

Future Highways Research Group

FHRG Waypoint Meeting: Q4, 2023

Virtual Meeting: MS Teams

ADEPT / Proving Research Partnership



Decision Equipped.

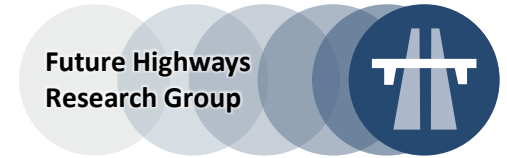
proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

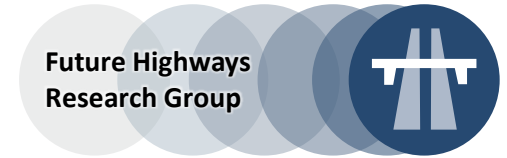
Agenda



- **Welcome, Introductions and ADEPT Update (Hannah Bartram, CEO, ADEPT)**
- **Local Government Headlines (Paul Marinko, Deputy Editor, Municipal Journal)**
- **FHRG Activities Update (Andy Perrin/Simon Wilson, Proving)**
 - Procurement survey update.
 - VFM framework for projects and programmes.
 - CCAS update.
 - CCAS Guidance document now published
 - Carbon Footprint assessments – next steps
- **Future Research Programme (2024 / 2025)**
 - Services Optimisation Using AI & New Technologies?
 - Doughnut Economic Modelling: Identifying Real World Benefits?
 - Future Procurements & Operating Models: Drivers for Change?
 - Members' Suggestions

Agenda

Continued...



- **FHRG Members Open Discussion**
 - Critical current challenges.
 - Sharing innovations and best practice.
- **Robotic Infrastructure Inspections (Jack Cornes, Hausbots)**
 - Using drones to inspect Infrastructure.
- **Comfort Break**

- **Social Value**

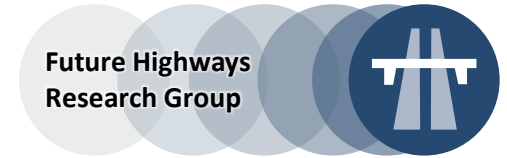
- Building the Foundations for Social Impact: Structure and Collaboration
 - (Paul Wheadon, Surrey CC & David Short, Kier)
- Driving Social Value through Public-Private Partnerships
 - (Jack Wiltshire, Dorset CC & Ryan Murphy, Hanson)
- Setting the Scene for Social Value Success
 - (Rachael Atkin, Colas)

- **Open Forum**

- How do we embed social value within our operations in a way that demonstrates the positive impact of initiatives delivered on value for money?
- What role can the FHRG play to support members in delivering social value and measuring the impact?
- Do members have sufficient support and guidance from other sources?

Agenda

Continued...



- **Introduction to Doughnut Economics (Simon Wilson, Proving)**
 - Planetary boundaries.
 - Social imperatives and social value.
 - Environmental considerations (biodiversity net gains/carbon reduction).
- **Date of next meeting and AOB**
- **Close**



Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

Welcome & ADEPT News

Hannah Bartram



Decision Equipped.

proving

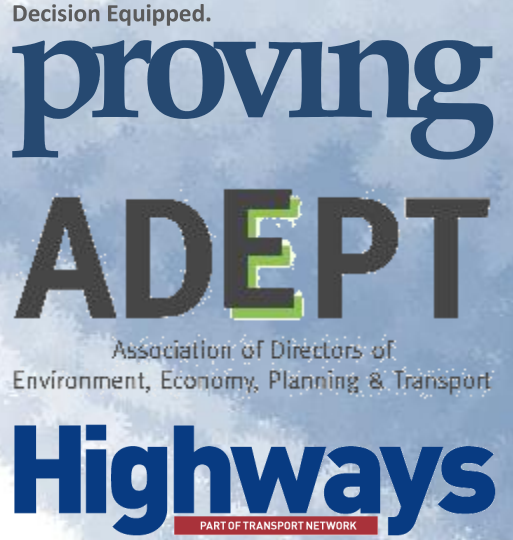
ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

Sector News: Municipal Journal

Paul Marinko, Deputy Editor



Member Updates: Open Discussion

Future Highways Research Group



Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

Programme Updates

Future Highways Research Group



Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

Procurement Survey Update

Future Highways Research Group



Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

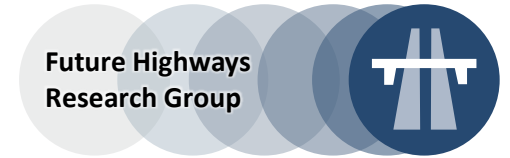
Highways
PART OF TRANSPORT NETWORK

Value for Money Framework: Programmes & Projects

Future Highways Research Group

Value for Money Toolkit for Framework Projects

Purpose



The purpose of the Value for Money (VfM) Toolkit for Framework Projects is to help drive consistency, rigour and continuous improvement in the way projects are undertaken, by applying a methodology that identifies best practice and facilitates simple value for money benchmarking across projects and programmes.

The VfM Toolkit will enable local highways authorities to measure and evaluate the VfM delivered by individual projects and, over time, benchmark different projects across and between frameworks to identify those that delivered the best VfM, such that the successful traits of those projects can be applied to other projects going forward.

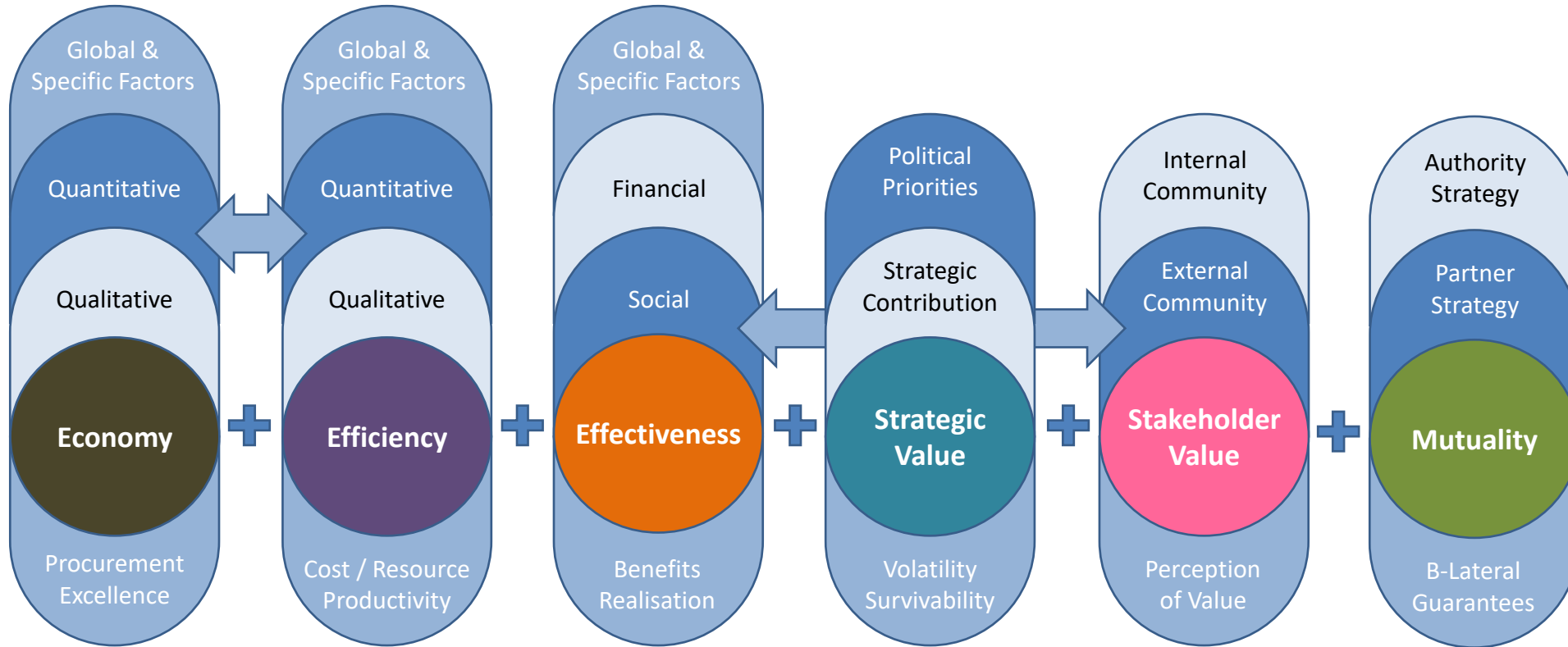
VfM Toolkit for Framework Projects

Principles and Approach



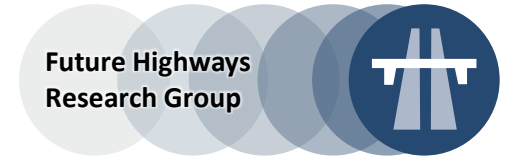
- **The core principles applied in developing the VfM methodology were that it must be:**
 - A process that adds value to all stakeholders.
 - Including both commissioners and suppliers.
 - Wieldy and proportionate.
 - Able to be used at all stages of a project.
 - Application following ECI will inform any improvements required prior to construction.
 - Easily applicable for use across all frameworks.
 - To facilitate the widest possible application of benchmarking and dissemination of best practice.
- **Key aspects of the approach:**
 - Sponsored by Taylor Woodrow.
 - As part of the quality commitment supporting TW's tender submission for inclusion on the MHA+ MSF4 framework.
 - Utilising a VfM methodology widely recognised across the highways sector.
 - The Future Highways Research Group and Value for Money Benchmarking Club methodology.
 - Oversight, subject matter expertise and review provided by a working group of commissioners and suppliers drawn from the MHA+ membership.

VfM Toolkit for Framework Projects Methodology



The methodology adopted was the same one that is recognised and utilised by the 40 members of the Future Highways Research Group and Value for Money Benchmarking Club.

Factor set - Economy



ID	Dimension	Factor Name	Weighting
100	Economy	Client Staff Costs	
101	Economy	Client Management and Supervisory Team	80
102	Economy	Designer Staff Costs	
103	Economy	Designer Management Team	80
104	Economy	Designer Staff	100
105	Economy	Contractor Staff Costs	
106	Economy	Contractor Management Team	80
107	Economy	Contractor Technical Staff	100
108	Economy	Contractor Operatives	100
109	Economy	Supply Chain	100
110	Economy	Cost of Works	
111	Economy	Plant, Equipment and Materials	80
112	Economy	Other Costs	
113	Economy	Fees and Overheads	60
114	Economy	Cost of Risk	
115	Economy	Early Warnings (Quality/Accuracy/Timeliness)	80
116	Economy	Cost of Risk	80
117	Economy	Compensation Events (Quality/Accuracy/Timeliness)	80
118	Economy	Revenue Generation and Savings	
119	Economy	Funding Streams Identified and Secured	100
120	Economy	Savings Secured through Value Engineering including ECI Innovation	100

Factor weightings are indicative and can be adjusted for each specific project.

Factors that are not relevant to a specific project are simply weighted to zero.

Factor set - Efficiency

ID	Dimension	Factor Name	Weighting
200	Efficiency	Client Staff Productivity	
201	Efficiency	Client Management and Supervisory Team	100
202	Efficiency	Designer Staff Productivity	
203	Efficiency	Designer Management Team	100
204	Efficiency	Designer Staff Costs	100
205	Efficiency	Contractor Staff Productivity	
206	Efficiency	Contractor Management Team	100
207	Efficiency	Contractor Technical Staff	100
208	Efficiency	Contractor Operatives	100
209	Efficiency	Supply Chain	100
210	Efficiency	Efficiency Performance Management	
211	Efficiency	Budget and Estimating Process	100
212	Efficiency	Early Contractor Involvement (ECI)	100
213	Efficiency	Equipment and Materials Deployed	100
214	Efficiency	Timeliness of Site Investigation	100
215	Efficiency	Timeliness of Land Acquisition	100
216	Efficiency	Innovation Identification Process	100
217	Efficiency	Adequate Contract Management Software	100
218	Efficiency	Timeliness of Project Closure	100
219	Efficiency	Post Project Review	100
220	Efficiency	Project Management	100
221	Efficiency	Stakeholder Management	100

Factor weightings are indicative and can be adjusted for each specific project.

Factors that are not relevant to a specific project are simply weighted to zero.

Factor set - Effectiveness

ID	Dimension	Factor Name	Weighting
300	Effectiveness	Quality and Timeliness	
301	Effectiveness	Accuracy and Timeliness of Feasibility Study	100
302	Effectiveness	Quality of Final Design	100
303	Effectiveness	Accuracy and Relevance of Stage Two Construction Scope	100
304	Effectiveness	Quality of Services Delivered	100
305	Effectiveness	Quality of Finished Product	100
306	Effectiveness	Completed within Agreed Timescales	100
307	Effectiveness	Impact of Innovation on Quality of Finished Product	100
308	Effectiveness	Digital Twin	100
309	Effectiveness	Stakeholder Experience and Satisfaction	
310	Effectiveness	Overall Customer Satisfaction	100
311	Effectiveness	Safety and Social Value during Project	
312	Effectiveness	Safety	80
313	Effectiveness	Sustainability	80
314	Effectiveness	Social Benefits	80

Factor weightings are indicative and can be adjusted for each specific project.

Factors that are not relevant to a specific project are simply weighted to zero.

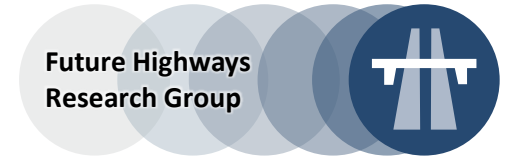
Factor set – Strategic Value

ID	Dimension	Factor Name	Weighting
400	Strategic Value	Ensure the safety and wellbeing of all stakeholders.	100
401	Strategic Value	Support initiatives that deliver carbon neutral services, schemes and incentives.	100
402	Strategic Value	Optimise and improve network access and performance for all users, supporting active travel under all conditions.	100
403	Strategic Value	Enhance the local economy through network expansion and improvement to meet the growth agenda.	100
404	Strategic Value	Sustain a financially resilient service that delivers best value with the resources available.	100
405	Strategic Value	Engage effectively to understand and meet the needs of our citizens and communities.	100
406	Strategic Value	Embrace best practice, innovations and new technologies enabling the service to continuously evolve.	100
407	Strategic Value	Develop and sustain collaborative partnerships that deliver the objectives of all partners.	100
408	Strategic Value	Attract, develop, empower and retain the best people capable of driving a dynamic and agile service.	100
409	Strategic Value	Develop a service that is understanding of social value and actively participates in the delivery of the benefits it provides.	100

The template is pre-populated with the strategic objectives adopted by the majority of FHRG members.

Where relevant, these should be overwritten for specific projects with the strategic objectives of the commissioning body.

Factor set – Stakeholder Value



ID	Dimension	Factor Name	Weighting
500	Stakeholder Value	MHA	
501	Stakeholder Value	Framework Community Board	100
502	Stakeholder Value	Client	
503	Stakeholder Value	Portfolio Holder	100
504	Stakeholder Value	Local Elected Member	100
505	Stakeholder Value	Project Sponsor	100
506	Stakeholder Value	Other	
507	Stakeholder Value	Third Party Funders	100
508	Stakeholder Value	Affected Local Communities	100
509	Stakeholder Value	Affected Local Businesses	100
510	Stakeholder Value	General Public	100
511	Stakeholder Value	Land Owner	80
512	Stakeholder Value	Delivery Chain Partners	80
513	Stakeholder Value	Utility Organisations	80

The template is pre-populated with a typical set of key stakeholders.

For specific projects, these can be amended, added to or deleted.

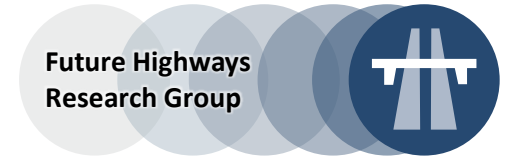
Factor set – Mutuality

ID	Dimension	Factor Name	Weighting
600	Mutuality	Joint Objectives	100
601	Mutuality	Joint Governance Structure	80
602	Mutuality	Behaviours and Trust Indicators	100
603	Mutuality	Joint Executive Sponsorship	80
604	Mutuality	Operational Leadership	80
605	Mutuality	Joint Communications Strategy	80
606	Mutuality	Joint Knowledge Management Strategy	80
607	Mutuality	Joint Risk Management Strategy	80
608	Mutuality	Joint Issue Resolution Process	80
609	Mutuality	Value Creation and Continuous Improvement	80
610	Mutuality	Measurement of Delivery and Performance	80
611	Mutuality	Joint Handover Strategy	80

The factor set for Mutuality mirrors the requirements of ISO4001 – *Collaborative business relationship management systems.*

VfM Toolkit for Framework Projects

Scoring Guide



115 Cost of Risk	
Early Warnings (Quality/Accuracy/Timeliness)	
Description	An assessment of whether Early Warnings raised were appropriate, accurate and timely.
Weighting	80
Scoring	
Excellent	<p>Early Warnings (EWs) raised were appropriate, accurate and timely throughout the project. The contractor engaged effectively with the supply chain to ensure this.</p> <p>All parties (client, designer, contractor) had effective processes in place to ensure all staff were empowered and had access to the processes to raise EWs.</p> <p>There was effective use of the contract management system to communicate EWs using the contract change management workflows.</p> <p>The actual volume and value of EWs raised was significantly less than would ordinarily be expected given the size, nature, value and complexity of the project as delivered.</p>
Good	<p>Early Warnings (EWs) raised were appropriate, accurate and timely throughout the project. The contractor engaged effectively with the supply chain to ensure this.</p> <p>All parties (client, designer, contractor) had effective processes in place to ensure all staff were empowered and had access to the processes to raise EWs.</p> <p>There was effective use of the contract management system to communicate EWs using the contract change management workflows.</p>
Satisfactory	<p>Early Warnings (EWs) raised were appropriate, accurate and timely throughout the project. The contractor engaged effectively with the supply chain to ensure this.</p> <p>All parties (client, designer, contractor) had effective processes in place to ensure all staff were empowered and had access to the processes to raise EWs.</p>
Requires Improvement	<p>Most Early Warnings (EWs) raised were appropriate, accurate and timely throughout the project. On most occasions, the contractor engaged effectively with the supply chain to ensure this.</p> <p>All parties (client, designer, contractor) had processes in place to ensure all staff were empowered and had access to the processes to raise EWs, but these were not always effective in practice.</p>
Poor	<p>Many Early Warnings (EWs) raised were inappropriate, inaccurate and/or not timely throughout the project. The contractor did not engage effectively with the supply chain to address this.</p> <p>Some or all parties (client, designer, contractor) had inadequate processes in place to ensure all staff were empowered and had access to the processes to raise EWs, and/or the practices in place were mostly ineffective in practice.</p>

For each of the 77 factors, a detailed scoring guide describes the characteristics of a project performing at Excellent, Good, Satisfactory, Requires Improvement or Poor in terms of VfM.

VfM Toolkit for Framework Projects

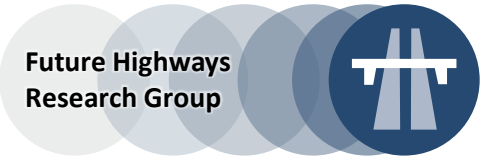
Approach to Scoring



- **VfM Stakeholder Scoring Workshop.**
 - Consolidated stakeholder scoring: client and supplier(s) in collaboration.
 - Based on the perceptions of stakeholders at the point of scoring.
 - Workshop attendees must collectively have a good knowledge of the project.
 - Option to include peer reviewers.
 - Scoring facilitated by Value Analyser, an excel based scoring tool (see next slide)
- **Detailed scoring guidelines and protocols are shared with all stakeholders prior to the Workshop**
- **Each factor is scored according to:**
 - **Performance** – Stakeholders' views as to the current performance.
 - **Confidence** – Stakeholders' confidence in their assessment of current performance.
 - **Opportunity** – Stakeholders' assessment of the opportunity for improvement.

Value Analyser™: Highways Services VfM Assessment

The Only Calibrated VfM Toolkit for Highways Services



VfM Dimensions & Factors

VfM Factor Weightings (MACE)

Factor Score (Based On Scoring Guidance)

Factor Confidence (Based On Evidence)

Opportunity To Improve?

Auto-Calculated Improvement Priority

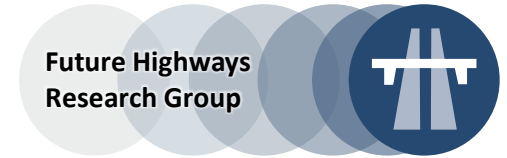
Externally sourced data and surveys.

Factor Scores

Dimension	Factor Name	Weighting	Score (Text)	Score	Confidence (Text)	Confidence	Opportunity (Text)	Opportunity	Priority	Factor Total	Dimension Total	Assessment Total
Economy	Commissioned / Outsourced Service Contract	100	Satisfactory [50]	50	Medium-High [75]	75	Probably [75]	75	11.7	16.5	2.51	67
Economy	Management / Professional Staff	100	Satisfactory [50]	50	Medium [50]	50	Probably [75]	75	14.1	25.0	1.69	81
Economy	Front Line Staff	100	Satisfactory [50]	50	Medium-High [75]	75	Probably [75]	75	20.3	18.8	1.27	90
Economy	Sub-contractors	100	Requires Improvement [25]	25	Medium-High [75]	75	Definitely [100]	100	1.6	37.5	0.51	12
Economy	Professional Services Including IT/IS	20	Satisfactory [50]	50	Medium-High [75]	75	Possibly [50]	50	12.2	18.8	0.76	18
Economy	Other Costs (Where Applicable)	20	Requires Improvement [25]	25	Medium-High [75]	75	Definitely [100]	100	0.3	56.3	0.38	0.09
Economy	Transactional / Internally Contracted Costs (Where Applicable)	10	Good [75]	75	Medium-High [75]	75	Probably Not [25]	25	12.2	18.8	1.01	0.24
Economy	Annual Retainers (Cost Justification & Cost Stability)	80	Requires Improvement [25]	25	Medium-High [75]	75	Probably [75]	75	3.9	16.5	1.53	0.61
Economy	Transactional Costs (Cost Analysis, Justification & Cost Stability)	100	Satisfactory [50]	50	Medium-High [75]	75	Probably Not [25]	25	14.1	25.0	1.69	81
Economy	Internal Costs	100	Satisfactory [50]	50	Medium [50]	50	Probably [75]	75	0.0	0.0	0.00	0.00
Economy	Management	100	Satisfactory [50]	50	Medium [50]	50	Probably [75]	75	6.1	18.8	0.76	18
Economy	Staff	20	Requires Improvement [25]	25	Medium-High [75]	75	Possibly [50]	50	0.9	25.0	0.34	0.08
Economy	Contract Cost Management	20	Satisfactory [50]	50	Medium [50]	50	Probably Not [25]	25	4.7	37.5	1.52	0.56
Economy	Professional / Casualty Services	60	Good [75]	75	Medium-High [75]	75	Probably Not [25]	25	1.6	56.3	2.28	0.55
Economy	IT / IS Services, Equipment & Software	40	Requires Improvement [25]	25	Medium-High [75]	75	Probably [75]	75	6.1	18.8	0.51	12
Economy	Materials & Consumables	20	Satisfactory [50]	50	Medium-High [75]	75	Possibly [50]	50	11.8	16.5	0.51	12
Economy	Vehicles / Equipment	20	Good [75]	75	Medium-High [75]	75	Probably Not [25]	25	12.2	18.8	0.76	0.18
Economy	Depots / Offices	40	Requires Improvement [25]	25	Medium-High [75]	75	Probably [75]	75	14.2	18.8	0.89	0.21
Economy	Other Operating Costs	20	Satisfactory [50]	50	Medium-High [75]	75	Probably [75]	75	12.2	18.8	1.01	0.24
Economy	Cost of Risk (Where Applicable)	80	Requires Improvement [25]	25	Medium-High [75]	75	Probably [75]	75	20.3	18.8	1.27	0.30
Economy	Cost of Compensation (Including CE's / Functional FTP Events)	80	Requires Improvement [25]	25	Medium-High [75]	75	Definitely [100]	100	12.5	37.5	2.03	0.49
Economy	Cost of Risk (Anticipated)	20	Requires Improvement [25]	25	Medium-High [75]	75	Definitely [100]	100	9.4	37.5	1.52	0.35
Economy	Cost of Risk (Emergent)	80	Requires Improvement [25]	25	Medium-High [75]	75	Probably [75]	75	11.7	16.5	2.51	0.67
Economy	Revenue Generation (Where Applicable)	100	Requires Improvement [25]	25	Medium-High [75]	75	Definitely [100]	100	12.5	37.5	2.03	0.49
Economy	Income / Services Trading	80	Satisfactory [50]	50	Medium-High [75]	75	Definitely [100]	100	9.4	37.5	1.52	0.35
Economy	Grant / Investment Winning	50	Good [75]	75	Medium [50]	50	Definitely [100]	100	11.7	16.5	2.51	0.67
Economy	Economy Improvement Plan (Savings Plan)	100	Satisfactory [50]	50	Medium-High [75]	75	Probably [75]	75	9.1	18.8	0.91	0.18
Efficiency	Delivery of Services Within Budget	80	Requires Improvement [25]	25	Medium-High [75]	75	Probably [75]	75	11.7	16.5	2.51	0.67
Efficiency	External Resource Efficiency (Commissioned / Outsourced Service Contract)	80	Requires Improvement [25]	25	Medium-High [75]	75	Probably [75]	75	9.1	18.8	0.91	0.18
Efficiency	Productivity of Management	80	Requires Improvement [25]	25	Medium-High [75]	75	Probably [75]	75	9.1	18.8	0.91	0.18

VfM Toolkit for Framework Projects

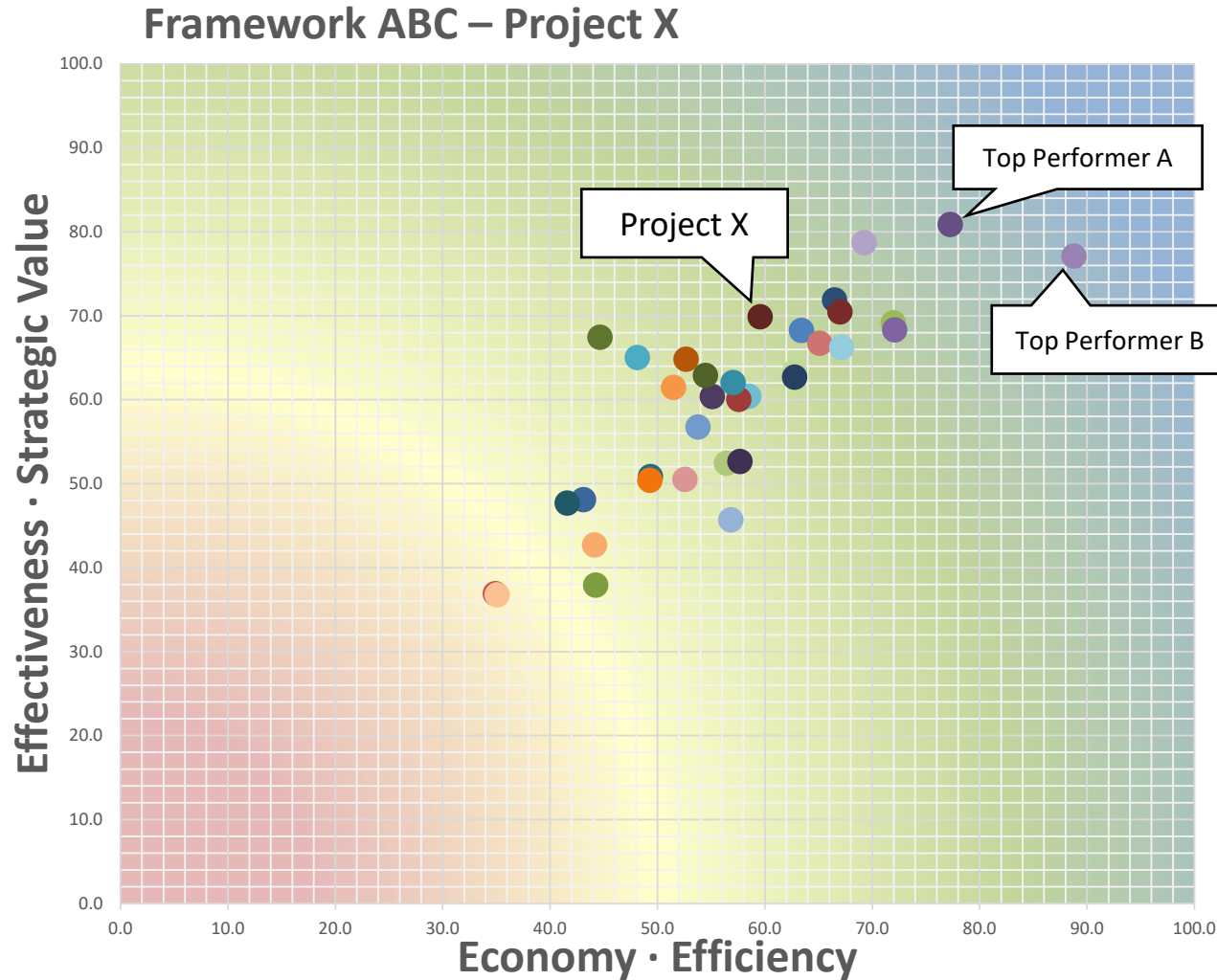
Outputs following Stakeholder Scoring Workshop



- **PowerPoint report setting out:**
 - **Narrative summary of overall VfM performance.**
 - With summaries by VfM dimension.
 - **Priorities for improvement.**
 - Value Analyser auto prioritises the areas for attention based on the actions that will deliver the greatest return in terms of improved VfM.
 - **Graphical illustration of current VfM performance.**
 - Including direction of travel where more than one assessment has been undertaken.
 - Also showing the improvement in VfM that could be achieved with just incremental improvement across all factors scoring Satisfactory, Requires Improvement or Poor.
 - **Graphical illustration of benchmarked VfM performance.**
 - Comparisons can be made to any projects both within and across different frameworks.
 - See next slide for illustrative example.

VfM Toolkit for Framework Projects

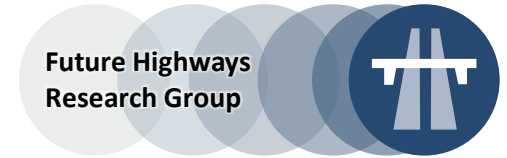
Illustrative Example of Benchmarking Capability



Value Analyser facilitates simple benchmarking of the VfM achieved by different projects both within and across different frameworks.

VfM Toolkit for Framework Projects

Next Steps



- **Soft launch – MHA Conference 20 Sept 23**

- We are confident we have a methodology and toolset that will add value for any framework project.

- **Pilots and testing**

- The methodology and toolset will be further tested and refined through a series of autumn pilots.
- As with all value for money factor sets, periodic review and refinement will continue indefinitely as the approach to planning and delivering framework projects evolves and further best practice emerges.

- **Further interest?**

- Please contact Andy Perrin at Proving Services – a.perrin@provingservices.co.uk



Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

Carbon Calculation & Accounting Standard

Simon Wilson

Carbon Calculation & Accounting Standard



Published!!!

Please send us feedback.



Decision Equipped.

proving

ADEPT

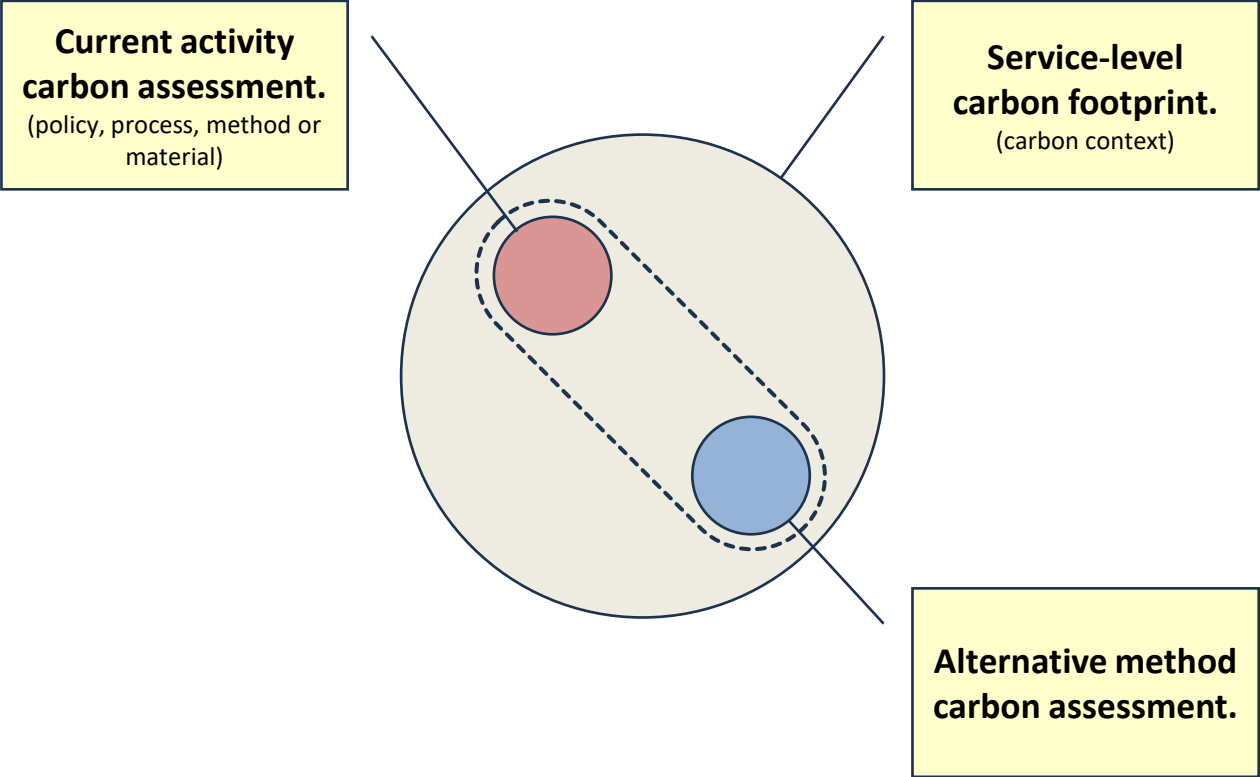
Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

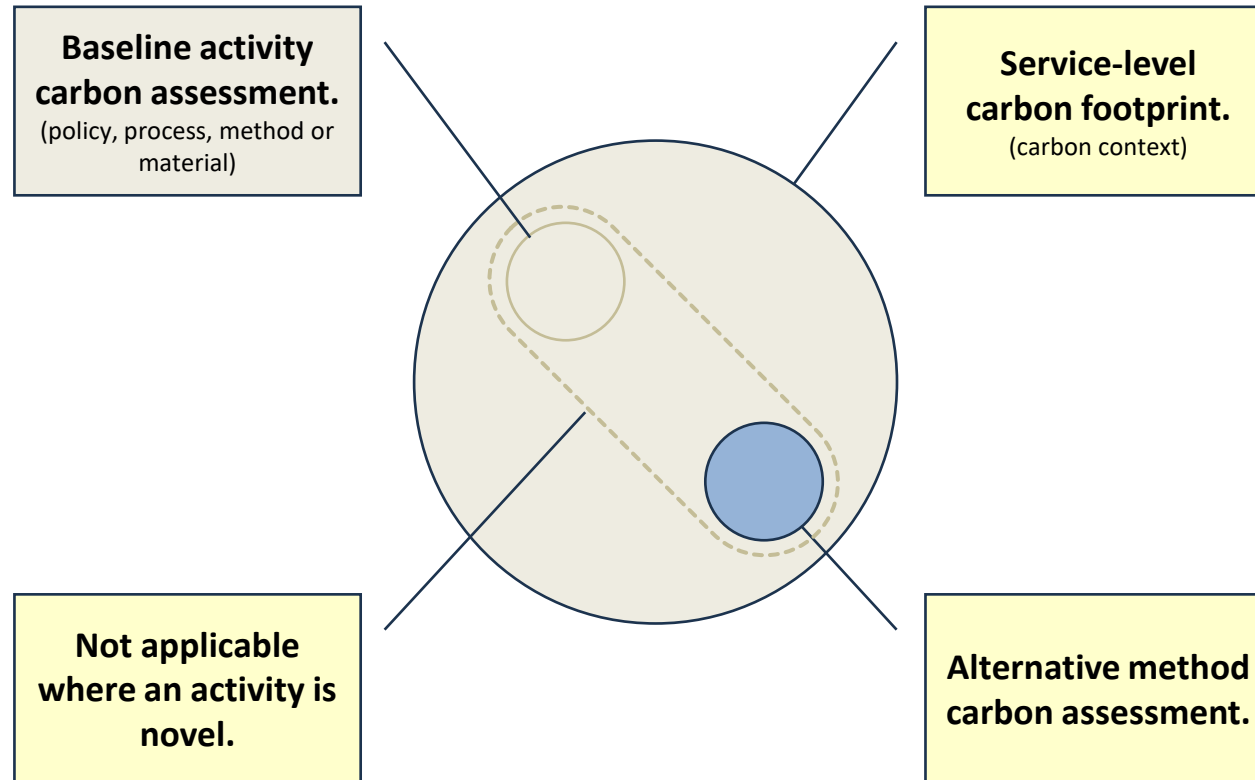
Full CCAS Toolkit & End-To-End Process

Future Highways Research Group

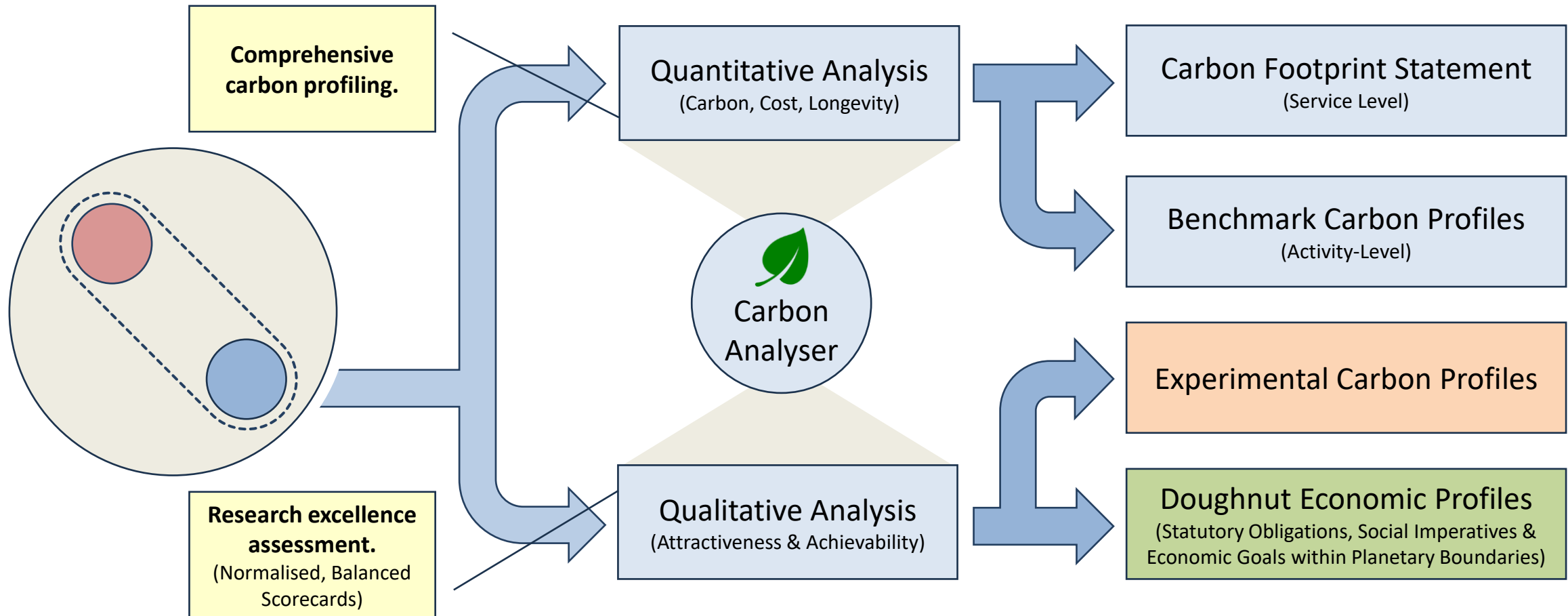
Carbon Assessments



Carbon Assessments

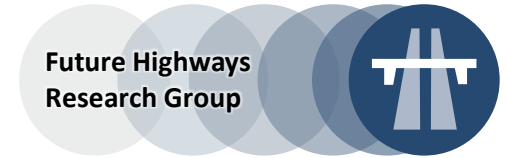


Carbon Assessments



Scorecards for DE and Innovations

Research Excellence Assurance Example



Attractiveness Analysis

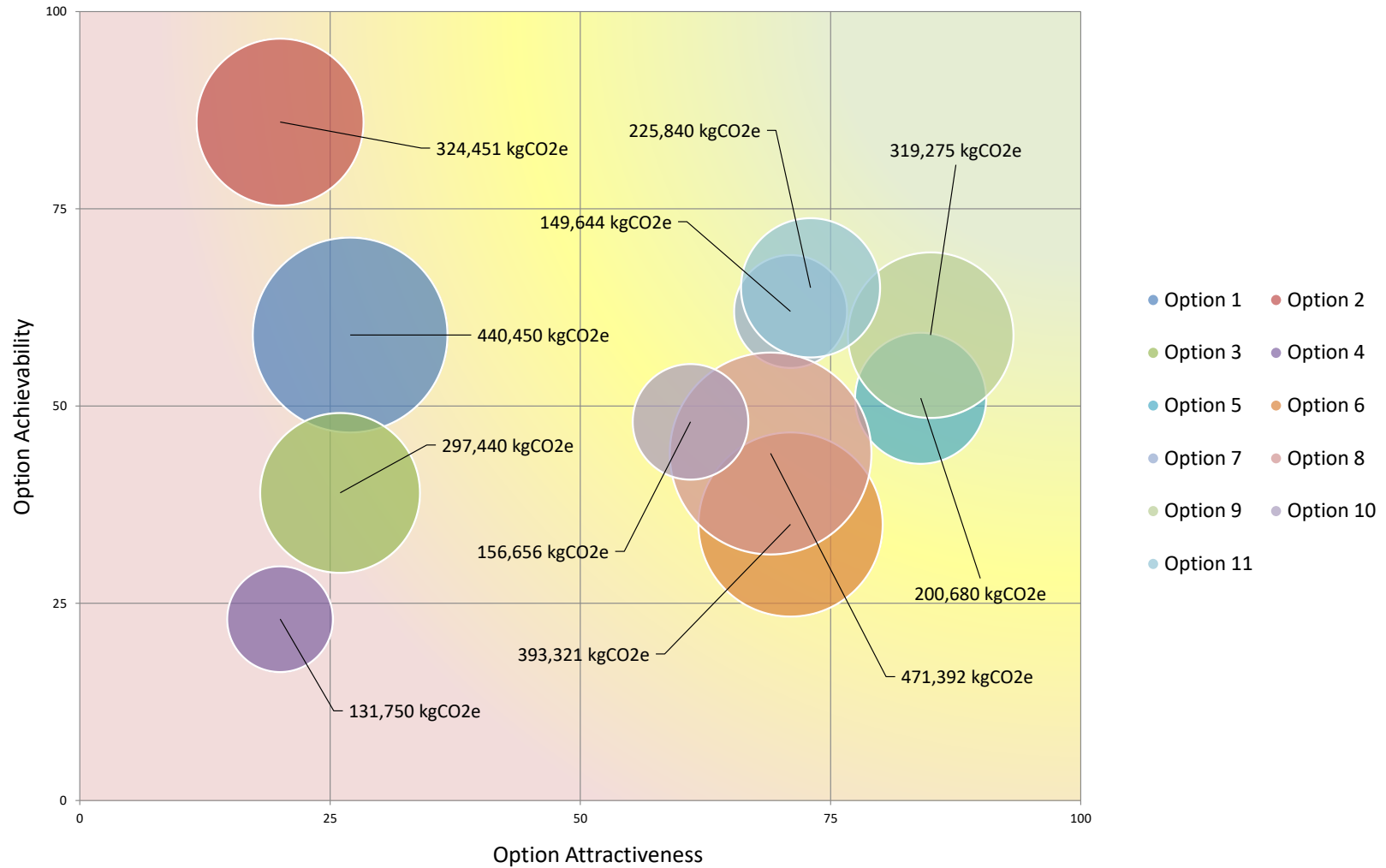
- Strategic Alignment & Contribution
- Whole Lifecycle Carbon Profile (Aligned With EN15978 Modules)
- Weighted Benefits & Dis-Benefits Analysis
 - Class #1 & #2 HM Treasury Benefits)
- Doughnut Economic Modelling
- Wider Sector Benefits
- Constraints Analysis (Costs, Timescales & Resources)
- Scalability & Flexibility
- Consistency & Coherence
- Providers & Partners (Readiness & Capacity)
- Stakeholder Support & Sponsorship

Achievability Analysis

- Experimental Variables & Validity Assurance
- Complexity Assessment (Inherent Risk)
- Affordability
- Resources Competence & Capacity
- Readiness Levels
 - Including TRL considerations
- Stakeholders' Clarity & Perception
- Governance & Accountability
- Alternatives Appraisals

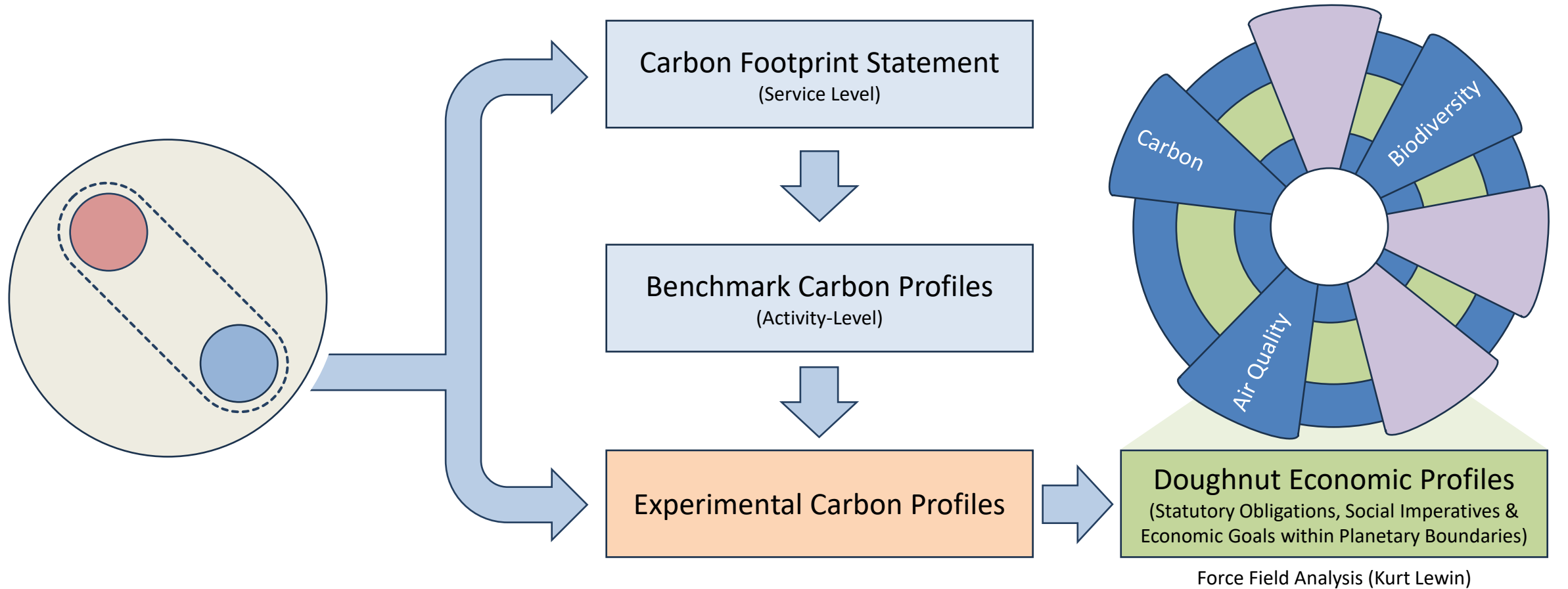
Options Portfolio Analysis

Programme Options Portfolio Analysis (Bubble Size = Carbon Saving (Illustration))



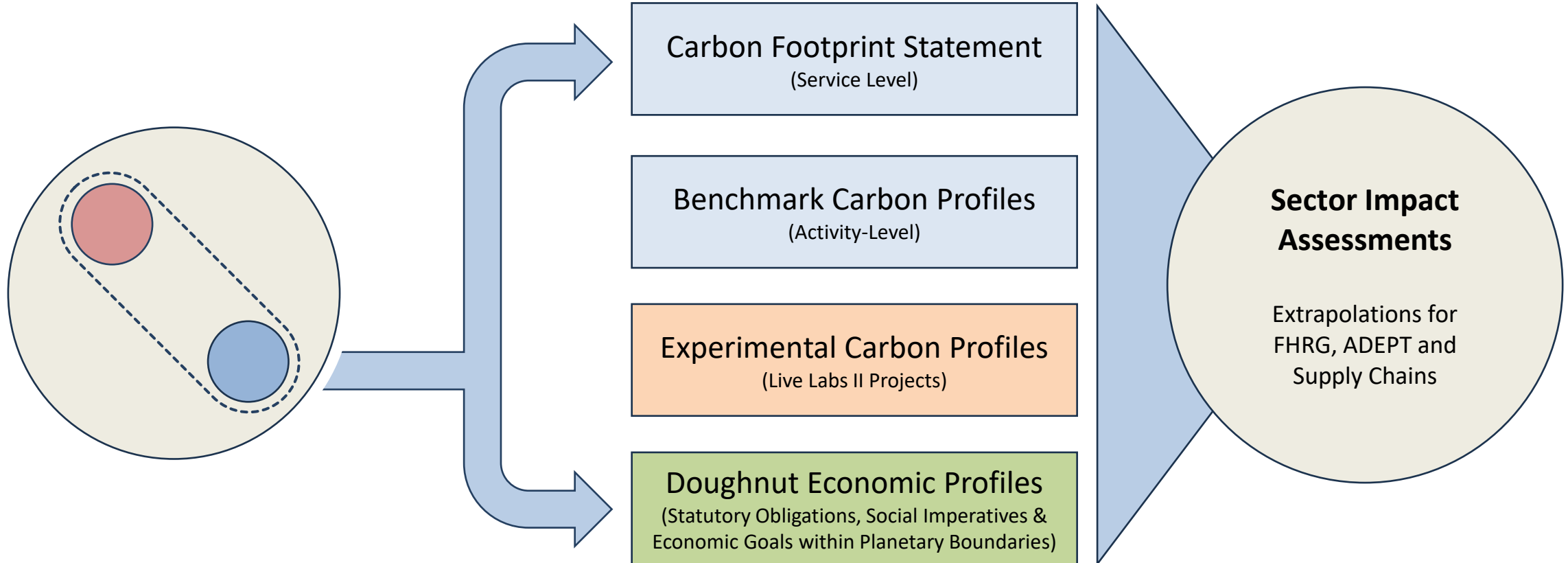
Carbon Assessments

Sector Impact Assessment



Carbon Assessments

Sector Impact Assessment



Future Highways
Research Group



Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

Future Research: 2024 / 2025 Programme

Simon Wilson



Future Highways Research Group (2024 & 2025)



Artificial Intelligence

Scheme designs,
maintenance management and
optimisation,
traffic management,
and resources management.





Automation & Robotics

Structures and assets
inspections,
embedded sensors,
self-healing pavements,
drone deliveries.

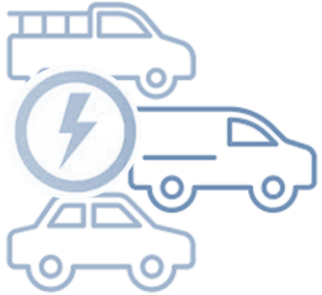




Materials Recycling

In-situ and ex-situ recycling,
high circularity materials,
energy from waste,
recyclates markets
management.





Electric Fleet

Technology maturity
monitoring (TRL)
(battery, motor and grid),
electric fleet business case
templates.





Future Procurement & Operating Models

Procurement collaborations,
sector learning sharing,
Procurement and contract
optimisation and de-risking.





Doughnut Economic Modelling

Social value, biodiversity, environment protection, and local economy development within planetary boundaries.



2024 / 2025 Research Assessments

Future Highways
Research Group



A new research programme to meet new challenges.

Future Highways
Research Group



Decision Equipped.

proving

ADEPT

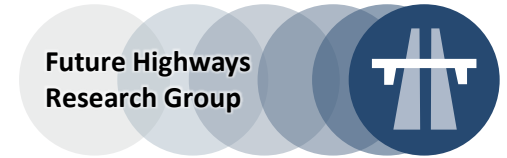
Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

Open Discussion

Future Highway Research Group

Open Discussion



- **Critical current challenges.**
- **Sharing innovations and best practice.**
- **Research requests?**
 - Research sponsorship and sponsors.
- **ADEPT / FHRG / LCRIG Alliance?**
- **Highways Alliances**
 - Closer collaboration.

Future Highways
Research Group



Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

Hausbots: Robotic Infrastructure Inspections

Jack Cornes, Managing Director

Our Purpose:

Stop human feet leaving the floor in inspection and maintenance of our critical assets, using Robotics

1933

Now



- **Services**

12 team members offering inspection services. We can provide PDF inspection reports, or work with structural engineers to collect data

- **Products + Training**

We manufacture robotic platforms and inspection sensors and offer training to inspectors on their use

- **Custom Solutions**

Have a problem that our current products don't cover? Our skilled engineers can create solutions for custom jobs

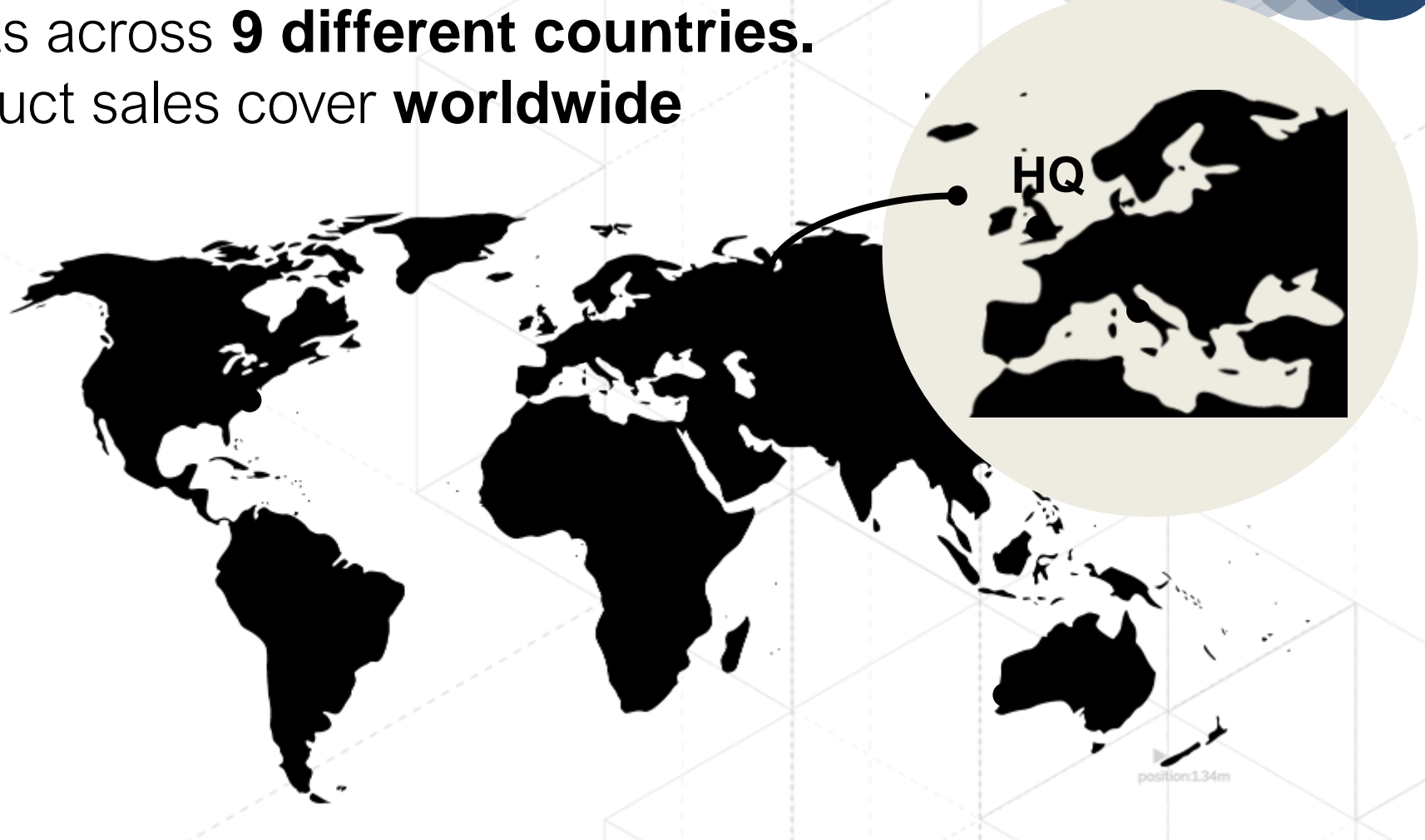
Presence



Research Group

30+ successful projects across **9 different countries.**
Our services and product sales cover **worldwide** operations

- **HQ in UK**
- **United States**
- **Germany**
- **Australia**
- **Canada**
- **Netherlands**
- **Sweden**
- **Italy**
- **Singapore**



Trusted by...



Highways Structures



Research Group

Expensive.

Road closures, MEWP rentals...

Dangerous.

The **leading cause of workplace fatalities** is falling from height in UK and US.

Disruptive.

Road closures to make place for the MEWPs

Slow.

Place MEWP, move, place MEWP, move etc





Hunt is on to find pioneering new ways to take care of National Highways' bridges

Published 26 June 2023 [Press Release](#)



Emerging innovations and ideas are being sought for a research project which hopes to detect defects in bridges and other road structures sooner without the need for disruptive investigation techniques.

National Highways is looking to revolutionise the way it monitors and maintains bridges and other structures by hunting out new and innovative ways that will spot potential defects sooner.

Research has begun to help National Highways on the ambitious journey towards self-monitoring and self-maintaining bridges with cutting-edge technology and modern methods being sought out for testing.

Share this article



MAINTENANCE & CONSTRUCTION EMISSIONS

Net zero by 2040

Net zero for maintenance and construction by 2040

Covering emissions from making and transporting the materials used to maintain our network. Actions include:

- ▶ Launch a zero carbon construction innovation programme
- ▶ Develop a near-zero plan for each of our procurement categories by the end of 2022
- ▶ Design and build the first net-zero major road enhancement scheme, open by 2035
- ▶ Increase capacity on existing roads by roll out of our digital roads vision
- ▶ We will follow a trajectory of 0-10% reduction by 2025, 40-50% by 2030, 70-80% by 2035 and net zero by 2040 against a 2020 baseline



Digital operations

Our operations will leverage data to drive increasingly pre-emptive interventions - resulting in improved asset resilience, increased asset life and a safer, smoother running network.

A WELL-MAINTAINED AND RESILIENT NETWORK



Challenge for NH?



Research Group



23,000 Highway Structures
Managed by National Highways

Code CS450

6 Years Principle
Est. cost £100k

2 Years General
Est. Cost £5k

**3 inspections per bridge in
6 year cycle**
£110k est. cost therefore avg £18k per year

**11,500 bridges inspected
in any one year**

C. £420 Million per year

= 23,000 structures, average of £18k per year inspection costs



A yellow and black handheld device, possibly a power tool or a sensor, is mounted on a wooden boardwalk. The device is connected to a power source, likely a battery pack, which is visible as a black rectangular object. The boardwalk is made of wooden planks, and the background shows a blurred outdoor setting with a railing and some foliage.

Circumferential or vertical

Easy Integration



Research Group



- **NDT**

With a constant connection to the surface, the HB1 can carry up to **6 kg** of payload for NDT equipment.



- **Regulations**

Crawler robots do not fall under expensive and complex CAA, EASA or FAA regulations

- **Weather**

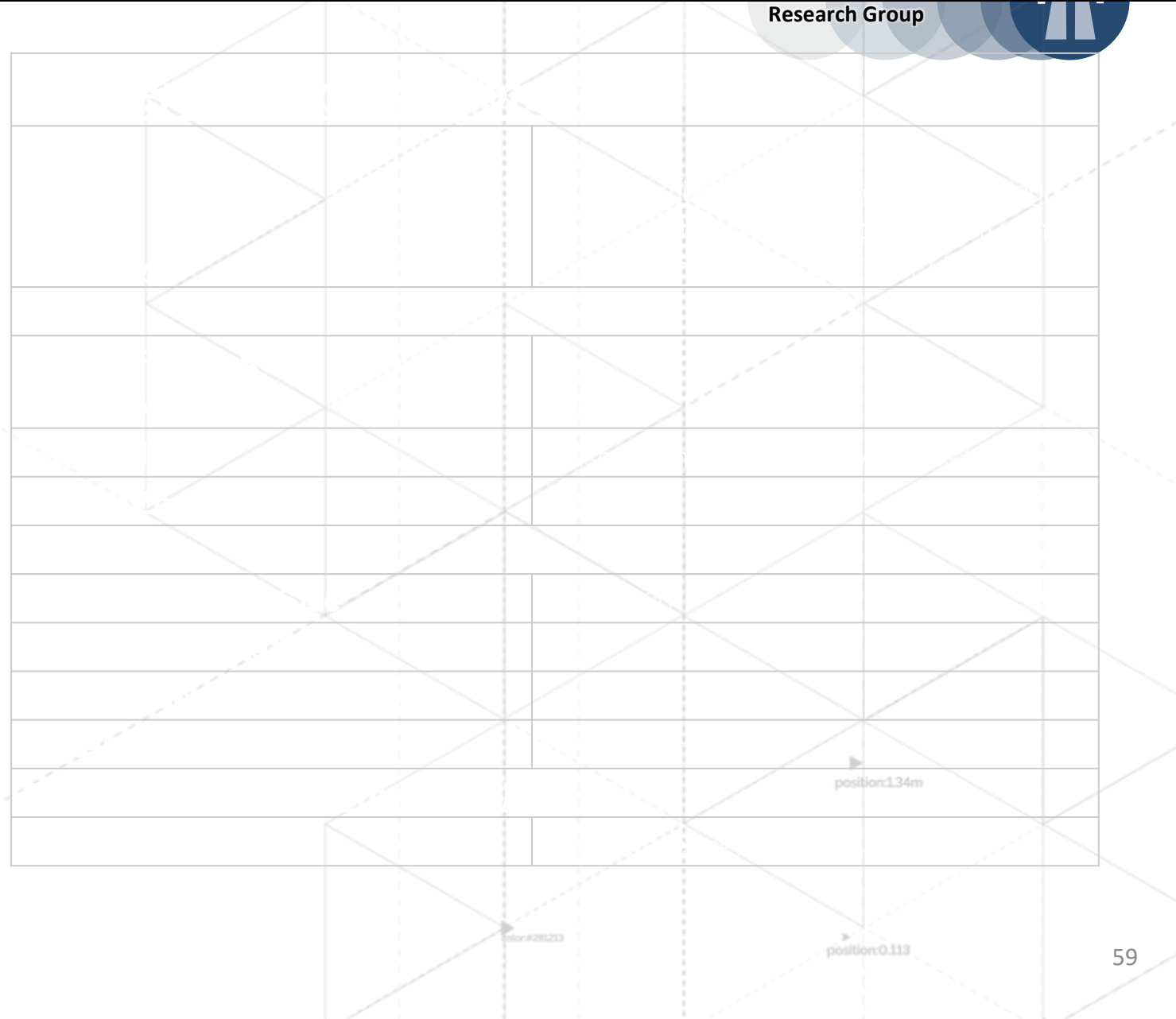
The HB1 can operating in many weather conditions including rain and up to **45 mph** wind



Camera



Research Group

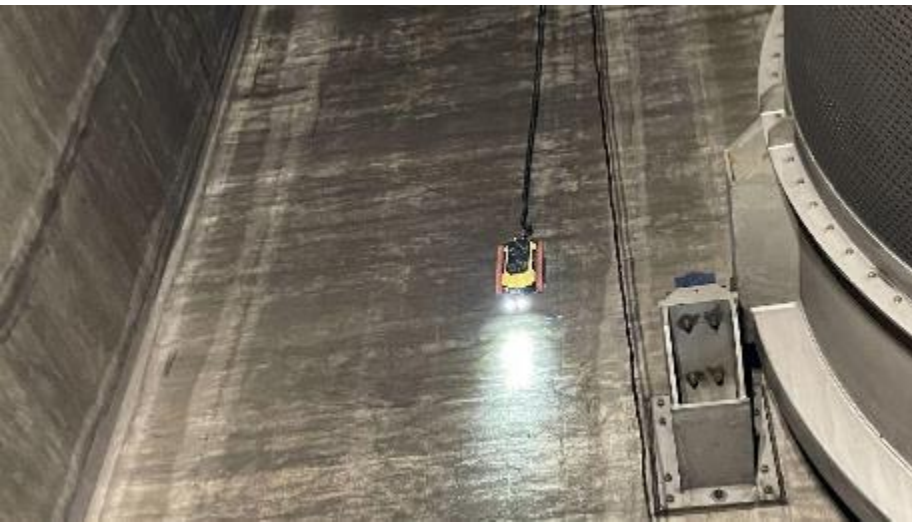


Payloads



Research Group

+ **PLUS** Your custom payload



Each Dot = Data Point



Research Group

Control panel

Quality:

Visualization: 2D 3D

A 3D visualization of a conical structure, possibly a hopper or a container, rendered in a light gray color. The structure is positioned on a grid base. The top surface of the cone is populated with numerous small, colored dots (red, green, and blue), representing data points. The side of the cone also shows some red dots. The grid base is a perspective view of a square grid.

Job Information

Site	
Department	
Asset	Dryer 1
Duration	64,26:01

Features

Time	2021-09-21 08:11:26
Location	6m from Ceiling Centre of 2'
Type	Reference Picture (Callings)
Notes	Reference Picture (Callings)

A small inset image showing a close-up of a mechanical component, likely a part of a dryer, with a red dot indicating a specific feature or defect.

Multiple Industries



Research Group

Silos



Transport Infrastructure



Chemicals/ Oil & Gas



Crawler



Concrete: GPR, Visual



Stainless: UT, PAUT, Visual



Insulation: PEC



Use Cases

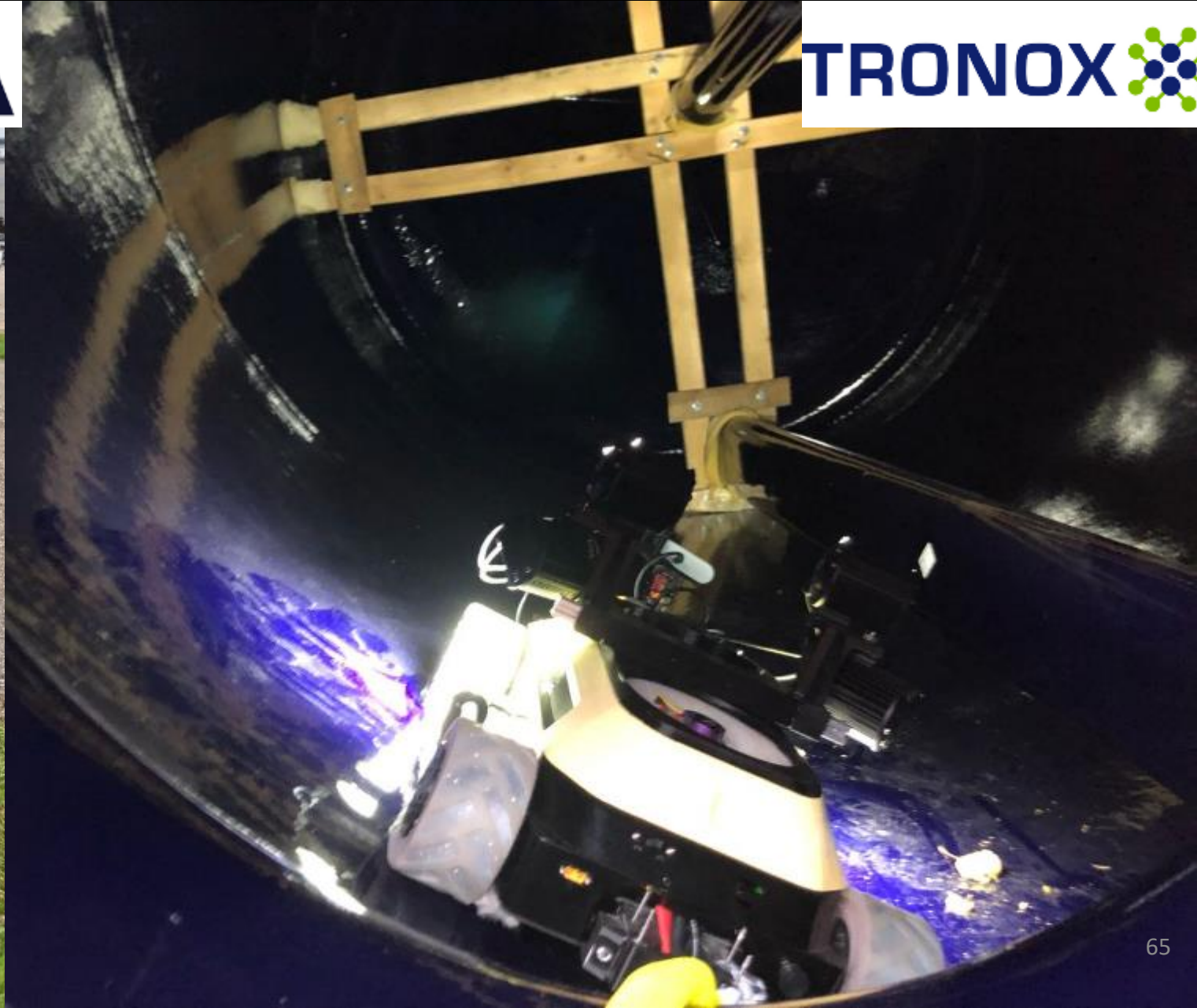


Spaces



LRQA

TRONOX

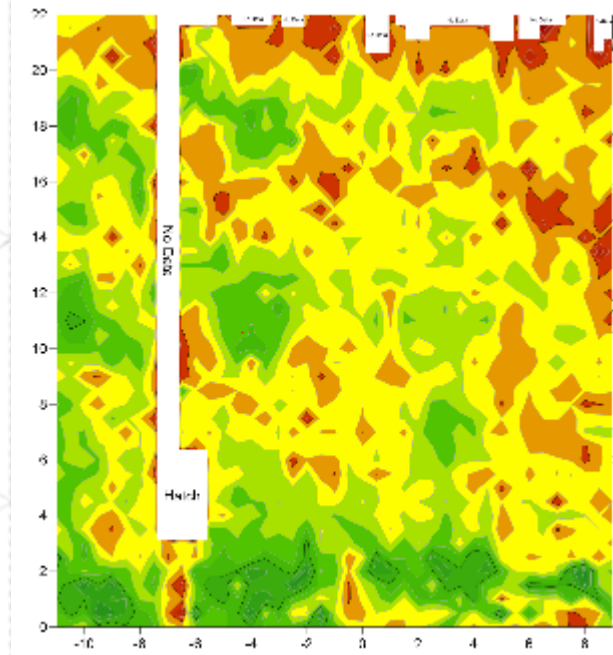
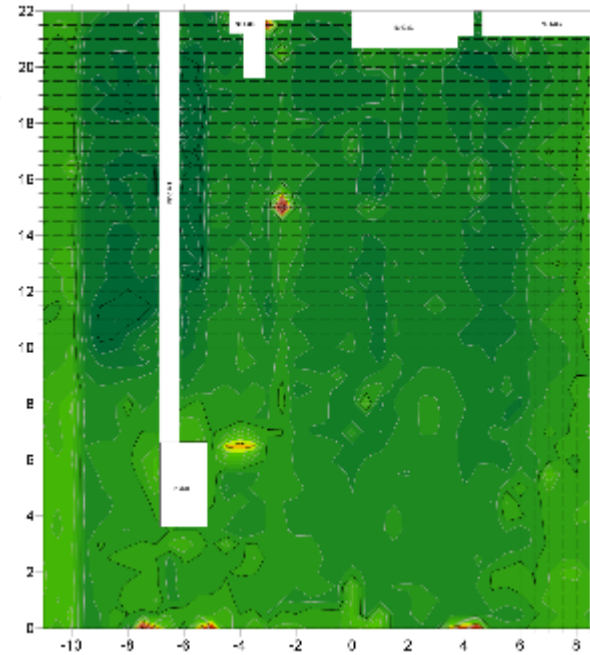


Data Sets



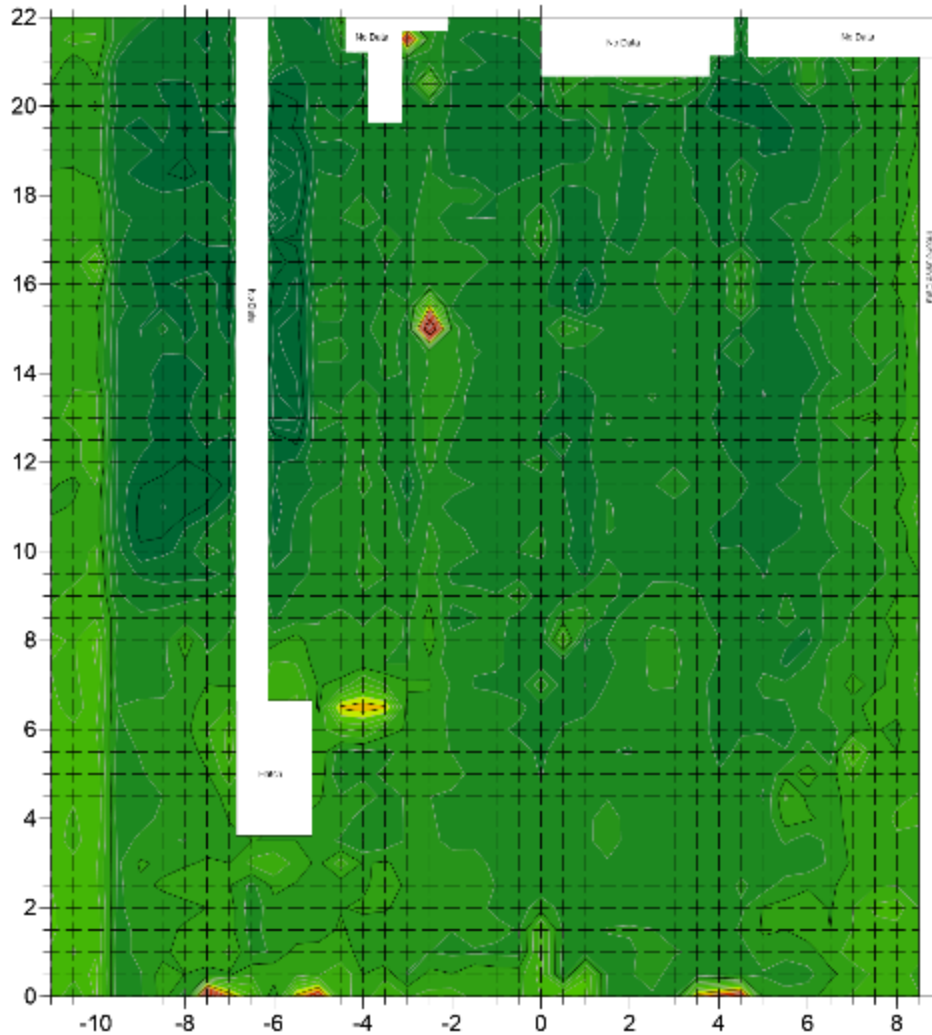
Research Group

Goodbye spot checks, Hello whole asset gridding



color:0.113

position:0.113



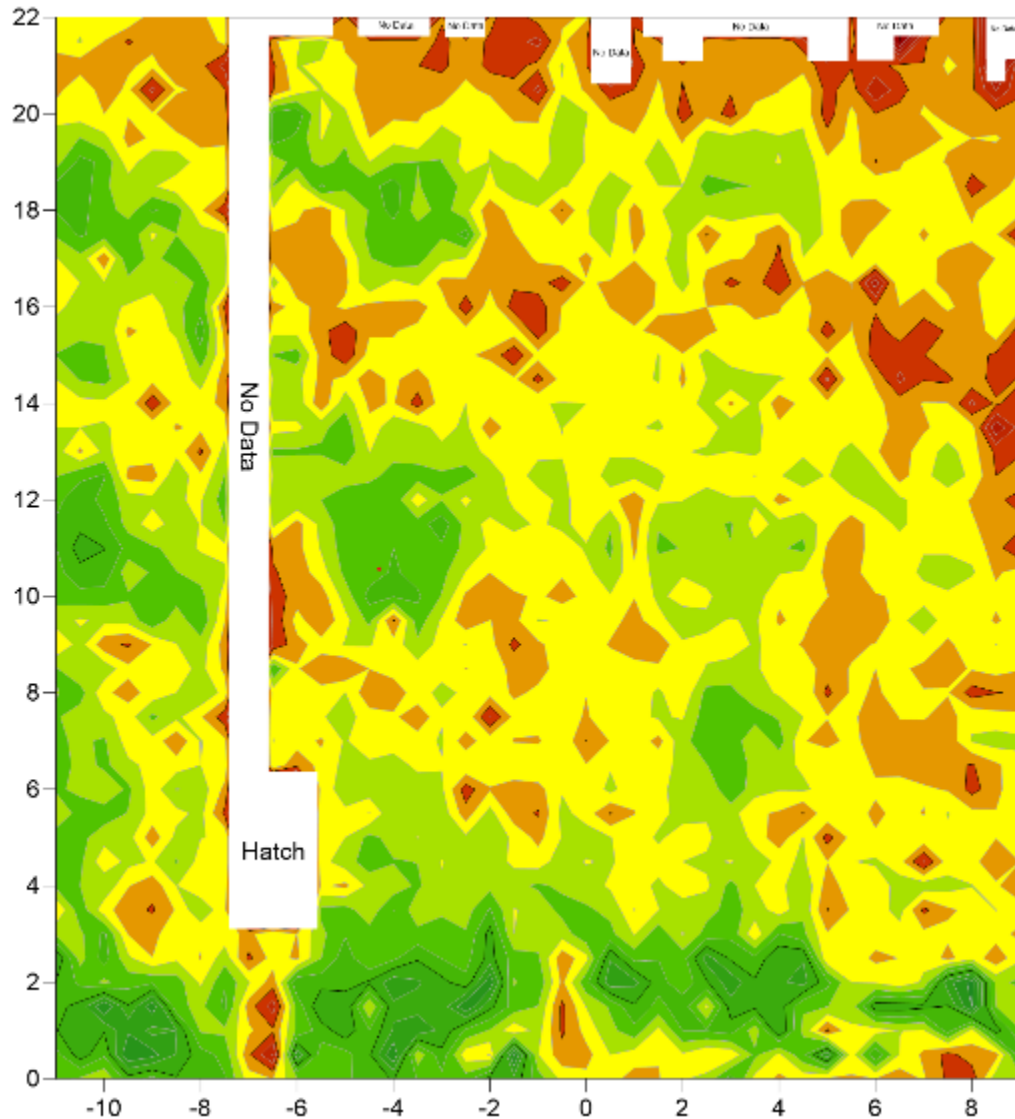
Half Cell Potential

- 38 Vertical collection lines
- +1km of half-cell data collected
- Data plotted onto 2D representation of silo
- In line with standards ASTM C876 – 15
- Data shows probability of corrosion of rebar

position:1.34m

color:0.00253

position:0.113



Cover Meter Survey

- 38 Vertical collection lines
- +1km of cover meter data collected
- Data plotted onto 2D representation of silo
- Green = 35cm of cover



Benefits



Research Group

1. Health and Safety

The implementation of the HB1 on this project reduced working at height by 90%

1. Haulage Traffic

The main traffic thoroughfare for the site was not blocked due to the small footprint of the HB1 team. The traditional MEWP would have needed to block the main route and cost the site valuable manufacturing time



1. C. 100% Asset Inspection Coverage

The HB1 provided the only economically viable option to inspect almost 100% of the asset. Other methods would be too slow or costly



1. Wind and Weather

Study - Bearing Inspection

Structure 12658- M25

- 48 Bearings
- 3 photos of each bearing
- 1 video of each bearing
- 2 HausBots service personnel
- 3D model delivered

Site Information



A total of 48 bearings were inspected on the Southbound carriageway.

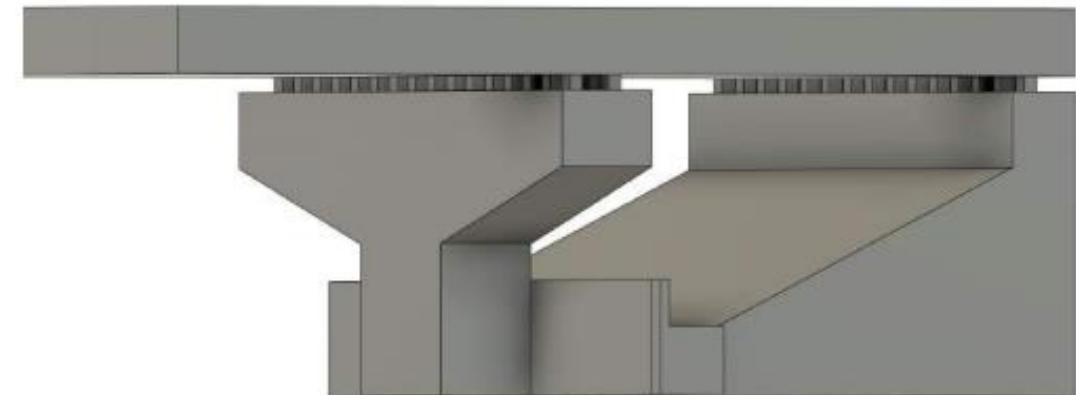
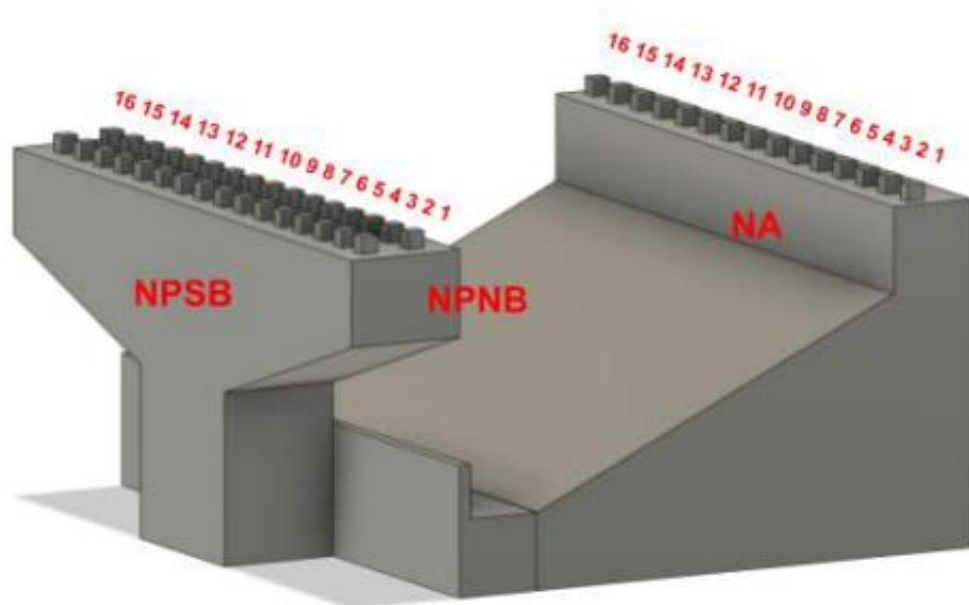


Fig above: 3D model of Southbound carriageway

Study - Methods & Outcomes



- Trial to directly compare MEWP bearing inspection vs HausBots services
- Using the HB1 with inspection camera payload



position:1.34m


position:0.113

Study - Methods & Outcomes

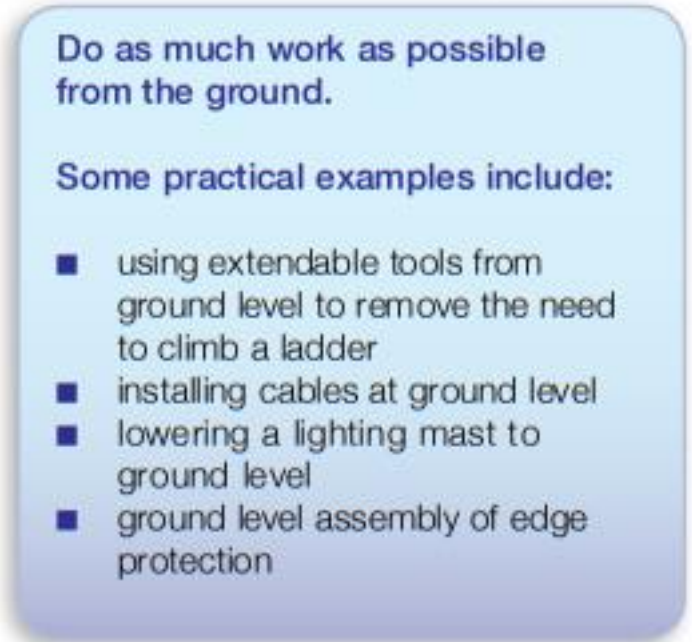


Project KPIs

- Project is shown to be faster than traditional methods
 - Between 11.00pm and 1.30am, HausBots completed the entire inspection. We collected **132 photographs in total**, averaging just under 1 photo per minute. This means we covered every bearing with **3 photographs and a video in under 3 minutes per bearing**.
- Project is shown to be more comprehensive and quality than traditional
 - Out of an available 48 bearings, the MEWP was able to **access 19 bearings**. A total **coverage rate of 39%**. The robot, however, had a **100% coverage rate**.
- No humans put in working at height danger
 - This is inline with the HSE Working at Height Law and proves there is a safe, compliant, available and superior technology which helps you **AVOID** work at height which is step 1 of planning a work at height project by law.
- Outcomes shown to be more preferable than drones
 - Drones would have needed special licenses and permissions.
 - The stability of the robot is unparalleled
 - Many of the images are taken in tight spaces that a drone may not be able to get close to.



Can you **AVOID** working at height in the first place?
If **NO**, go to **PREVENT**



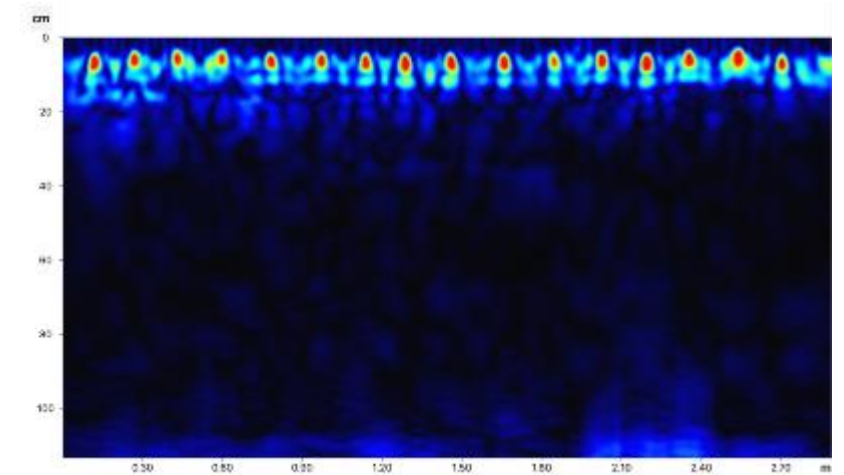
Do as much work as possible from the ground.

Some practical examples include:

- using extendable tools from ground level to remove the need to climb a ladder
- installing cables at ground level
- lowering a lighting mast to ground level
- ground level assembly of edge protection

Avonmouth Crossing

- Bearing Inspection
- GPR Inspection





- **Services**

12 team members offering inspection services. We can provide PDF inspection reports, or work with structural engineers to collect data

- **Demonstrations**
- **General Inspections**
- **Special Inspections**

position:1.34m

color:#285253

position:0.113



How to Work With HausBots

- Providing services
- Hardware rental/ subscription available
- Hardware purchase available + Training

jack@hausbots.com

Future Highways
Research Group



Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

Coffee Break

10 Minutes

Future Highways
Research Group



Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

Social Value In Highways

Future Highway Research Group



Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

Foundations for Social Impact: Structure & Collaboration

Paul Wheadon, Surrey CC & David Short, Kier

Building the Foundations for Social Impact: Structure and Collaboration

Surrey Highways

October 2023



Introduction & Background

- Surrey Highways- Kier contract 2011-2022
- Remodelled contract structure in 2014/15 following unsustainable opening period.
- Meeting Surrey's Strategic Objectives and growth ambitions
- Surrey County Council- Financial 'black hole'
 - 15% referendum in 2017



**30%
outcome
rate**

**12000
hours work
experience**



22 jobs

**8 returners
to
education**



Contract Model- a key enabler

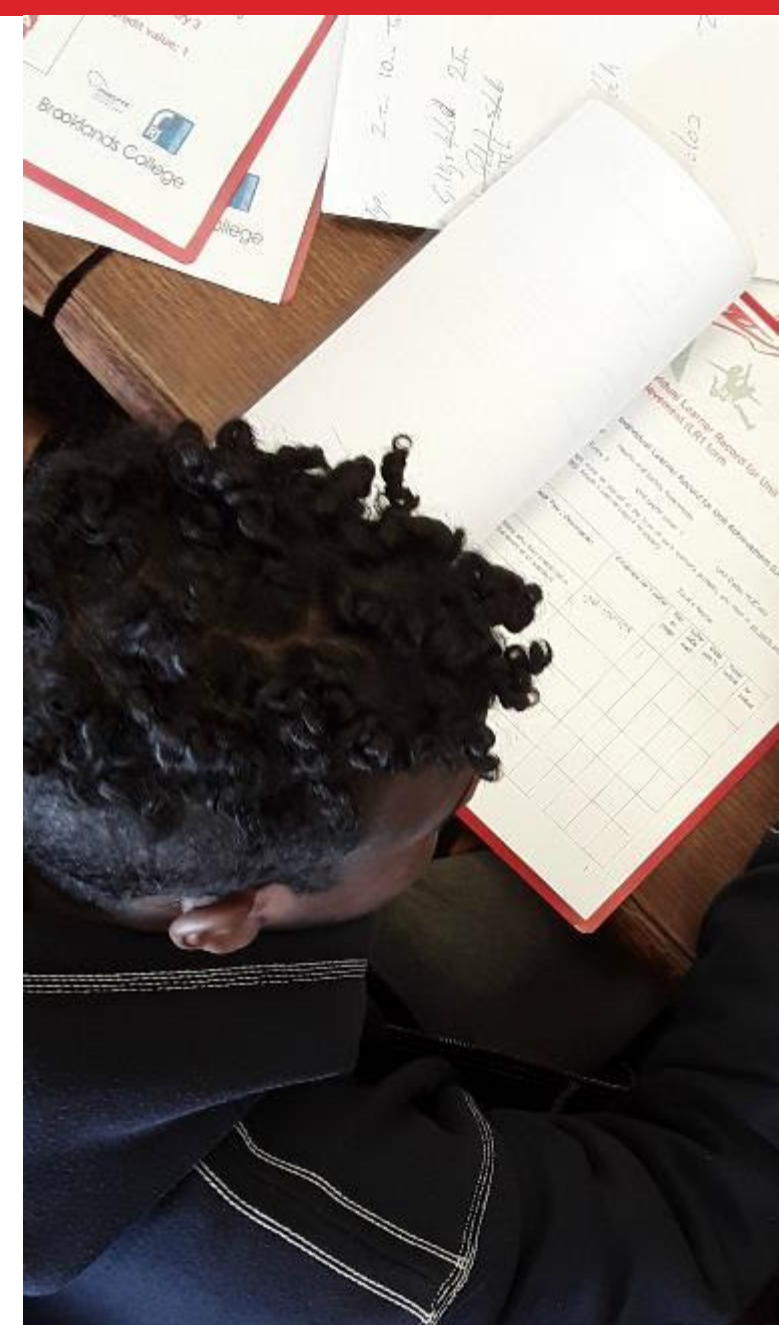
- Term Partnering Contract (TPC2005)
- Joint 'Core Group' Contract Management Team
- Clear and accessible escalation and dispute resolution
- Investment in partnering culture
- Limited and balanced risk and opportunity.
- Incentivised Partnering Timetable
 - Long term added value projects
 - Incentive element is top-sliced from available profit
 - Accountability and responsibility given to Subject Matter Experts



Skills & Employment Workstream- Aims and Objectives

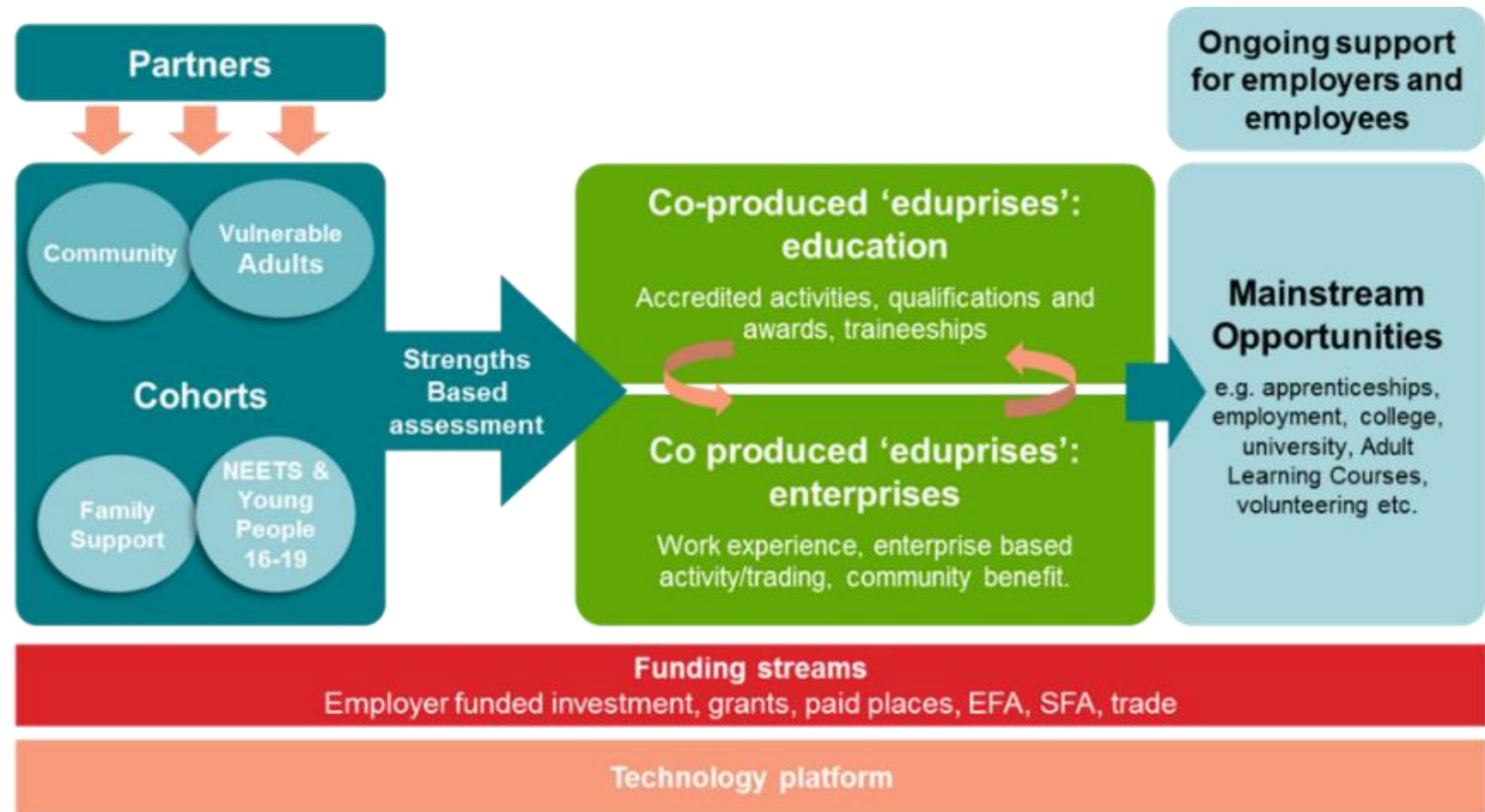
Creating opportunities for those furthest from employment. Realising the untapped assets within our communities

- Tackling the local highways skills shortage
- Moving people from state dependency to adding value
- Building relationships between directorates and stakeholders
- Increase sector awareness within communities, schools and colleges
- Promote equality, diversity and disability confidence.



Inter-directorate collaboration

- Collaboratively developed model
- Children's Services, Adult Social Care and specialist SEND provision
- Joint project team



S-Skills for Highways

- Safe but real environment
- Shared organizational values
- Symbiotic relationship and legacy



2-week induction- Impact



Case Study: Alfie Williams – Age 18

Background

- Excluded from Mainstream school at age 6
- Exhausted special school system
- Diagnosed with Asperger's and ADHD
- Large family with social and health problems
- Unable to function in group settings

Benefits after programme

- Now able to work as part of a small team
- Gained confidence in obtaining and retaining employment
- Significantly enhanced self-esteem
- Case worker not required full time during induction

12-week paid work experience

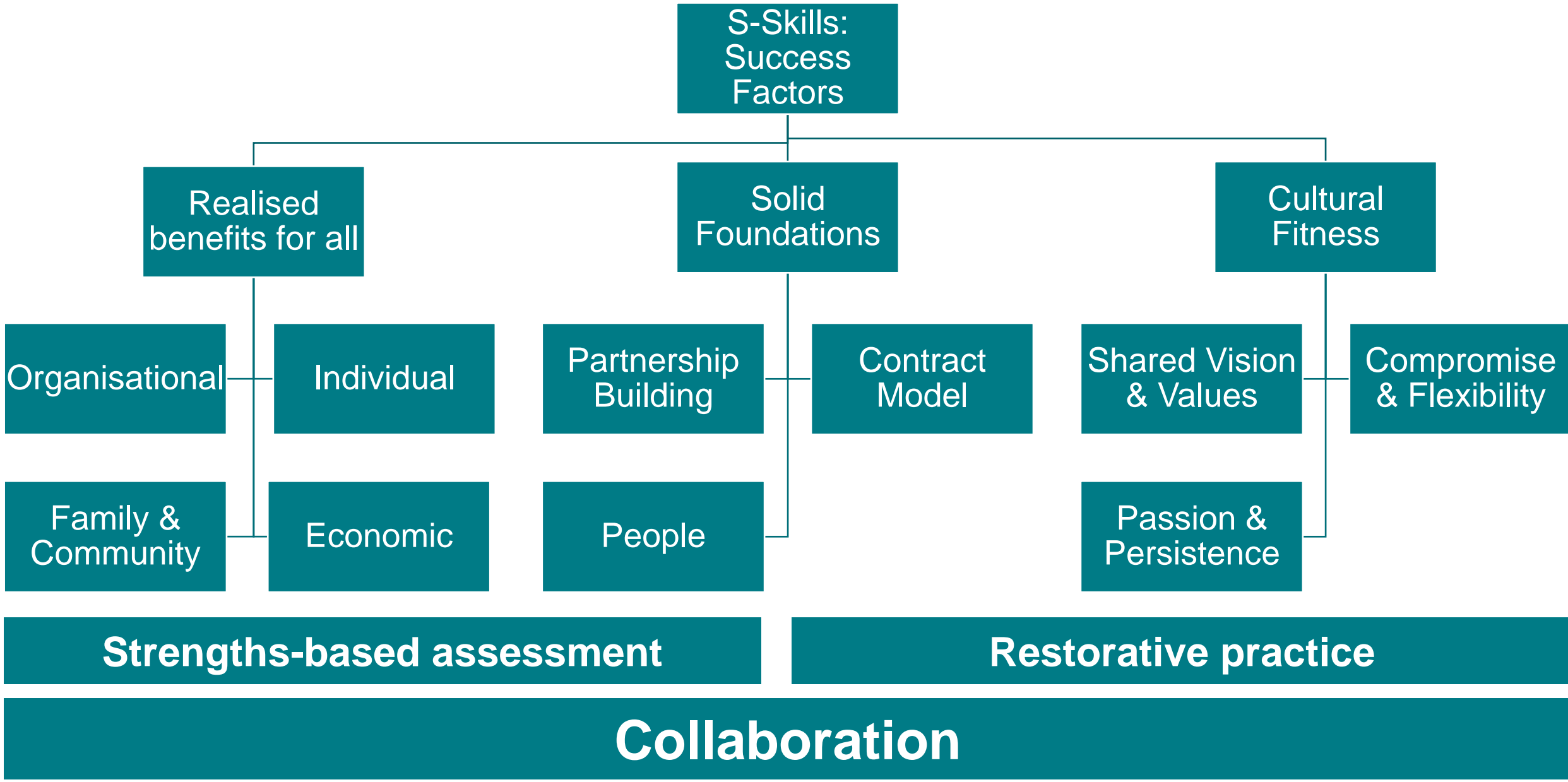


Benefits

- Meaningful work experience
- Embedded into depot 'family'
- Responsibility transferred to private sector

Challenges

- Drugs and alcohol
- Under 18's myth-busting
- Logistics



What's happened since 2022?



Programme principles



Strength-based assessments

Strengths-based assessment is used to understand the skills and abilities of a candidate and match them to an opportunity in Highways. This approach reduces the stress of a traditional recruitment process, which can be intimidating and exclusive. Within our programmes, our candidates can try a number of roles within Kier, client organisations, or supply chain.



Programme principles



Restorative Practice

Kier Pathways applies the principles of restorative practice to help assess the needs of vulnerable individuals as their programmes and support progress. This means working with people to recognise the setbacks or difficult situations they have faced and understand how to respond. The programme aims to advance peoples' holistic personal and social development and improve their well-being.



Our target individuals

Our target individuals reflect our objectives.



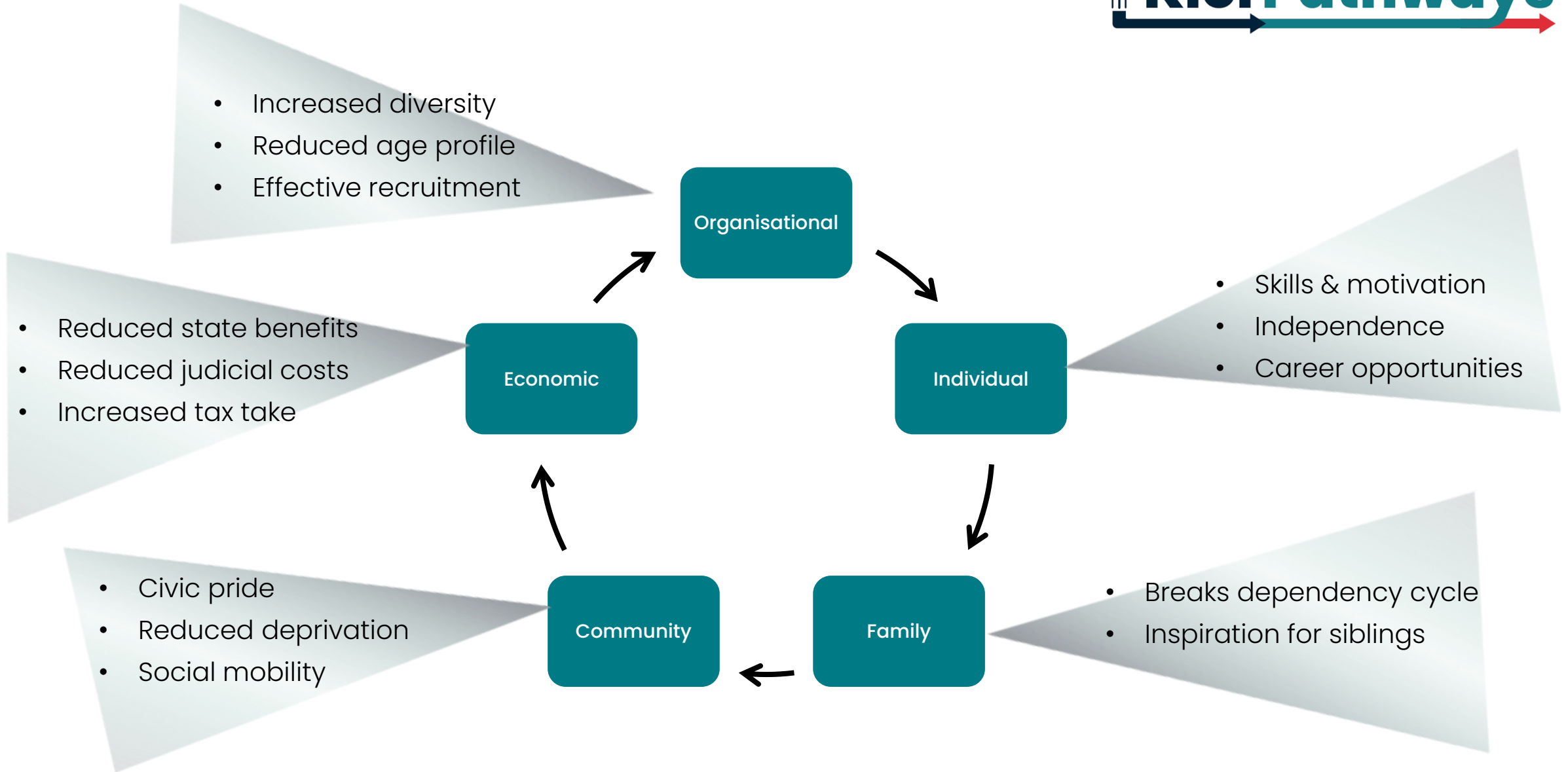
	Vulnerable Groups	Schools & Colleges	Career returners
Target groups	<ul style="list-style-type: none">• Youth offenders• Unemployed• Children whose families are long term unemployed• Those with disabilities• Care leavers• Ex-offenders, those released under licence or at risk of re-offending	<ul style="list-style-type: none">• Aspiring construction workers• Aspiring professionals• Parents• Careers advisors• Teachers and lecturers	<ul style="list-style-type: none">• Ex-military• Extended parental breaks• Career change• STEM returners• Women In Transport returners

Our Programmes

Kier Pathways consists of the following programmes. We will continue to develop new programmes to meet the needs of our target individuals



Virtuous circle of benefits





Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

Driving Social Value Through Public-Private Partnerships

Ryan Murphy & Jack Wiltshire



Agenda

1. **Embedding Social Value as a partnership**
2. **Activities and initiatives**
3. **Measuring outcomes**
4. **Sharing best practice**
5. **Key Takeaways**



1.

Embedding Social Value as a partnership



Transactional vs Collaborative

Transactional:

- ‘Get what you ask for’ but little more
- Main responsibility with local authority
- Low levels of trust / empowerment
- Less innovation
- More difficult to plan strategically
- Less impactful outcomes

Collaborative / Partnership

- Potential for above and beyond
- Empowered / take ownership
- Work as a collective, delivering higher impact activities
- More strategic activity aligned to a long-term programme
- Best of what is on offer (we might not be able to do X but could do Y)



Embedding Social Value as a partnership

History of the partnership

- 20+ years working together
- Previously won 'Best partnership' – Highways Awards 2017
- Shortlisted for 'Team of the year' – Highways Awards 2023
- Signed a formal charter

Embedding a collaborative culture

- Transparent
- Robust communication
- No blame culture, openly tackling challenges
- 'A place you want to be'

Building capacity (Management structure)

- Working groups
- Dedicated resource

Early Contractor Involvement

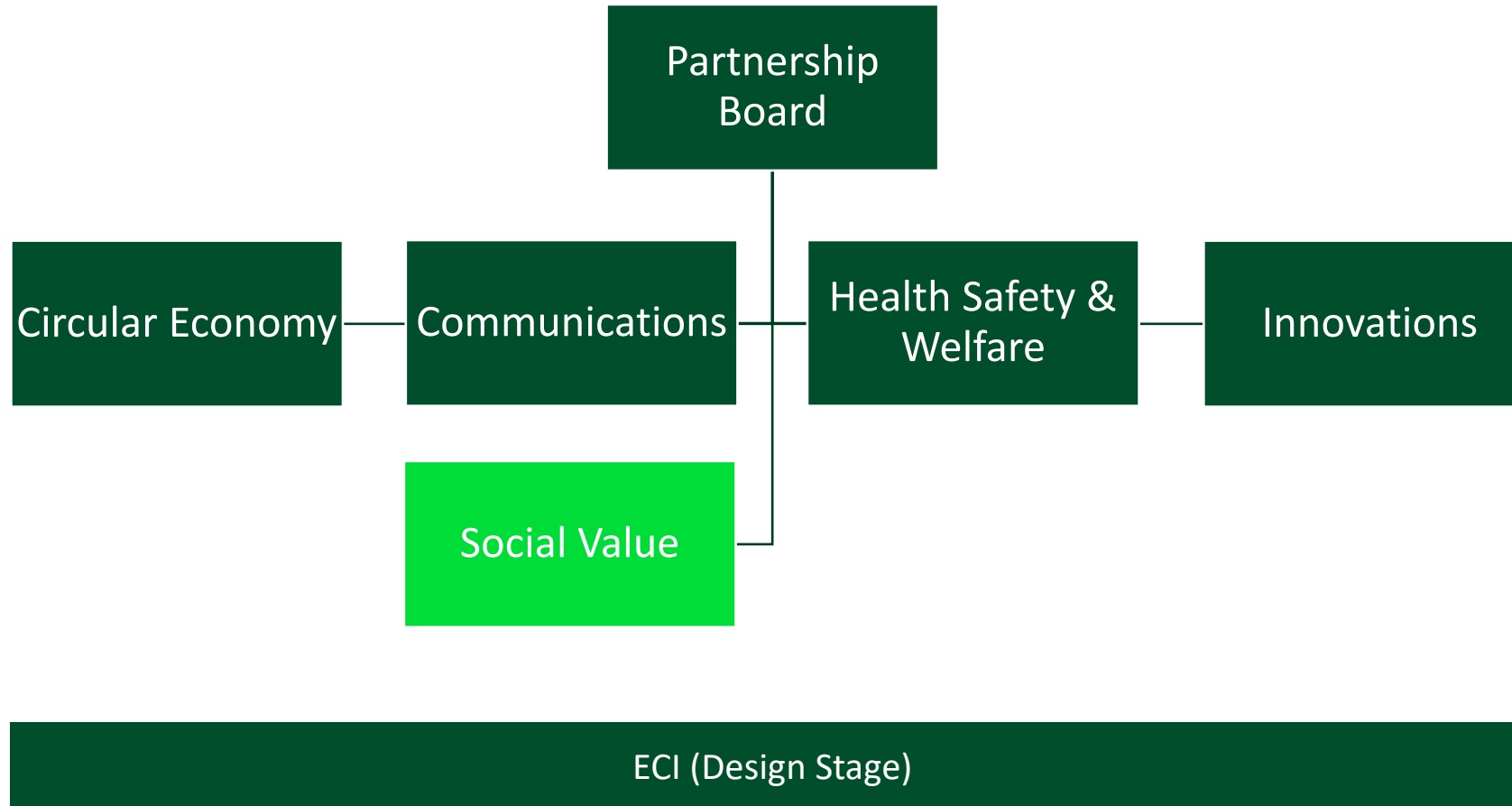
- Understand local needs
- Planning for downtime (efficient scheduling)

Engaging the broader Supply Chain

- Combined funding, combined management, combined knowledge, combined goals



Embedding Social Value as a partnership



Partnership Board

- Head of Highways (DC)
- Executive Director of Place (DC)
- Service Manager for Infrastructure & Assets (DC)
- Service Manager for Network Operations (DC)
- Director of Contracting (HM)
- Regional Manager (HM)
- Commercial Manager (HM)
- Project Manager (HM)
- Partnership Liaison Manager (HM)



2.

Activities and initiatives



Activities and initiatives

- School engagement (STEM) & donations:
 - Principal street St Georges Dorchester school engagement
 - Leigh Road 'Days Topps Nursery' – We purchased them jackets / hats and brought them to project to educate on road surfacing process & safety on roads
- Charitable engagement:
 - Pilsdon Community, via CRASH, working farm to support people with substance abuse – re-surfaced the entrance way to make it more accessible.
 - Rugby Club volunteering – renewing & painting
 - Homeless bus shelter – utility connections laid



Activities and initiatives

- Tumbledown Farm - Joint initiative with supply chain and partners – NH '3 million trees project' will cover cost, we together will volunteer to plant, Tumbledown has offered the space for hundreds of trees, in addition to vegetation clearance and opportunities for supporting minor civils works & laying aggregates (such as kerb laying)
- Sharing apprentice experience across the supply chain (improving overall experience and development)
- Broader supply chain activity – Knights Brown supported a respite shelter for young carers & WJ are supporting isolated elderly members of the community





Social Value promotion



 **PROJECTS**



Education Programmes



CETC



3.

Measuring outcomes



Measuring outcomes

- Regional and project specific tracker
- Options for monetised / non-monetised
- Dedicated resource and support teams
- Social Return on Investment
- Generate project specific of overall reports
- Letter drops & QR codes



Measuring outcomes

- Benchmarking for improvement
- Better understand local needs
- Know if the activity has been a success
- Apply learnings across future projects
- Better understand what value is brought to the region (financial, environmental, social)



3.

Sharing best practice



Sharing best practice

- Drawing on the supply chain, their existing activity and commitments
- Focus on outcomes and impacts, not just outputs
- Utilise specialised skillsets – i.e. a finance director painting fences rather than supporting a local business with their accounts
(However, don't forget the morale benefits, team building!)
- Good to have guidance – but too strict and it'll make it harder to achieve
- Visibility to the general public, local businesses other organisations such as charities VCSEs etc. They may want to make use of opportunities or make suggestions



Key Takeaways

- Partnerships bring a range of benefits
- We believe this is the most way to deliver social value - You can achieve better social value outcomes through collaboration
- Measurement can be a challenge, but it is essential for setting benchmarks for improvement

Questions

jack.wiltshire@dorsetcouncil.gov.uk

ryan.murphy@heidelbergmaterials.com





Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

Enabling Social Value Success

Rachael Atkins, Colas



SETTING THE SCENE FOR SV SUCCESS

NOVEMBER 2023 FHRG



WE OPEN THE WAY

COLAS SOCIAL VALUE APPROACH

SV POLICY AND STRATEGY APPLIES TO WHOLE BUSINESS, FOCUSED ON SUPPORTING LOCAL AUTHORITIES TO TACKLE SOCIAL INEQUALITIES

PROJECT/BUSINESS LEVEL PLANS ALIGN TO STRATEGY OF COLAS AND CLIENTS

SV TEAM IN PLACE TO SUPPORT DELIVERY AND ENSURE ACCOUNTABILITY, BUT 'WHOLE COLAS' APPROACH EMBEDDED

'TYPICAL' ACTIVITIES INCLUDE LOCAL EMPLOYMENT & SPEND, APPRENTICESHIPS, SCHOOL/COLLEGE/UNI ENGAGEMENT, PRE-EMPLOYMENT SUPPORT, VOLUNTEERING – FLEXIBLE APPROACH

SPECIALIST PROJECTS DEVELOPED FOR DELIVERY OF MORE CHALLENGING ASPECTS

Yahya Mohammed, Cleaning Operative at Princess Road, Manchester



'I wanted to work to look after my family and earn money for the documents we needed to stay in the UK, [...] so when I got a job with Colas I was over the moon. The site team helped me to study CSCS and get the test paid for [...] and they helped me get a new job when the Princess Road project ended, there is nothing I can't ask of them'



COLAS LEEDS

- MAIN CLIENTS LEEDS CITY COUNCIL / NATIONAL HIGHWAYS, WEST YORKSHIRE LOCAL AUTHORITIES
- HIGHWAYS INFRASTRUCTURE WORKS, DELIVERY CIVILS SURFACING AND TM
- EACH WEEK WE HAVE BETWEEN 140-160 MALE OPERATIVES WORKING DIRECTLY FOR COLAS OUT ON THE ROADS
- WE HAVE 3 MAIN SME SUBCONTRACTORS, RS CIVILS / CIVCON / ALINED LTD THEY HAVE APPROXIMATELY 10-15 MALE OPERATIVES WORKING ON COLAS SITES
- CURRENT ACTIVITY: TCF / ACTIVE TRAVEL / TRAFFIC ENGINEERING / MAINTENANCE / NH



COLAS LEEDS - INNOVATION CHALLENGE



We set the challenge around mental health, due to the high rates of male suicide in Leeds and our own experiences of suicide in the work force

This was a well developed idea and involved us linking up with 'Andy's Man Club'. Alined Ltd had arranged for their 'its ok to talk' logo to be incorporated on to their PPE

People started talking, increase in empathy and change started to happen



MENTAL HEALTH STRATEGY

PUSHING THE AGENDA ON

Our Vision :

Our Mission:

CORE OBJECTIVES:	1. Strategy: We commit to understanding and responding to regional drivers and priorities.	2. Delivery: We commit to embedding a multi-faceted MH provision across our depots and construction sites.	3. Behavioural Change: We commit to proactively driving culture change in how we discuss, influence and manage the Mental Health of our workforce.
RATIONALE	Research: Yorkshire/Humberside has highest male suicide rate in the UK. Leeds male suicide is disproportionately high (male: female ratio of 5:1 against UK 3:1). CIOB research identifies Built Environment as having 2 nd highest suicide rate. Pressing need for employers to tackle poor MH/suicide.	Ability to act as a central pivot to drive change: Colas has developed strong working relationships with our workforce, our suppliers and public/third sector providers. Leeds Contracting is ideally placed to drive a holistic approach and robust regional strategy to enable a mentally healthy workplace.	Culture of acceptance and support: We will embed MH awareness into our day-to-day operations through regular insight sessions. In collaboration with our local partners we will develop and deliver a initiatives to promote positive mental/physical health and wellbeing.
ACTIONS NECESSARY TO ACHIEVE OBJECTIVES:	<ul style="list-style-type: none"> Use local partnerships (Leeds Mind, Colas Suppliers, Mindful Employer Network, Leeds CC Public Health Directorate) to understand and respond to local needs in a collaborative, joined-up manner. Demonstrate visible leadership, and shape regional strategy through participation in Mindful Employer Network and Mindful employer Steering Group. Colas brings sector and gender diversity to this group (which represents circa 400+ employers in the region), which is comprised mainly of public-sector bodies. Support Mindful Employer Network's events and digital campaigns to ensure local awareness of MH provision in the region. 	<ul style="list-style-type: none"> Use internal events (such as coffee mornings), visual campaigns and Toolbox Talks to promote supportive services Continue to train our personnel and supply chain, to ensure they have the knowledge and skills to discuss MH sensitively, and to support themselves and their colleagues. Increase number of trained Mental Health First Aiders (MHFAs) across depots and sites from XX to XX Provide personnel with access to MH support via partnership with Andy's Man Club (5 members of Colas' team and supply chain have used the service to date) and Mates in Mind. Develop strategies for extending provision to supply chain, and stakeholders (charities, SMEs, members of the public). Develop over-arching Comms Strategy to maximise internal/external awareness of provision. 	<ul style="list-style-type: none"> Run internal awareness sessions in partnership with Mates in Mind, Andy Man's Club and Leeds Mind to promote a positive and transparent MH culture. Senior leaders to continuously reinforce MH awareness and 'Ok not to be OK' ethos Management to signpost team to further sources of advice/support. Provide coffee mornings and non-work related team activities (5-a-side, team outings etc.) to promote positive physical and mental health. Ensure newsletters, literature and visual awareness tools (posters, site notice boards etc.) promote MH awareness. Continue promoting open dialogues around MH issues
CORE FOUNDATIONS	<p>Leadership team to drive consistent focus across projects and depot activities.</p> <p>Sustained collaboration with aligned public and 3rd sector partners.</p> <p>Robust capture and reporting of activities / impacts using National TOMs framework.</p>		

- People had started talking, so we started to think how we could do more and contacted Leeds Mind for support
- Leeds Mind supported Colas in putting together a Mental Health strategy for the Leeds Business Unit
- The strategy is reviewed annually
- Forms part of our operating procedures
- Created a more empathetic culture
- The BU felt ready to do more – meeting with St George's Crypt initiated through Leeds Council staff

REINTEGRATION TO EMPLOYMENT SCHEME

Step 1 – Prepare the opportunity

- Ensure supervisors ready for different approach
- Identify entry roles
- Link to referring organisation – in Leeds St George’s Crypt and Leaving Care Team
- Identify specific awareness raising

Step 3 – Person Centred Work Experience

- Negotiate hours with candidate and referring body
- Minimum 6 weeks
- Paid (RLW)
- Complete person centred risk assessment, looking at personal barriers to employment
- Training plan to get the candidate job ready

Step 2- Engage Candidates

- Speak to candidates about the opportunity
- Arrange workplace visit for candidates, use this to observe for desired attributes
- Offer work placement – **no application or interview**
- Placement flexible to persons needs

Step 4 - Employment

- Offer a role – when the candidate is ready
- Revisit person centred risk assessment
- Flexibility around hours
- Quality opportunity

RESULTS SO FAR

LEEDS (INCUBATOR)

- 2 X RECRUITS FROM ST GEORGE'S CRYPT
- 1 FROM HMP ARMLEY –RELEASED 3 WEEKS EARLY DUE TO GUARANTEED JOB OFFER FROM COLAS
- JOSH (CARE LEAVER) IN HIGHWAYS OPERATIVE APPRENTICESHIP, MEGAN ALSO DID WORK PLACEMENT
- 2 TRAFFIC MANAGEMENT OPERATIVES RECRUITED VIA HAPPY DAYS CHARITY IN KIRKLEES
- DAVID (EX VETERAN, AMPUTEE) IN PART TIME EMPLOYMENT, ADMIN

LIVERPOOL (FIRST ROLL OUT AREA)

- DEE (BOTTOM) NOW AN APPRENTICE ENGINEER
- CONNOR (PRISON LEAVER) – COMPLETED WORK PLACEMENT
- SHABANA (REFUGEE, IN TEMP ACCOMMODATION) COMPLETED WORK PLACEMENT, BEING INTERVIEWED BY LOCAL SME

CWAC (SECOND ROLL OUT AREA)

- 2 CANDIDATES ON WORK PLACEMENTS (1 NEET, 1 LTU) VIA JCP

GENERAL

- SCHEME WON CIHT NORTH WEST EDI AWARD, AND LCRIG SOCIAL VALUE. HIGHLY COMMENDED FOR 2 MORE



WE FOUND OUT..

UNINTENDED OUTCOMES

DEVELOPED EMPATHY IN PEOPLE
MANAGEMENT SKILLS

STAFF ENGAGEMENT AND RETENTION

SOFT SKILLS DEVELOPMENT

MATURITY IN APPLICATION OF POLICIES;
IMPACT ON EXISTING WORKFORCE

CHALLENGES

BUSINESS UNIT/PROJECT READINESS

SELECTION OF MANAGERS/MENTORS

SELECTION OF STAKEHOLDERS & SUPPORT
NETWORKS

CANDIDATE SELECTION AND BEHAVIOUR
ISSUES

POLICY CHANGES AND REVIEW OF
PROCESSES

SURETY OF WORK AND LENGTH OF PROJECTS

PROCUREMENT

COULD SPECIFICATION SOLVE ANY OF THE PROBLEMS?

SCHEME SUITABILITY – DURATION, COMPLEXITY

ONE SIZE FITS ALL TENDER QUESTIONS CAN CAUSE MORE HARM THAN GOOD

FRAMEWORK RELIABILITY OF WORKS

RELIABLE WORKSTREAM NEEDED

RELATIONSHIPS

ALL PARTIES – CLIENT, CONTRACTOR AND EXTERNAL STAKEHOLDER NEED TRUST AND COOPERATION.

CONSIDERATION OF MOBILISATION, CONTRACT MANAGEMENT AND MONITORING

ARE YOU GETTING WHAT YOU ASKED FOR?

Future Highways
Research Group



Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

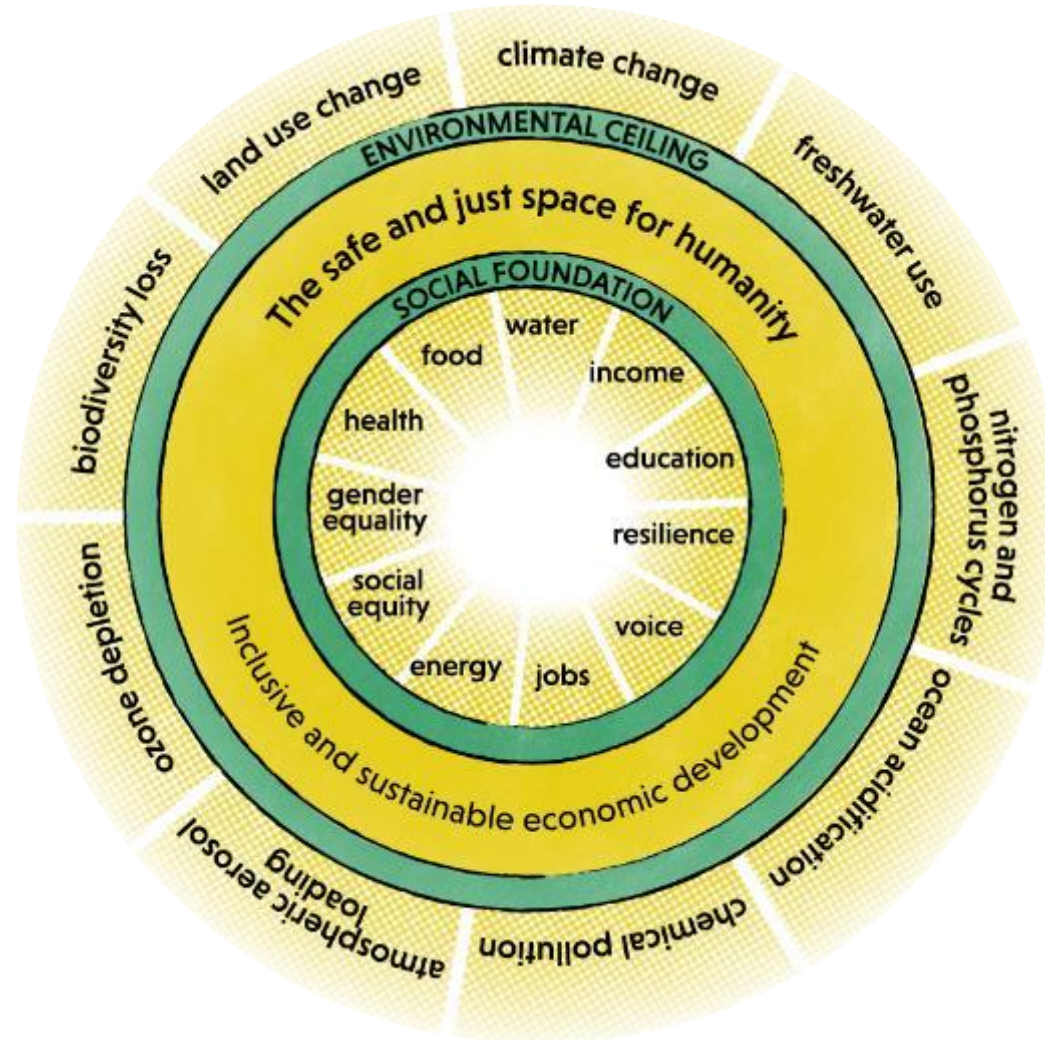
Highways
PART OF TRANSPORT NETWORK

Doughnut Economics: Highways Sector Applications

Future Highways Research Group


Doughnut Economics

A brief introduction...



Doughnut Economics

Highways Applications



The challenge is taking a high-level concept and creating practical processes and tools for the highways sector.

Live Labs II and the upcoming FHRG Research Programme will address these challenges.

- **New Schemes Design**
- **Repurposing Assets**
- **Challenging Political Priorities**
- **Driving Social Value**
- **Increasing Circular Use & Reducing Waste**
- **Focusing Deliverables**
- **Improving Water & Air Quality**
- **Developing Green Energy Alternatives**
- **Creating Biodiverse Spaces**
- **Transforming Local Economies**

Future Highways
Research Group



Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Highways

PART OF TRANSPORT NETWORK

Next Meeting:
8th February 2023

Future Highway Research Group

Future Highways
Research Group



Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Highways
PART OF TRANSPORT NETWORK

End of Document

Future Highway Research Group