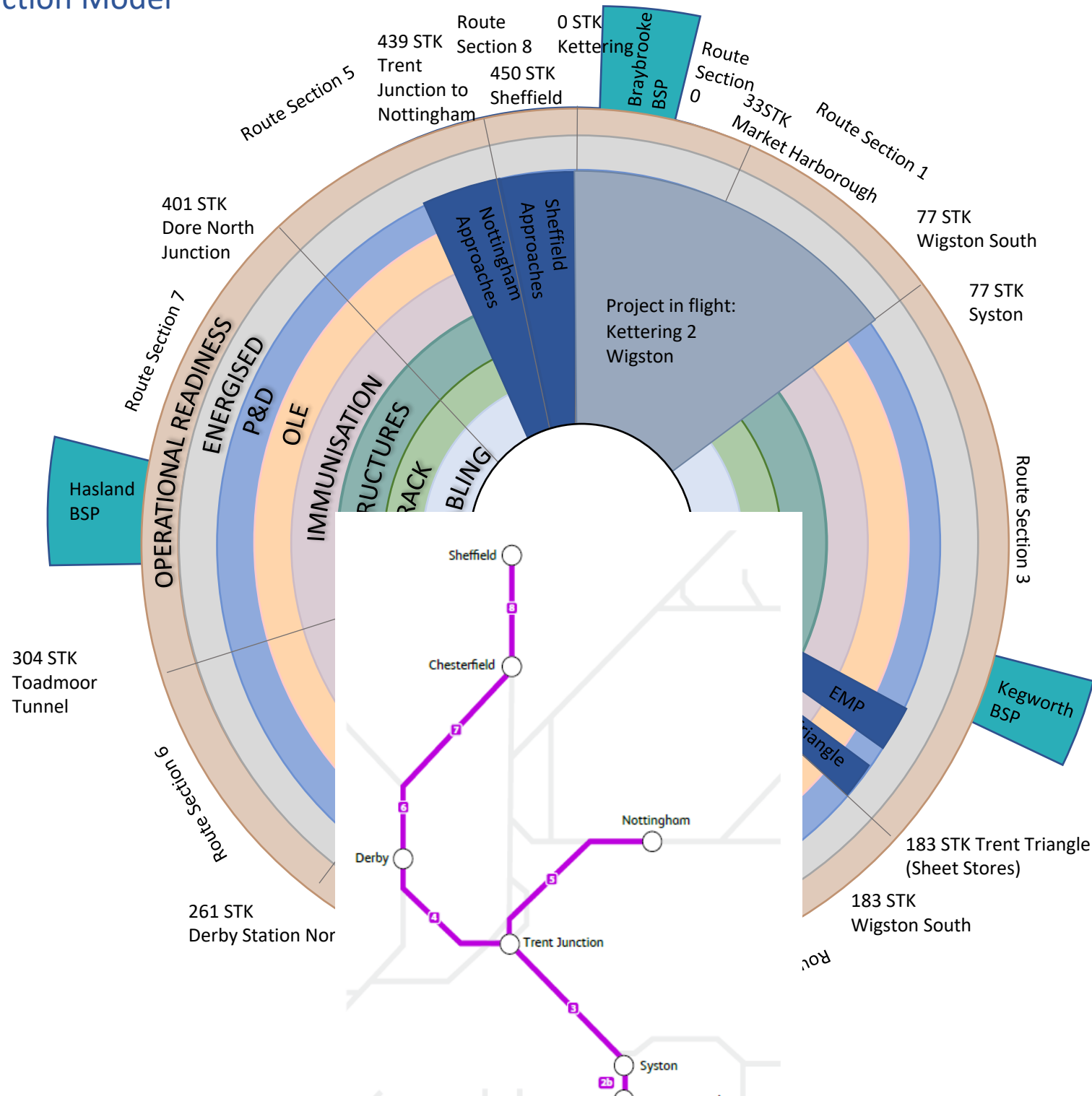
Operational Readiness

EIS, Authorisation implementation, operational resilience, maintenance readiness and handover

ENABLING WORKS

- Design
- Site compounds
- RRAPs/access points
- Site investigations
- Fencing
- CMS
- Piling

Enabled via Direct Delivery



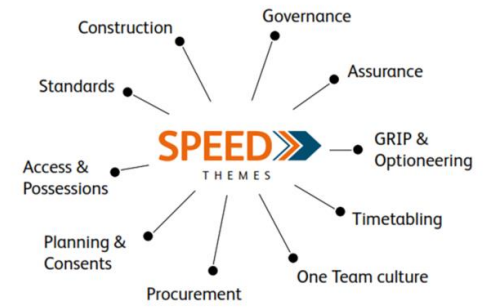
Midland Mainline Electrification

153km 421STK

- K2W (KO1A & RS1) – Kettering to Wigston
- RS2 – Wigston South to Syston
- RS3 – Syston to Trent
- RS4 – Sheet Stores to Chaddesden Sidings
- RS5 – Trent Sidings to Nottingham
- RS6 – Chaddesden Sidings to Toadmoor Tunnel
- RS7 – Toadmoor Tunnel to London Road Bridge
- RS8 – London Road Bridge to Sheffield

Minimum Viable Product (MVP)

- Minimum 'viable' solution that meets the primary project outcomes at the lowest cost



What is MVP

- ✓ Focus on project outcomes
- ✓ Optimal version of product / service
- ✓ Viable to deliver
- ✓ Viable to operate and maintain: not always the lowest cost solution
- ✓ Refined from continual challenge
- ✓ Applies Validation & Verification
- ✓ Achieved through questioning & challenging

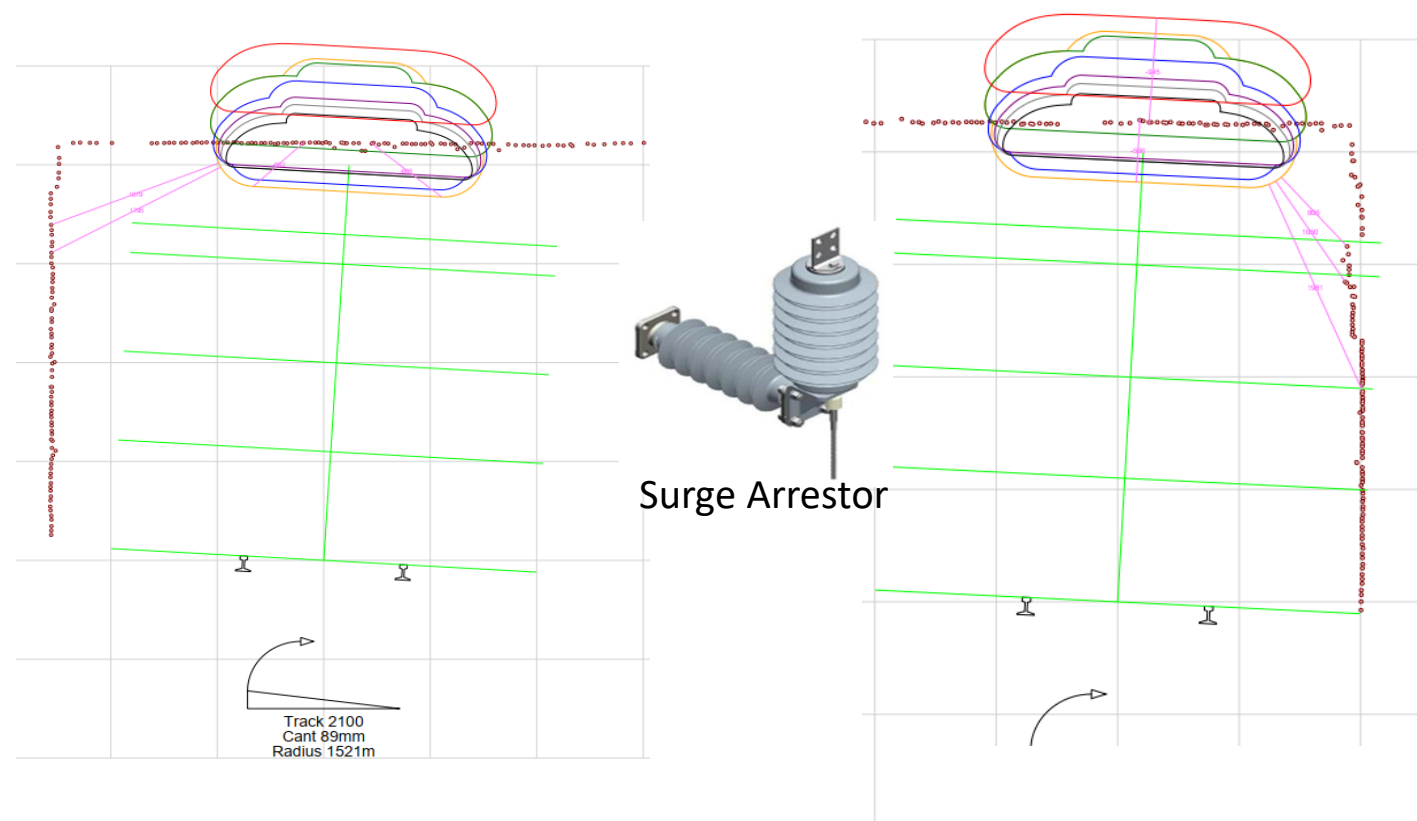
What MVP is not

- ❖ The minimum cheapest product
- ❖ About cutting scope
- ❖ Ignoring whole life cost
- ❖ A process to replace requirements / remits / made design decision without formal change control

MVP Case Study – VCC MML Example

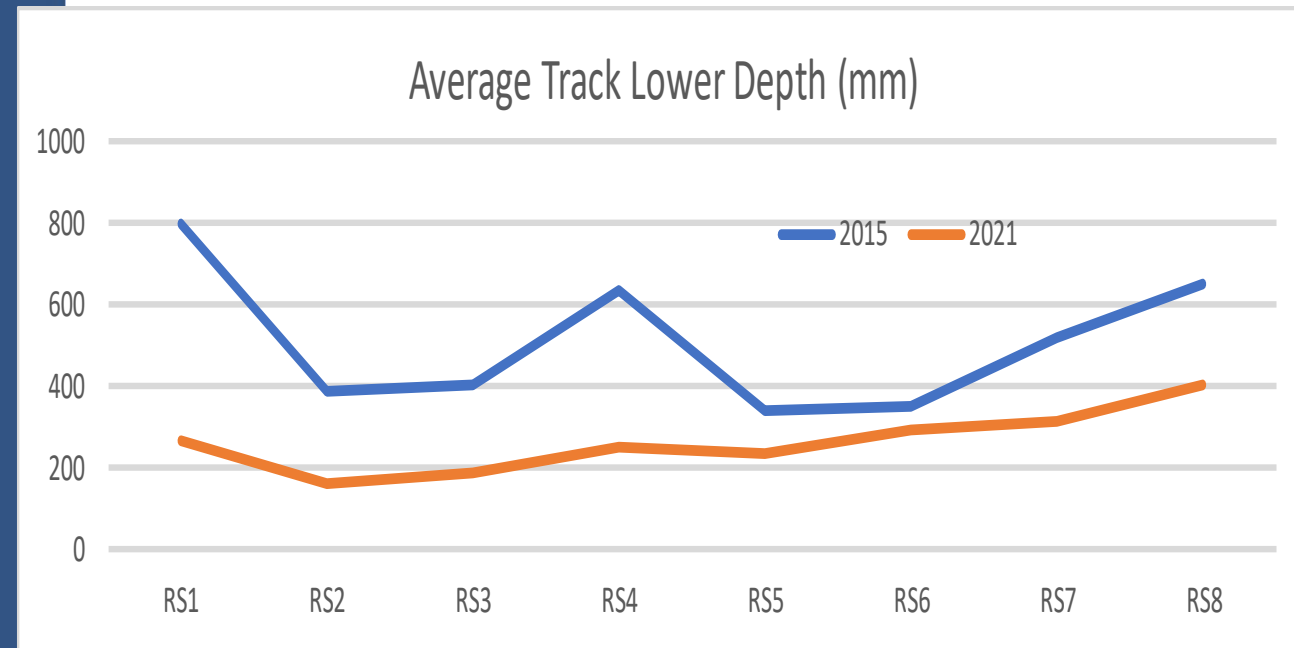
75% Track Lower spec reduction through VCC

1	SPC3	28D	83.1441	Main Street Bridge	flat deck road bridge	800mm track lower	track lower estimated 200mm in conjunction with VCC	track lower relatively straightforward and significantly cheaper than recon
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MVP Case Study – VCC MML Example

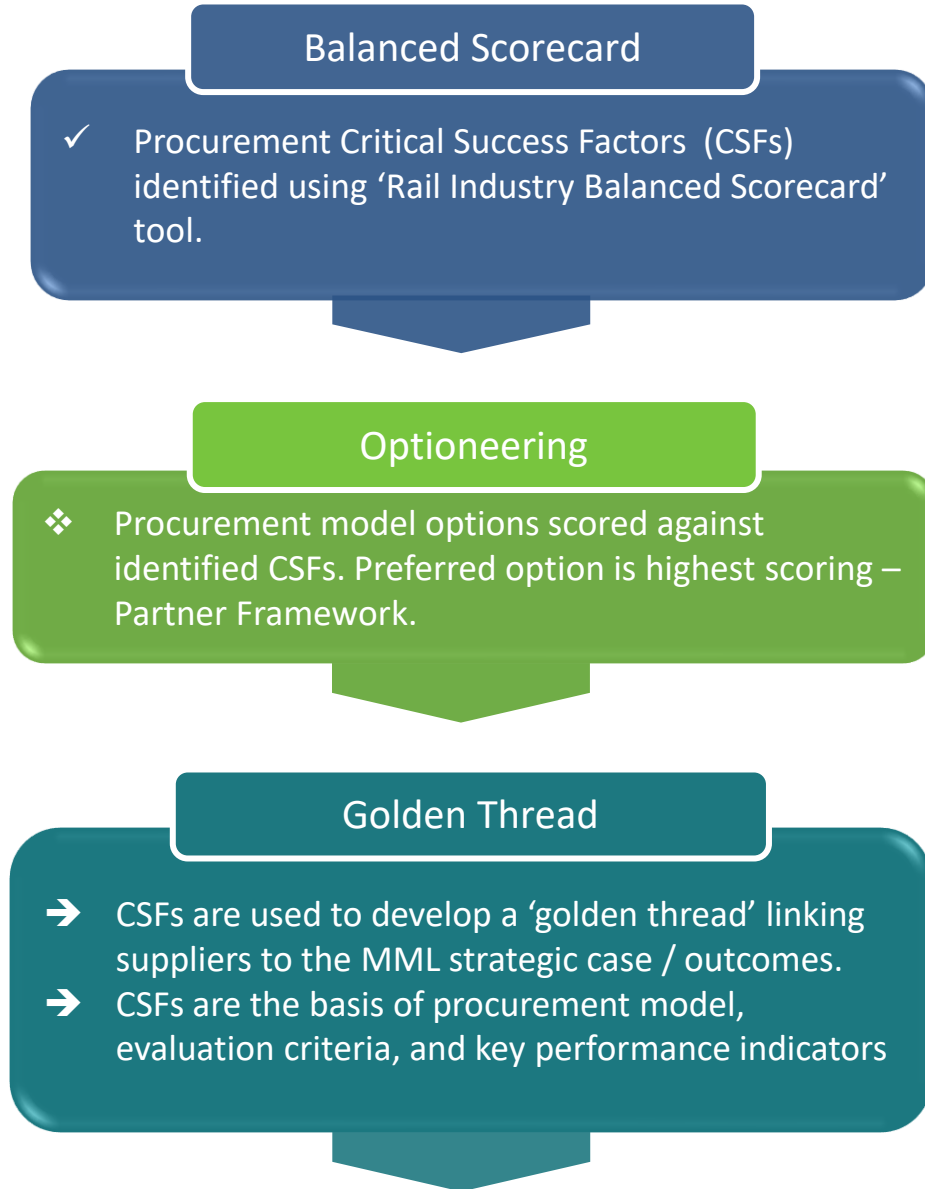
- ✓ Aggressive approach to minimisation of route clearance costs
- ✓ Recognition application of some techniques has not yet been fully developed
- ✓ Use of Voltage Controlled Clearances (VCC) as a standard part of the route clearance toolkit
- ✓ VCC measures have been recommended for 53 bridges on MML, reducing the magnitude of track lowers and minimising the quantity and spec of structural interventions
- ✓ Use of VCC in tunnels to reduce number of track lower interventions



Contracting Strategy Partnership Framework

David McBride, Head of Commercial Management – CD Eastern

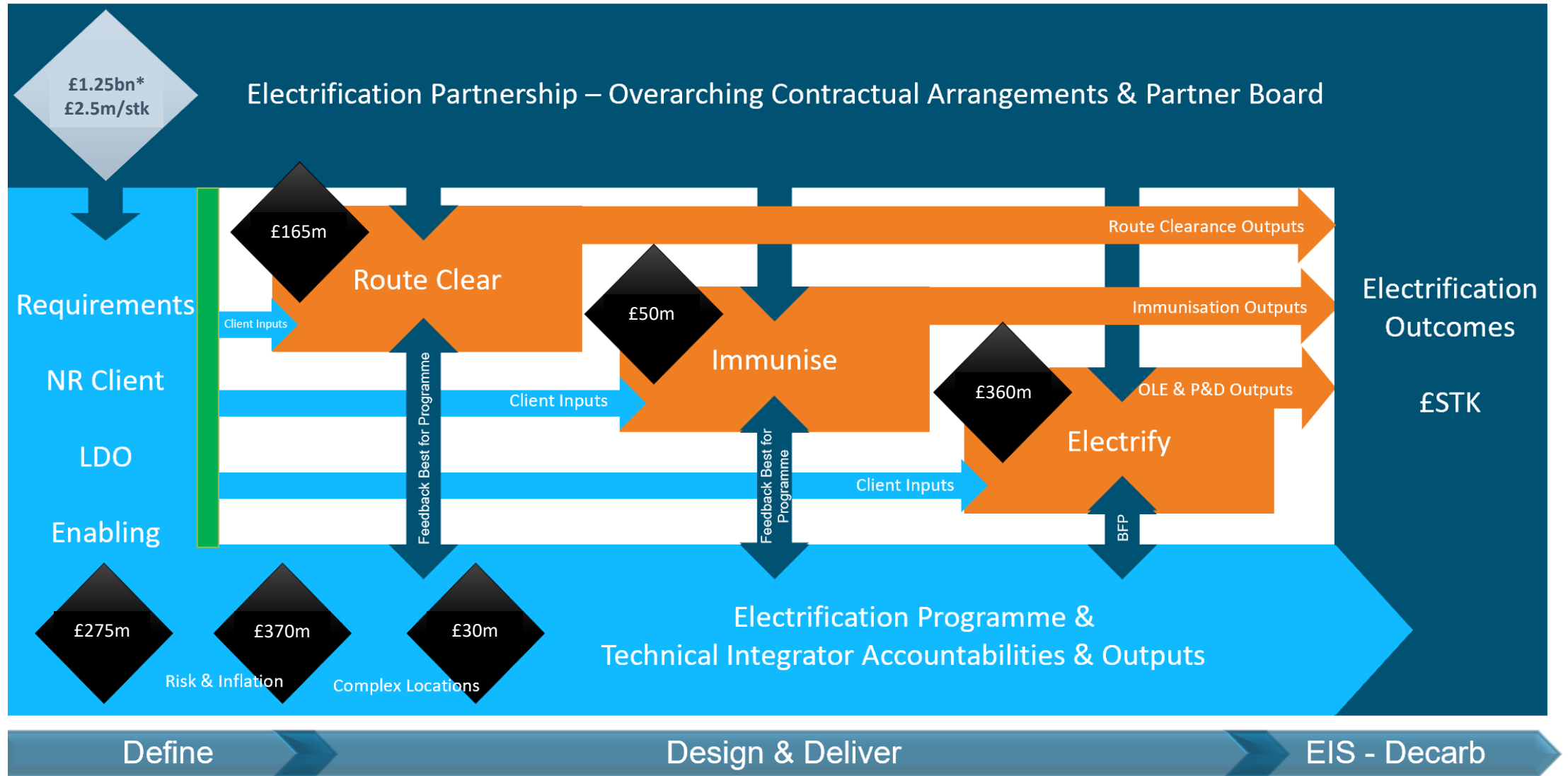
Procurement Strategy Approach



MML Procurement Balanced Scorecard

Criticality	Critical Success Factor	Pass/Fail
High	Health & Safety	Pass/Fail
	Cost Management	
	On Time Delivery	
	Supply Chain Accessibility	
	Output / Outcome Quality	
Medium	Production / Delivery / Construction Process	
	Workforce Skills	
	Supply Chain Management	
	Energy efficiency / climate change impact	
	Life-cycle Costs	
	Legacy Benefits	
	Customer Experience / Disruption	
	Employment & Workforce Engagement	
Resource & Waste Management		
Low	Information Security & Data Protection	Pass / Fail
	Modern slavery	Pass /Fail
	Supplier Organisational Learning & Continuous Improvement	
	Community Benefits	

Partnership Contract Environment Visual with Values



* Less £132m for Route Section 1, which has already been procured.

Procurement Strategy



Key Features:

- Framework Agreement
- 5 years + up to 5 year duration
- Compliance with Utilities Contracts Regulations (UCR) 2016
- Negotiated procedure: Pre-Qualification Questionnaire (PQQ) / Invitation to Negotiate (ITN)
- 4 discreet lots
- 2-4 suppliers on each lot
- Published through BravoNR
- Work package call-off contracts

Contract Strategy

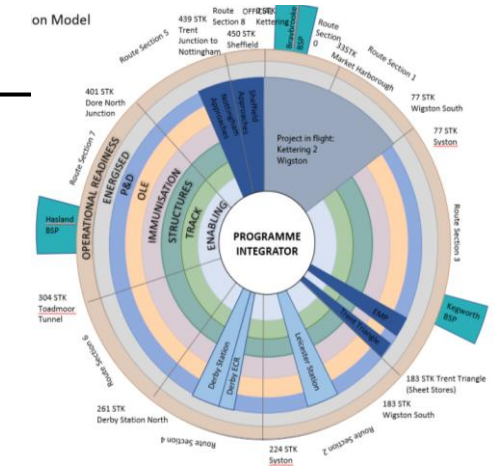
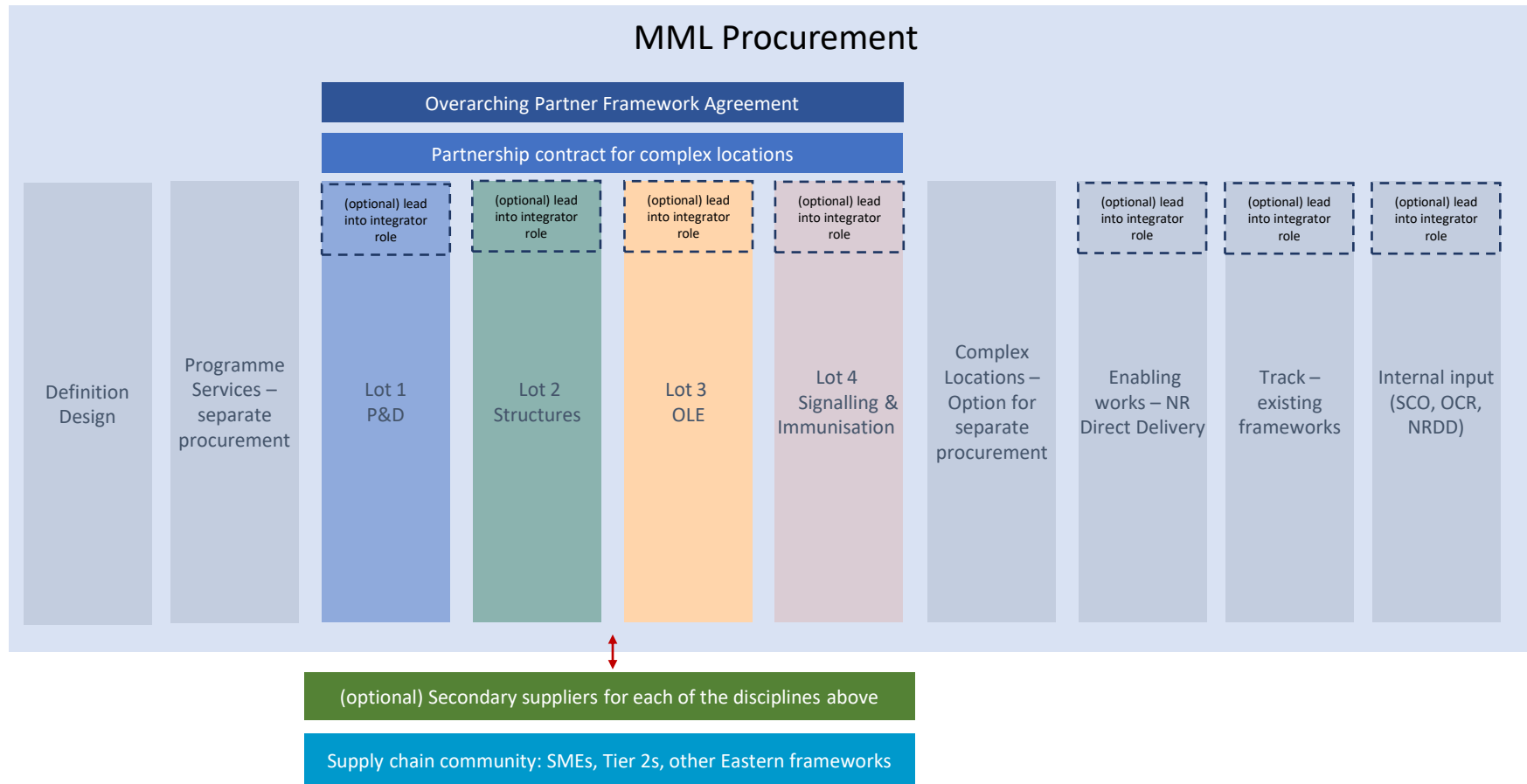
- NEC4 Framework Agreement
- Call-offs based on NEC4 ECC suite of contracts
- All NEC4 ECC main payment and secondary options included for flexibility
- Suitably incentivised to innovate and outperform both at framework lot and call-off contract level
- Governance / Partnership Framework Board



Partner Framework

David McBride, Head of Commercial Management – CD Eastern

Proposed MML Electrification Procurement Model - Partner Framework



- ✓ 'best for programme' principle
- ✓ Partner board for coordination and optimisation
- ✓ Out of lot award for resilience
- ✓ Secondary Suppliers / Reserves for contingency
- ✓ Allowance for complex locations

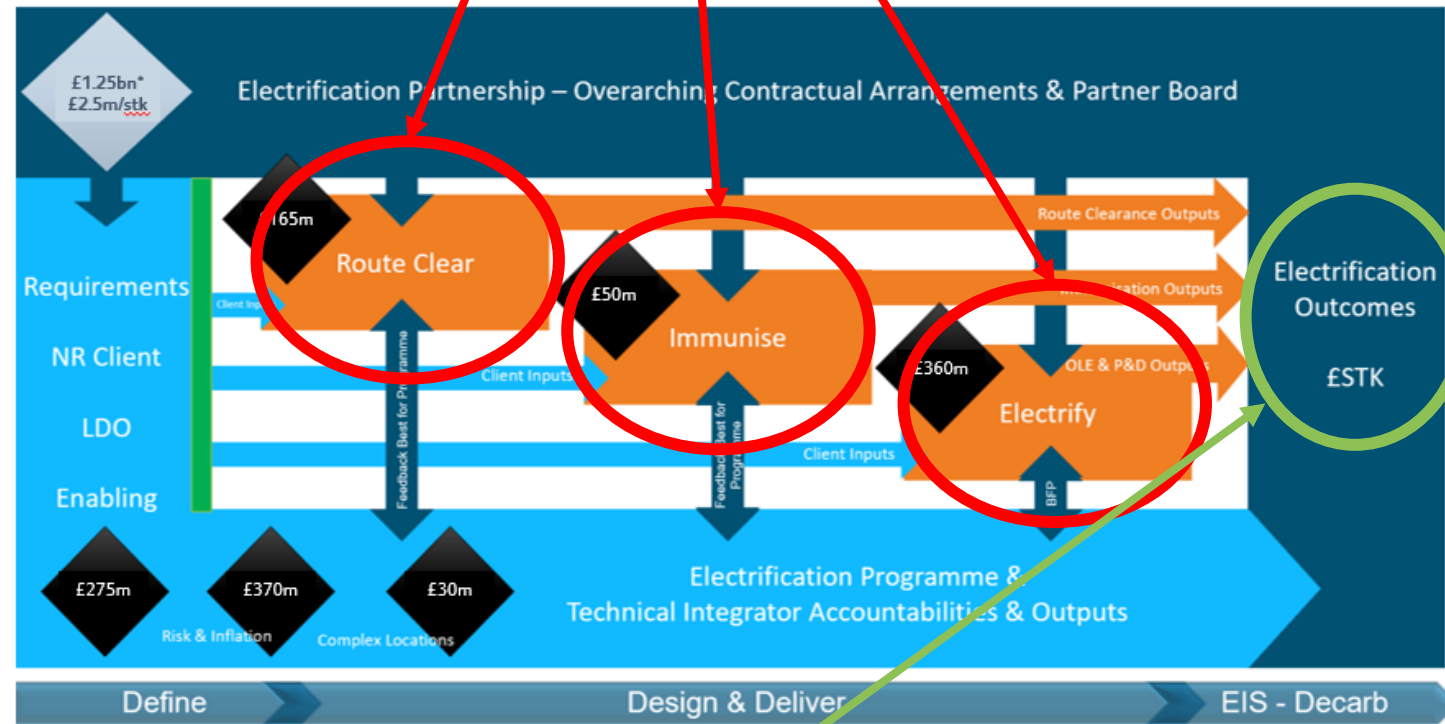
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Incentivisation

David McBride, Head of Commercial Management – CD Eastern

Incentive Principles

Level 1 - Individual Performance Outputs within individual lots = more work & business continuity



Simple incentivisation

- ✓ Performance determines future work allocation and access to further gain share (no “bidding” for work)

Level 1 – Individual Performance Outputs

- ❖ Clear targets for each call off contract within lot

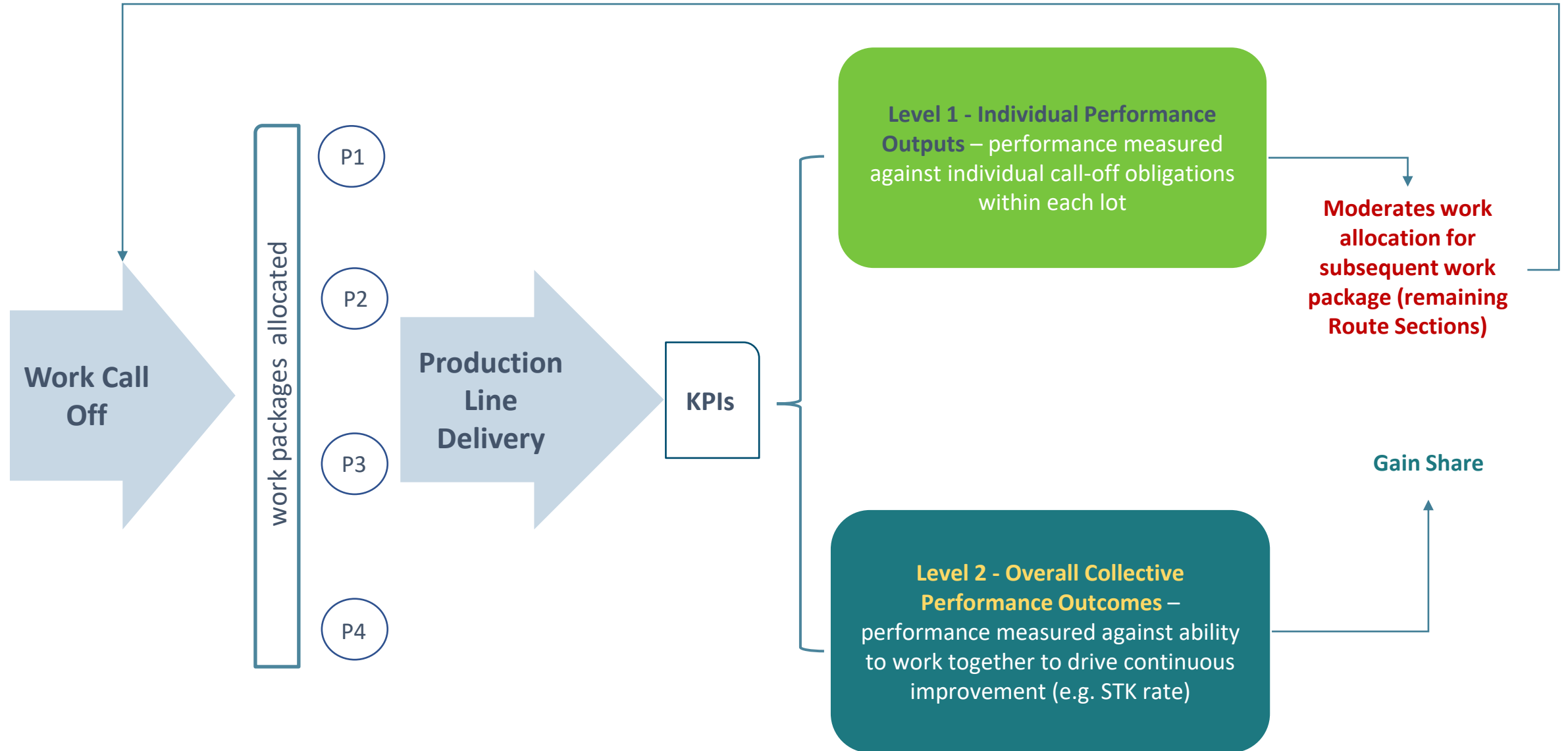
Level 2 – Collective Performance Outcomes

- ➔ Targets to work together within each lot to drive increased performance for programme

Level 2 - Incentives by Programme
Overall Collective Performance = Gain share

* Less £132m for Route Section 1, which has already been procured.

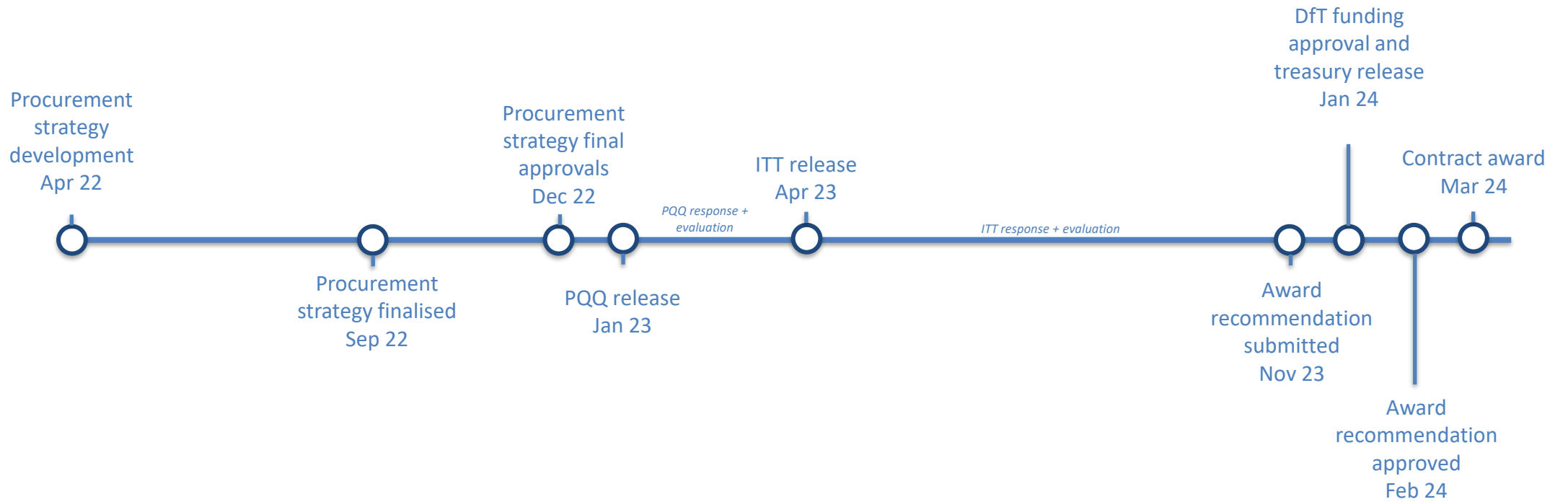
Incentivisation Model



Procurement Plan

David McBride, Head of Commercial Management – CD Eastern

Indicative Procurement Timescales



Market Sounding

David McBride, Head of Commercial Management – CD Eastern

Market Sounding Questionnaire

Test market appetite and canvas views of the supply chain on the key principles of the MML Electrification Sourcing Strategy:

- 1 Delivery Model 2 Procurement Model 3 Commercial Model 4 Contract Strategy

- Issued via email using MS Forms within a week of this event.
- Deadline for the MSQ will be circa 3 weeks following release (17:00, 8th July).
- Feedback to be analysed by project team to assist development.
- Further market sounding may be held if needed.



Q&A Open Session

End

**Thank you very much for your
attendance here today**

Appendices

