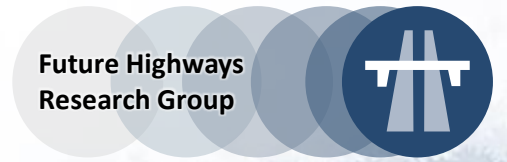


Future Highways Research Group

Q3 2020, Waypoint Update

**2021 - 2025 Research Programmes & Concepts Pioneering,
New Technical Research Themes
& The Value for Money Benchmarking Process for 2021**



Decision Equipped.

proving

ADEPT

Association of Directors of
Environment, Economy, Planning & Transport

Agenda

- **Welcome & Introductions**
- **ADEPT & Sector News (HB)**
- **Individual Authority Updates (Group)**
 - Members' news and announcements.
- **FHRG Announcements (SW)**
 - COVID-19 Impact & Recovery Assessment: Calibrated Toolkit Available to FHRG Members
- **A Changed World, BT Presentation & Discussion**
 - Simon Haston (Chief Technology Innovation Officer, BT)

Break (10:30am – 10:40am)

- **Proposed Research Programme: 2021 – 2025 (SW)**
 - Programme review.
 - New, technical research theme and research options (KB, NB, HB).
 - New VfM factor sets to support the new themes (HB).
 - New, human capital management research theme (SW, KF).

Agenda (Continued...)

- **“Big Picture”, progress and updates (KF / SW).**
 - Collaboration with measure2improve (NHT and CQC).
 - Clarion revised COVID timeline and data integration.
- **FHRG & Benchmarking Club 2020: Membership**
 - Progress and updates (AP).
 - Launching 1st November 2020,
 - Peer reviewers and knowledge sharing,
 - VfM assessments scheduling.

Break (11:40am – 11:50am)

Agenda (Continued...)

- **Marketplace Review & Future Services Delivery Options (KF / AP)**
 - Progress and updates.
- **Innovation Conference: Private Sector Briefings (SW)**
 - Client presentations: aspirations and the future of the sector.
 - For ADEPT private sector partners.
- **Smart Places Working Group: Update (SW)**
 - Update and post-COVID rescheduling.
 - Relaunch with SSE and BT.
- **AOB & Date of Next Meeting (Group)**
 - Proposed Date: 21st January 2021
 - Proposed Format: Physical Meeting? Location?

Close

ADEPT News & Announcements

Hannah Bartram, COO, ADEPT

Members' News & Announcements

Open Discussion

A Changed World

Simon Haston, Chief Technology Innovation Officer, BT



**Driving inclusive growth,
creating healthy and safe
societies, providing skills
for all and protecting our
environment.**



A changed world

We can work from anywhere and at anytime. Shared and automated transport may signal the end of private car ownership. Retail is now online, disrupting the high street. TV consumption will never be the same, learning is delivered virtually, anything can be delivered to your house and we interact with robots daily. This needs a world class digital infrastructure. **Now more than ever.**

Everyone is designing and procuring digital infrastructure in silos using different components without clarity on the wider aims. By itself, technology will not transform society or businesses. This only achievable through a combination of world class infrastructure, new applications, skills and different business models.

So what if we could create a digital fabric that supports inclusive growth across all of society. One that is reusable, can be delivered fast, is scalable, is future proofed and can point at any outcome.

"A crisis is a terrible thing to waste",
Paul Romer, Nobel Prize winning economist.



Sustainable and Scalable Innovation

Co-investment in innovation that can be scaled and is commercially viable. Innovation based around six families: Movement of people and things, immersive experiences, industry 4.0, remote diagnosis, work anywhere and safely and inclusion. Clear outcomes and benefits identified and tested.

Traffic management

Wayfinding

Connected ambulance

Remote Breast screening

Connected care home

Autonomous drones

Future learning and training

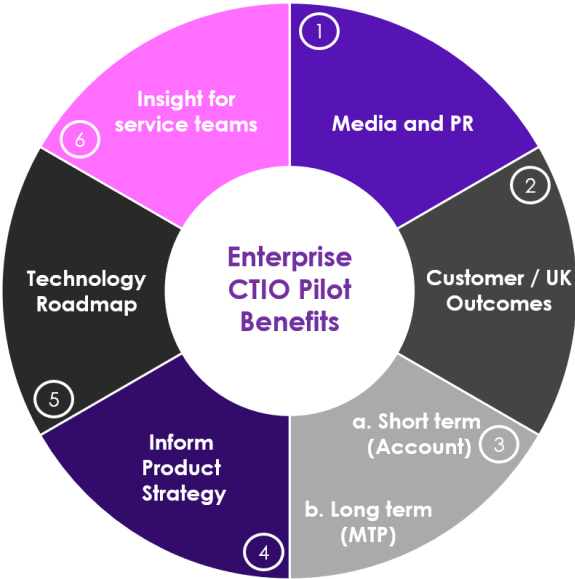
Mobile maintenance and future campus

Pop up 5G

Robotic deliveries

Intelligent movement

Real time environmental monitoring



Example: Forth Valley - Climate recovery & inclusive growth - Scotland

Introducing repeatable technology foundation:

- Sensors / Devices
- Artificial intelligence
- Converged connectivity
- Data exchange & analytics
- Visualisation

Benefits:

Deliver the first green recovery platform in the UK through a digital fabric down the Forth Valley. Proof of concept to be delivered on 17th September and then a proposal to Stirling Regional deal for £x m platform . Initial BT investment of £x. Ongoing commercial model based on data and professional services. Aim to deliver nationally and internationally.



Partnering:



DIAGEO



Belfast | Moving beyond the harbour



Belfast Harbour

To be the region's gateway for trade, growth, tradeable services and an Iconic Waterfront for the City.

Innovation District

To attract and accelerate the opportunity for emerging and innovative growth sectors, including FinTech, MedTech, Global Innovation Institute, Smart Media Innovation Lab,

SMART Belfast

More and better jobs; inclusive growth; improved skills, digital infrastructure and growth of domestic business and foreign direct investment.

Deploy Digital Fabric Infrastructure:

- UK's first 5g private network
- Edge computing
- Sensor/CCTV
- Data hub services
- Innovation platform

Deploy five use cases

1. Movement of people and things
2. Safety and surveillance
3. Environmental
3. Innovation platform for developers
4. Maritime mile for tourism

Proposition:

1. Identify a common challenge
2. Identify use case and potential solution
3. Explore cost, feasibility and joint funding model.
4. Set success criteria
5. Implement, scale and sustain.

Comfort Break

10 Minutes

Research Programme: 2021 - 2025

Proposed Research Themes

Convergent Strategic Goals of Highways Authorities

Based on 21+ Interviews & Reviews

- **Support initiatives that deliver carbon neutral services, schemes and incentives.**
 - Improve biodiversity and air quality; kind to the natural environment.
- **Optimise network performance for all users under all conditions.**
 - Engage effectively to understand and meet the needs of our citizens and communities.
- **Enhance the local economy through network expansion and improvement to meet the growth agenda.**
 - Increasing revenue, decreasing and offsetting costs, rechargeable costs recovery, developing the “County £”.
- **Develop the role of the authority as a visionary anchor institution within the local economy.**
 - Driving economic growth, environmental sustainability, social value and citizen wellbeing.
- **Sustain a financially resilient service that delivers best value with the resources available.**
 - Embrace best practice, innovations and new technologies enabling the service to continuously evolve.
 - Commission the best value partner for each element of our service / strategic programme.
- **Attract, develop, empower and retain the best people capable of driving a dynamic and agile service.**
 - Creating home-grown talent, local skills and capabilities.
 - Create a culture where people feel safe and can realise their potential.

Our Research Portfolio

Participatory, action-based research: exploring and testing transformational options with large-scale business benefits and tangible strategic outcomes.

Benchmarking
& Sector
Analysis

Strategic
Options
Research

Technical
Options
Research

(Proposed New Collaboration)

Since 2015: 31 Members, 88 Associate Members

Natural Next Step

2021 - 2025 Research Themes & Options

A Strategically Aligned Programme

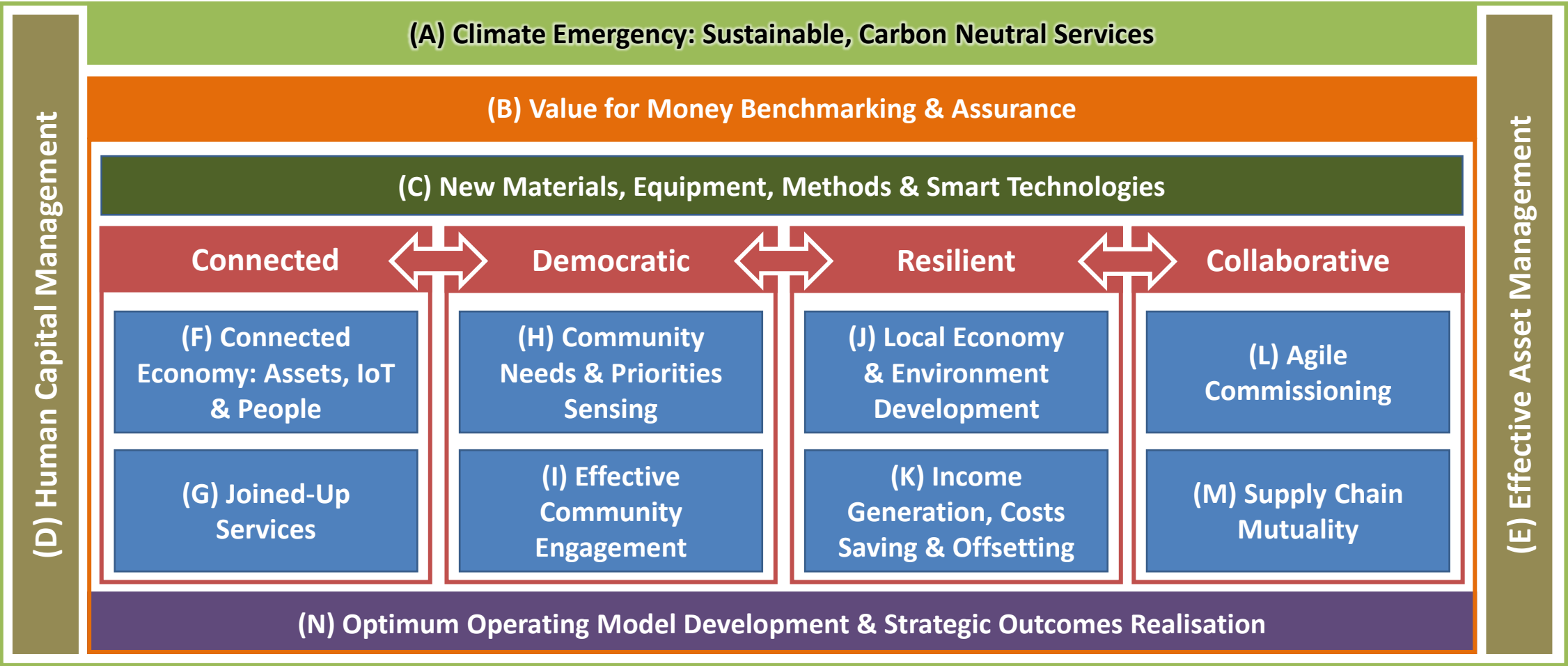
	Revised Research Themes & Options
1	Value for Money Benchmarking & “Big Picture” Analytics (B) ♦
2	Financial Resilience (Income Generation, Cost Saving & Costs Offsetting) (K) ■
3	Private Sector Engagement, Agile Commissioning & Mutuality (L) / (M) ■
4	Climate Change Impact Analysis & Response Management (A) ■
5	New Technologies & Smart Places ■
6	Human Capital Management (D) ♦
7	Optimum Operating Models & Strategic / Political Goals Realisation (N) / (E) ♦
8	New Materials, Equipment & Methods (C) / (E) ♦
9	Community Engagement & Community Resources Utilisation (H) ●
10	Intelligence Gathering: Citizen Perceptions, Concerns & Priorities (F) ■*
11	Effective Stakeholder Communications (G) ●
12	Services Devolution & Democratising Services (Districts, Towns & Parishes) (I) ●

	Options Analysis Elements
A	Option definition (description and scope).
B	Structural changes and enablers.
C	People, processes and systems changes.
D	Strategic and political rationale.
E	Whole life costs.
F	Cashable business benefits.
G	Non-cashable business benefits.
H	Dis-benefits.
I	Implementation and operational risks.
J	Impacts on stakeholders and communities.
K	Sector readiness and barriers to success.
L	Retreat options.

■ Enhanced Research Theme ♦ New Research Theme ● Archived Theme, Background Updates (Tools & Papers Online) *Merged With “Big Picture”

The Sector: Convergent Highways Strategies

Extrapolated Strategic Focus: 2021 to 2025



Group Discussion

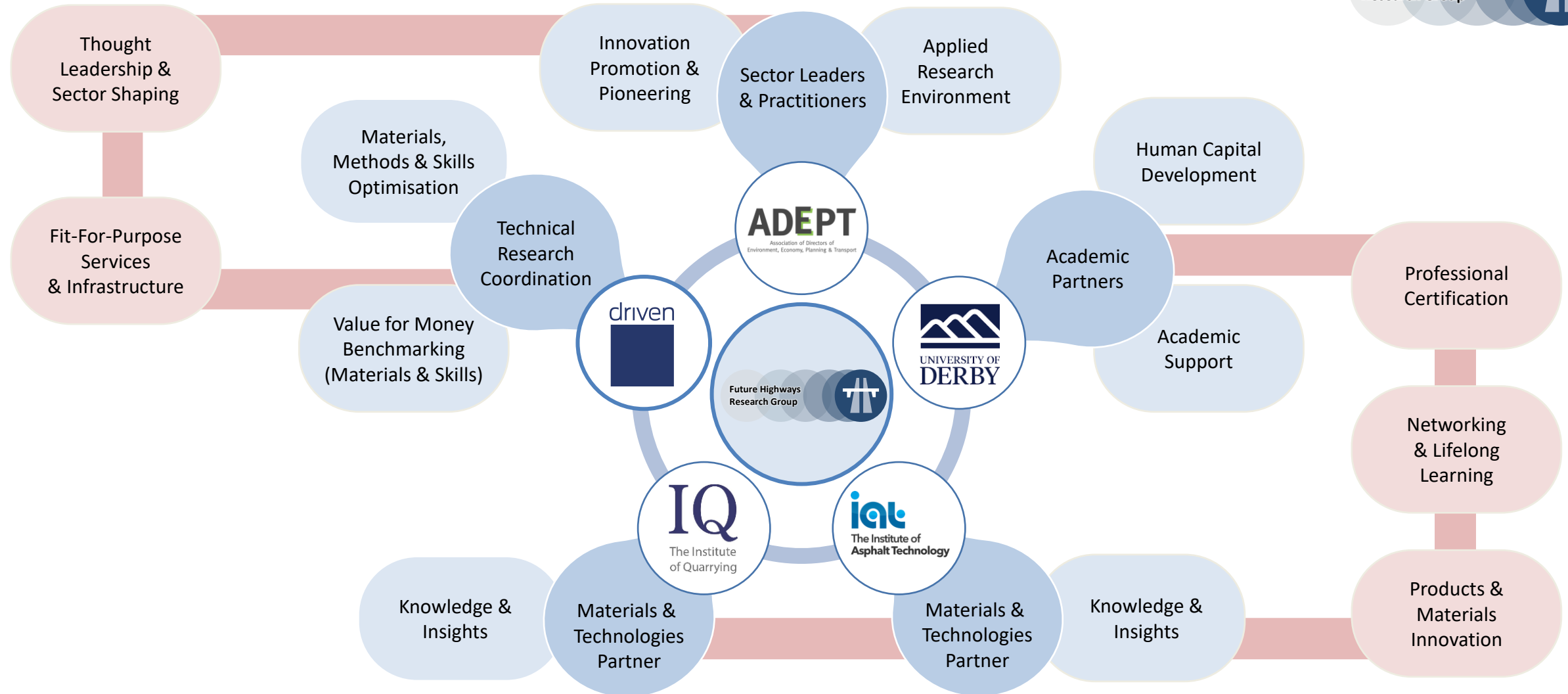
Does the programme align with the strategies and ambitions of FHRG members?

Extended Programme: “Technical” Research

Proposed Research Themes

“Technical Research” Collaboration: A New Theme

Roles, Purposes & Contributions



Technical Research Options

For Consideration & Shaping

The story to date...research theme introduction

- **Network resilience**-The need to understand the problem around early failure/potholes and how we can reduce revenue costs whilst increasing network resilience.
- **Climate Change**- What is the impact and what do we need to do to address this? Lots of water and network damage.
- **Value for money**- Demonstrate value for money.
 - Premature failure of surfacing with increasing option of new products
 - Good quality road condition is one of the highest priorities for our stakeholders.
- **Incentive fund**- Be prepared for the DfT to encourage us through the incentive fund?
- **Funding**- No budget and declining condition
- **Opportunity**
- Light at the end of the tunnel – POTHOLE FUND = RESEARCH proposed focussed on Derbyshire CC and Kirklees, benefit of DCC in house highways lab and expert input from DRIVEN
- Holistic approach touches many areas of our activity.
- **QUESTION** - FHRG feedback on the focus of our planned research and to gauge interest where this work could go, what is already being done and whether there is an appetite for greater involvement/cost sharing??

Joining the dots

Derbyshire, Kirklees, FHRG & Driven

Prevention and a better cure!?*

**HMEP Prevention and a better cure, potholes review, 2012, DfT*



The Review, which has been assisted by experts from both the public and private sectors, highlights three main themes:

- **Prevention is better than cure** – intervening at the right time will reduce the amount of potholes forming and prevent bigger problems later.
- **Right first time** – do it once and get it right, rather than face continuous bills. Guidance, knowledge and workmanship are the enablers to this.
- **Clarity for the public** – local highway authorities need to communicate to the public what is being done and how it is being done.

Research and Innovation

The sector will benefit from supporting, co-ordinating, contributing and disseminating research on all aspects of pothole operations. Innovation from such research may continue to provide opportunities for improvement of pothole management and operations.

Recommendation 17

How is research providing improvement? What is the link to Well Managed Highway Infrastructure and the DfT's Incentive Fund?

A well managed highway ...

**UK Roads Liaison Group, Well Managed Highway Infrastructure: A Code of Practice, DfT, 2016*

RECOMMENDATION 20 – RESILIENT NETWORK

Within the highway network hierarchy a Resilient Network should be identified to which priority is given through maintenance and other measures to maintain economic activity and access to key services during extreme weather.

RECOMMENDATION 21 – CLIMATE CHANGE ADAPTATION

The effects of extreme weather events on highway infrastructure assets should be risk assessed and ways to mitigate the impacts of the highest risks identified.

RECOMMENDATION 32 – CARBON

The impact of highway infrastructure maintenance activities in terms of whole life carbon costs should be taken into account when determining appropriate interventions, materials and treatments.

RECOMMENDATION 35 – ENVIRONMENTAL IMPACT, NATURE CONSERVATION AND BIODIVERSITY

Materials, products and treatments for highway infrastructure maintenance should be appraised for environmental impact and for wider issues of sustainability. Highway verges, trees and landscaped areas should be managed with regard to their nature conservation value and biodiversity principles as well as whole-life costing, highway safety and serviceability.

Decision Equipped.

proving

Future Highways
Research Group



Are we getting it right?

Could we do better?

Defining a disconnected - interconnected problem!

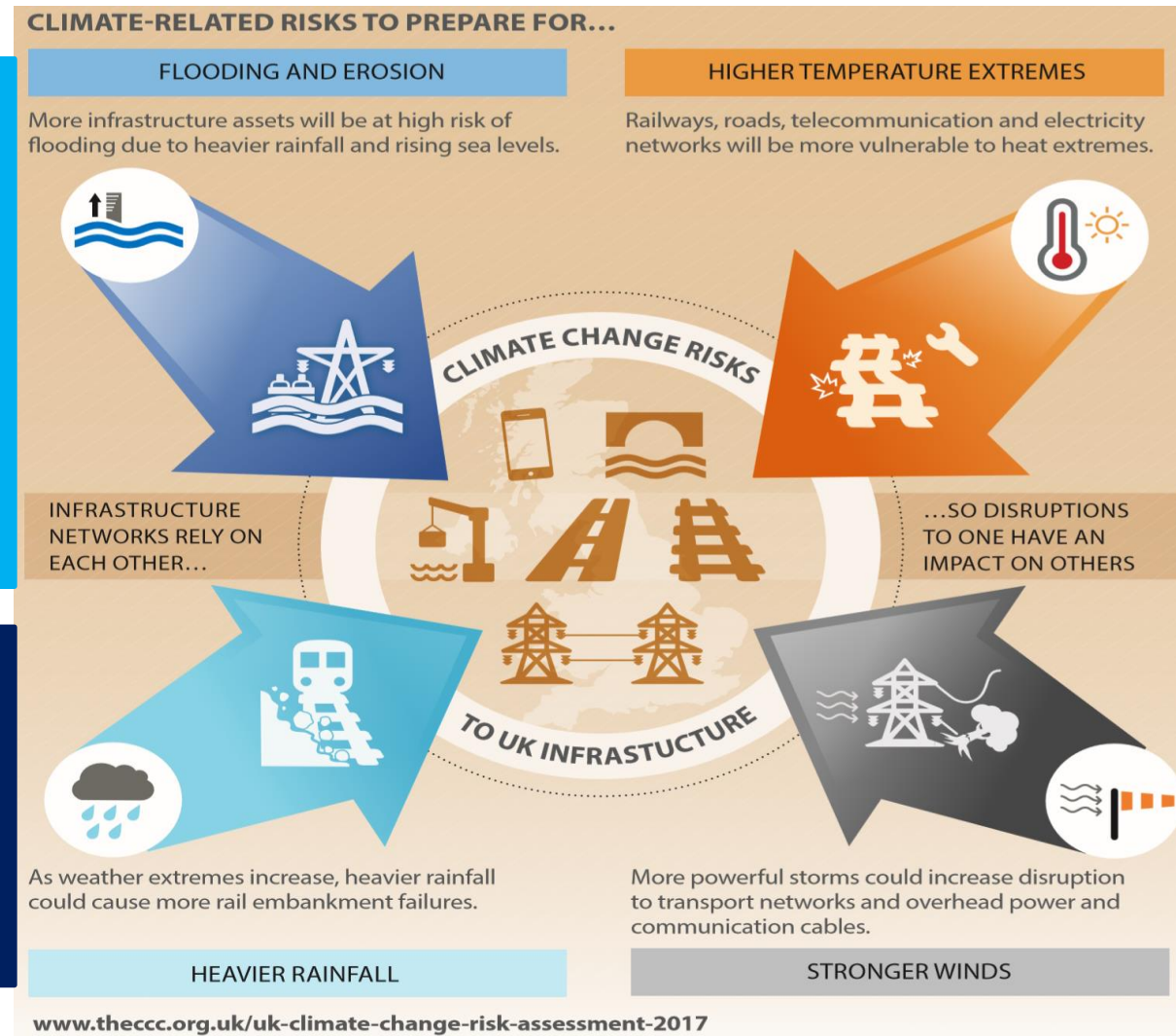
General increase frequency and severity of flooding

Asphalt needs to be more durable and the pavement structurally sound

The Pitt Review 2008 & Making Space for Water

Increased rainfall signals an increasing need for durable materials with good adhesion.

How much rainfall though?



General increase in temperature across Europe

Bitumen used in asphalt needs to be less temperature susceptible.

Understanding of performance required

**Delays to the road user...
Unpredictable journey times...
Economic cost of congestion...**

**Is there a better way?
How should/can the network adapt to reduce this?**

Research Questions

Value for money

- With a changing climate impacting our network do we get value for money for workmanship and materials?
(if we do – lets skip to the end where we ask for questions)
- Has a VfM assessment been undertaken to assess the materials and processes we all use?

Climate Change/Adaptation

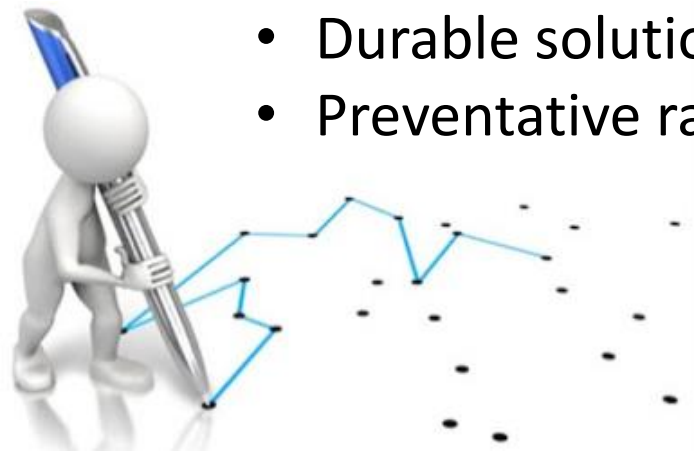
- Do we fully understand the impacts and consequences of a changing climate on our network? LCLIP Developed and Implemented – hearts and minds?
- Are we able to forecast how and when these events may cause future harm to our network?
- Have we optimised and adapted our materials and process to provide the best solutions to mitigate these impacts?
- Can our materials and process be further improved to help sustain our local and National environments?

Selection/Prioritisation

- Can we provide a single-score indicator uniting different environmental data points into one (monetary) number?
- Could we use a monetary number to holistically look at environmental/health impacts and change the way we tender?
- Consider impacts to 'traditional' go to treatment options and effects on whole life costs and lifecycle planning of taking these 'impacts' into consideration
- Is it possible that we could minimise/mitigate negative impacts by simply(?!) joining the dots?

Making the links – what's important?

- Workmanship (quality of)
- Appropriate materials (right first time)
- Traffic conditions (changing? – heavier batteries? platooning?)
- Active Travel & Connected and Autonomous Vehicles Considerations
- Climate change – increased frequency and severity of events (consequences? adaptation and resilience?)
- Protecting our environment sustainably – (not shifting the problem)
- Durable solutions (longevity – quality over quantity - performance)
- Preventative rather than reactive maintenance



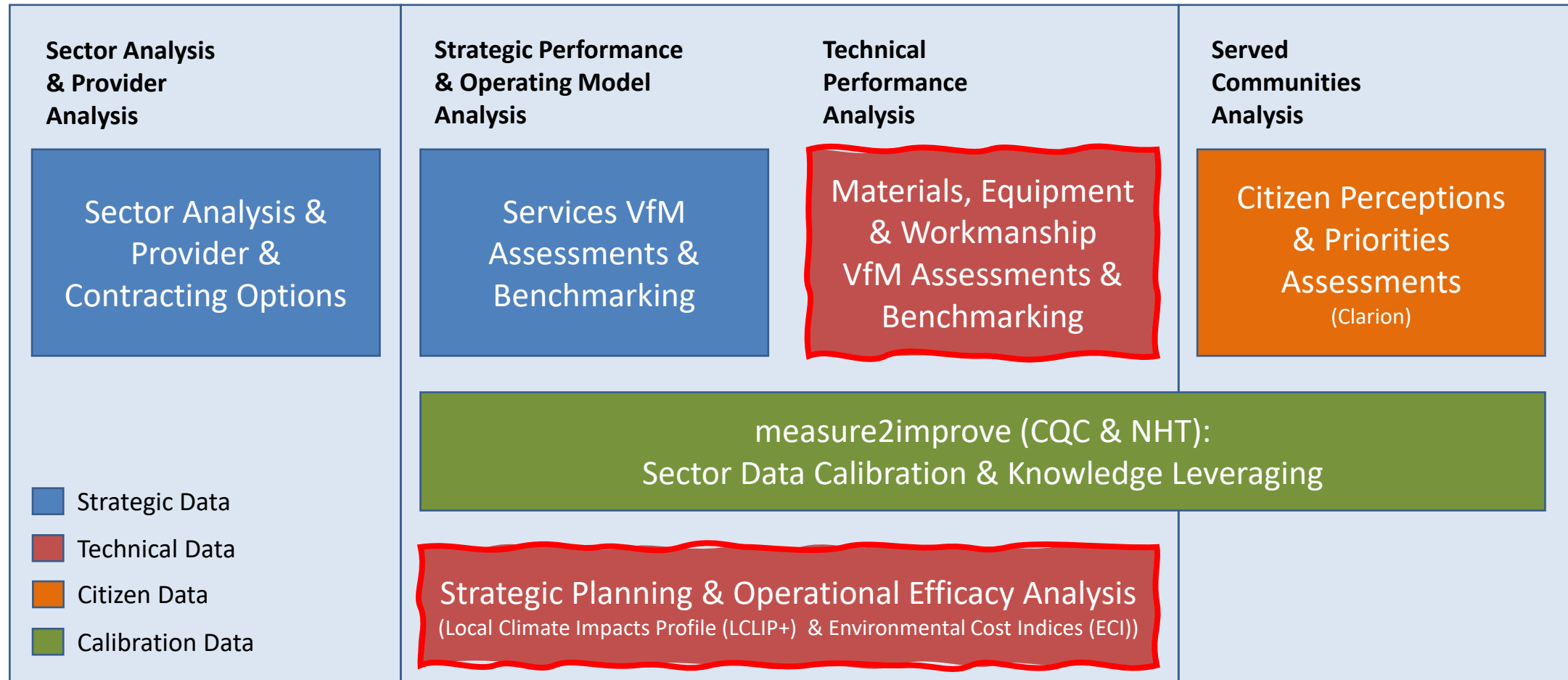
An overview of how (potentially)

1. VfM: Materials and processes: create new standards?
2. LCLIP+ : Examine consequences of (recent) past events, but expand model to include projection for future climate events – start the adaptation process.
3. Design for resilience: Adapt material choice based on combined VfM and LCLIP+ to improve quality and longevity of network.
4. Assess feasibility of providing an Environmental Cost Index (ECI) to provide a single monetary value to a variety of materials and process to harness the best outcomes from the innovation currently available.
5. At a more strategic level, ECI could lead to the development or adaptation of an independent tool to address environmental outcomes enabling procurement teams to promote more environmentally beneficial products or schemes from a holistic perspective. (No more greenwash!)



"Big Picture" Contribution

Socio-Technical Data Integration



Development of LCLIP+

What is it?

LCLIP: Local Climate Impacts Profile - Developed by UK Climate Impacts Programme (UKCIP) – 2009 update

What it is/does; relatively simple framework for assessing current weather and its impacts, ensures focus is on the output of consequences rather than events themselves

What it doesn't do; restricted to very recent past (not future) – i.e. no forward projection

How?

By applying UK Climate Projections, as developed by the Met Office and Environment Agency, it will be possible to assess future risk and vulnerability.

These projections for future changes to both average climatic conditions and also the frequency of extreme weather events, allow for an understanding of where risk levels may change, and the identification of new risks which may emerge as the climate changes.

When applied alongside records of past incidents, and other information sources (such as flood maps), climate projections may also help to identify when and what action should be taken to adapt to the risks. **(A move to performance specification)**

More about ECI (Environmental Cost Indices)

What is it and why bother?

The advantage of the ECI approach is that it provides a single-score indicator uniting different environmental data points into one (monetary) number. Conversely, in Life Cycle Assessments (LCA), data comes from many different sources along the supply chain and can be difficult to compare.

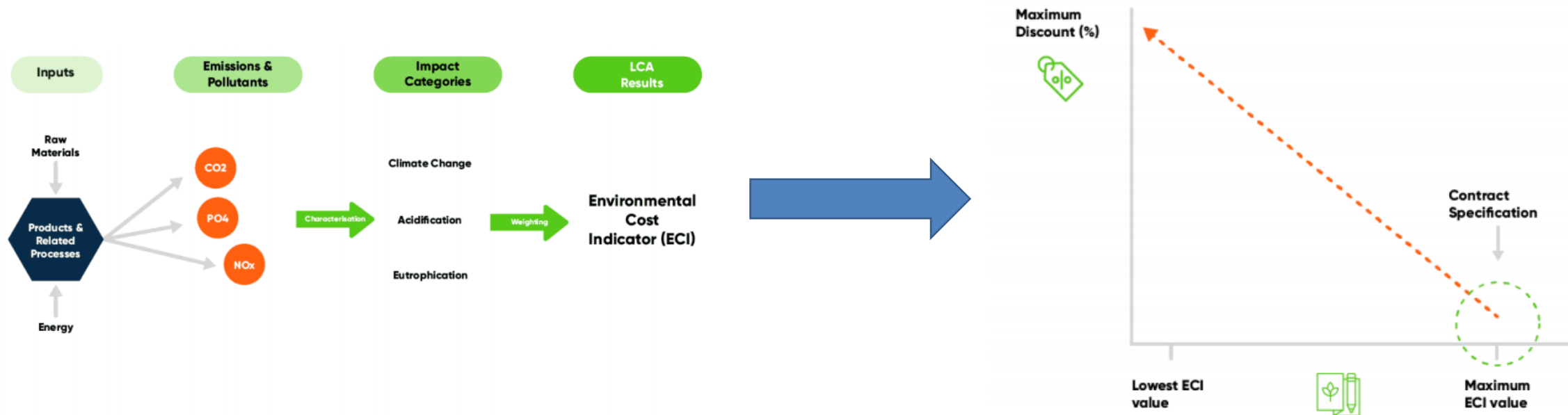
This project will assess the feasibility of applying existing ECI modelling to UK pavement materials contained in the LA network. This will require shadow pricing to be developed based on the UK Governments highest acceptable cost level per unit of emission control (prevention). It will therefore provide **independent assessment of environmental outcomes** of various pavement materials, binders and novel alternatives would ensure that negative impacts would be minimised and could be mitigated / offset based on reliable data.

It should help **LA's build a sustainable strategy** for the future which **measures both financial and non-financial impacts** in relation to maintaining and extending the network whilst at the same time **provide a level playing field** for the evaluation and comparison of products and process. It could also help them **meet the Performance Indicators and targets around carbon**, expressed as CO₂e by **encouraging contractors to invest in providing low carbon products** and in more efficient plant and processes.

ECI possible outputs

Outputs will include industry best practice guidance document for the calculation of ECI in the context of highways. This will feature examples of a variety of materials and process to harness the best outcomes from the innovation currently available.

At a more strategic level, the development or adaptation of an independent tool to address environmental outcomes would enable procurement teams to promote more environmentally beneficial products or schemes



Resilience

What?

Understanding the factors driving the costs and resilience of repairs and the initiatives that can be undertaken to optimise asset and support services performance.

How or if a matrix of optimised preventative repair solutions can be drawn up for Derbyshire and Kirklees (and the sector as a whole?) which takes account of skills (contractor/DLO), network hierarchy, climate and traffic information (previous research has evaluated these factors separately but not in combination).

Outputs:

How to provide a more resilient network, whilst improving quality and efficiency

Potential training module for the workforce to improve and maintain quality and efficiency of workmanship (national upskilling potentially).

Improved perception of the LHA in how we manage our roads and better support for our council objectives – UKRLG Economic Assessment Tool?

Horizon Scanning: 2022 and beyond...

- **Predicting performance lab to lane.**
 - Link to Live Labs and improved evaluation methods on back of LCLIP+/ECI etc.
- **Designing for resilience.**
 - Risk based approach to pavement design – Oxfordshire lead.
- **Adopting a data – driven approach**
 - Digitising the network and autonomy?
- **DfT Incentive Fund.**

Technical Research: Next Steps

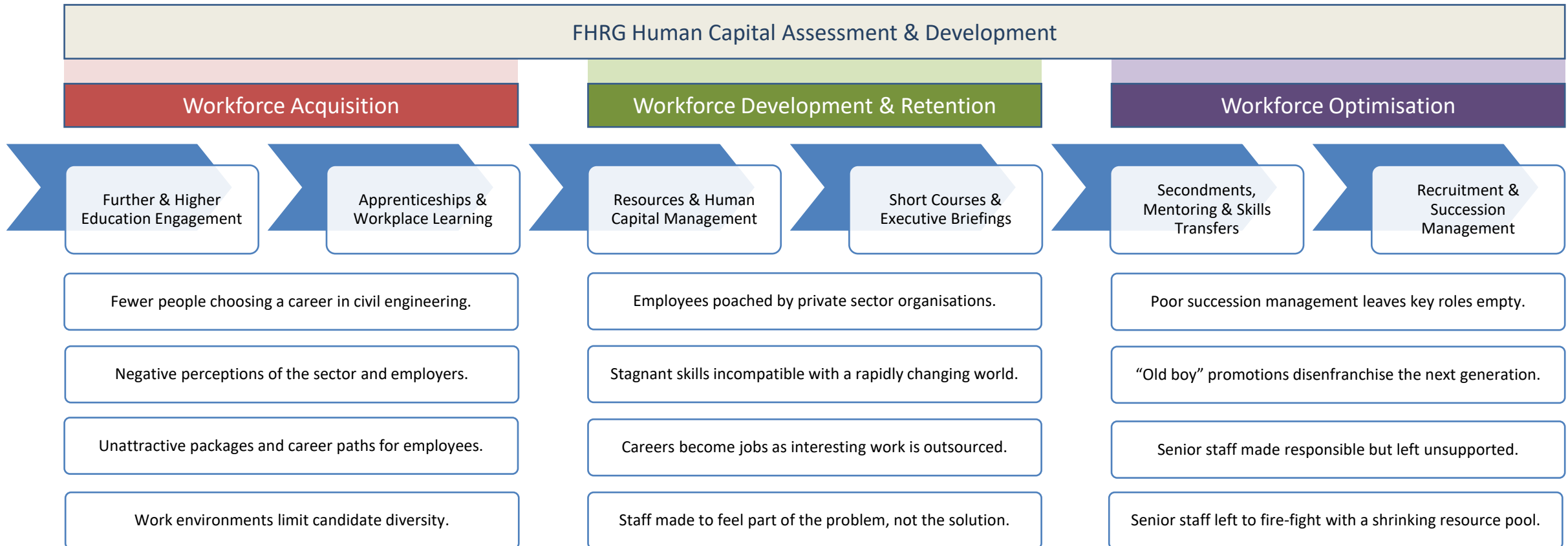
Group Discussion

Human Capital Management

Proposed Research Theme

Human Capital Assessment & Development

Is there a problem?



HCM Introduction & Objectives

1. Introduction

- Human Capital Management (**HCM**) is the effective acquisition, employment, and development of a company's employees through strategic and tactical practices, processes, and applications in order to maximise their economic value.
- The highways sector is facing an increasing challenge in recruiting and retaining the skilled resources necessary to deliver a service that meets the expectations of its customers now and into the future. The problem is exacerbated by an ageing force, meaning effective succession planning is becoming ever more critical.

2. Objectives

- The objective of this review is to identify and describe the optimal future policies, processes, relationships and systems to support successful Human Capital Management across the Highways Sector, ensuring the service has the necessary resources to successfully address the current service challenges and realise the opportunities of the future.

Future Challenges & Opportunities

- **Changing Workplace Environment**

- Environmental and climate change considerations.
- Future infrastructure, materials and technologies.
- Condition of the network and highways assets.
- Changing local and central government, and citizen priorities.
- Future funding level and sources.
- Changes in working practices - virtual working.
- Machine learning and Artificial Intelligence.
- Current generation work expectations.

- **Human Resource Implications**

- Skills requirements: now and emergent.
- Resource availability and affordability.

- **Highways Sector Resource Investment**

- Public / Private Joint Human Capital Management
 - Future relationship / partnerships.
 - Dynamic resources pool sharing.
- Future training and support requirements.
 - Scope and scale of training and work experience.
 - Joint training programmes / secondments.
- Career progression and opportunities (across the sector).

- **Support Systems**

- People Analytics
 - Resource Performance
- Organisational Structures and Policies
- Resource Management

Next Steps

1. Develop the research proposal.

- Scope?
 - Design and technical, contract management, streetworks...
- Focus?
 - Diversity, geographic reach, succession, AI, remote working...
- Sector Participants?
 - Public sector, private sector, educational establishments, professional bodies...

2. Invite participants.

- All members will invited to engage; this is a sector-wide problem.

3. Aim to publish the research by March 2021.

4. Ask for nominal funding from members and seek private sector funding.

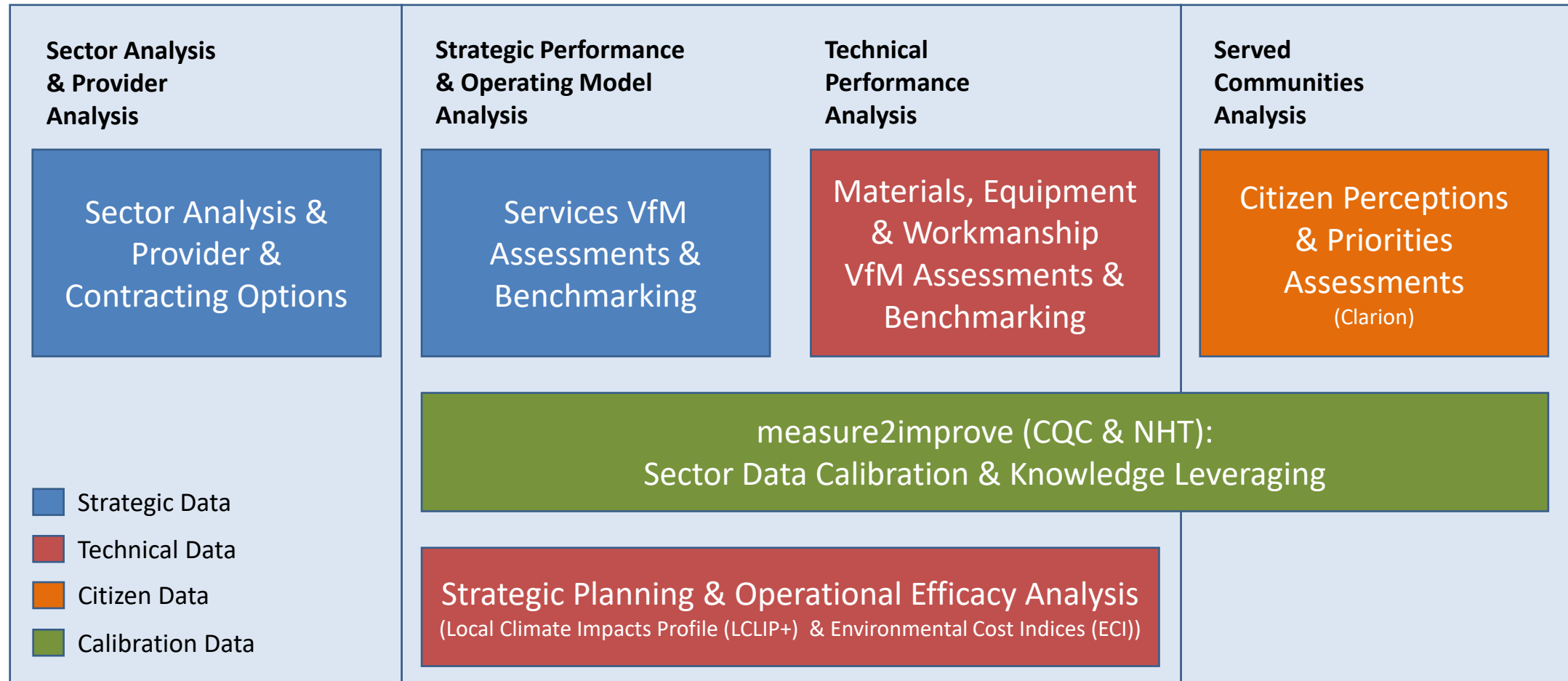
Comfort Break

10 Minutes

Developing “Big Picture”

New datasets and integration with measure2improve (NHT and CQC).

Building “Big Picture”



Collaboration with Measure2Improve

- **Undertaking a review and alignment of respective Highways Assessment Factors.**
 - NHT Performance Management Framework
 - NHT Customer Satisfaction Survey
 - CQC Efficiency Assessment
- **M2I to provide relevant measures for each VfM assessment.**
 - Improve analysis to better understand the differences.
 - Seeking to ensure the timeliness of metrics provided.
- **Ambition is to provide an agreed and comprehensive set metrics that support the ‘Big Picture’ agenda.**

FHRG & VfM Benchmarking Club

Launch and Next Steps

FHRG & VfM Benchmarking Club

Launch Date Approaching

- **Launch: 1st November 2020**
- **What is new?**
 - Refreshed factor set, incorporating key metrics from CQC and NHT.
 - Clarion data integrated over time.
 - Peer reviewer involvement.
 - Virtual assessments.
- **What is next?**
 - Peer reviewer event, Autumn 2020.
 - Agree scope, responsibilities and time commitment
 - Review and sign off refreshed factor set
 - Subscription invoices issued 20th October 2020.
 - Assessments scheduled from 21st January 2021.

VFM Benchmarking Club – Peer reviewers

- **Jack Wiltshire** **Dorset CC**
- **Matt Davey** **W Sussex CC**
- **David Laux** **Northumberland CC**
- **Paul Rusted** **Lincolnshire CC**
- **Jon Evans** **Lincolnshire CC**
- **Tom Gifford** **Lincolnshire CC**
- **Neill Bennett** **Derbyshire CC**
- **Jade Jones** **Central Beds Council**
- **Dave Farquhar** **Bucks Council**
- **Andy Wilde** **Shropshire CC**
- **Steve Smith** **Shropshire CC**
- **Pat Clarke** **Leicestershire CC**
- **David Walters** **Staffordshire CC**
- **Mark Stevens**
- **Tom Blackburne-Maze**

Marketplace Review & Future Services Delivery Options

Sector Reports

Marketplace Review

Report Available

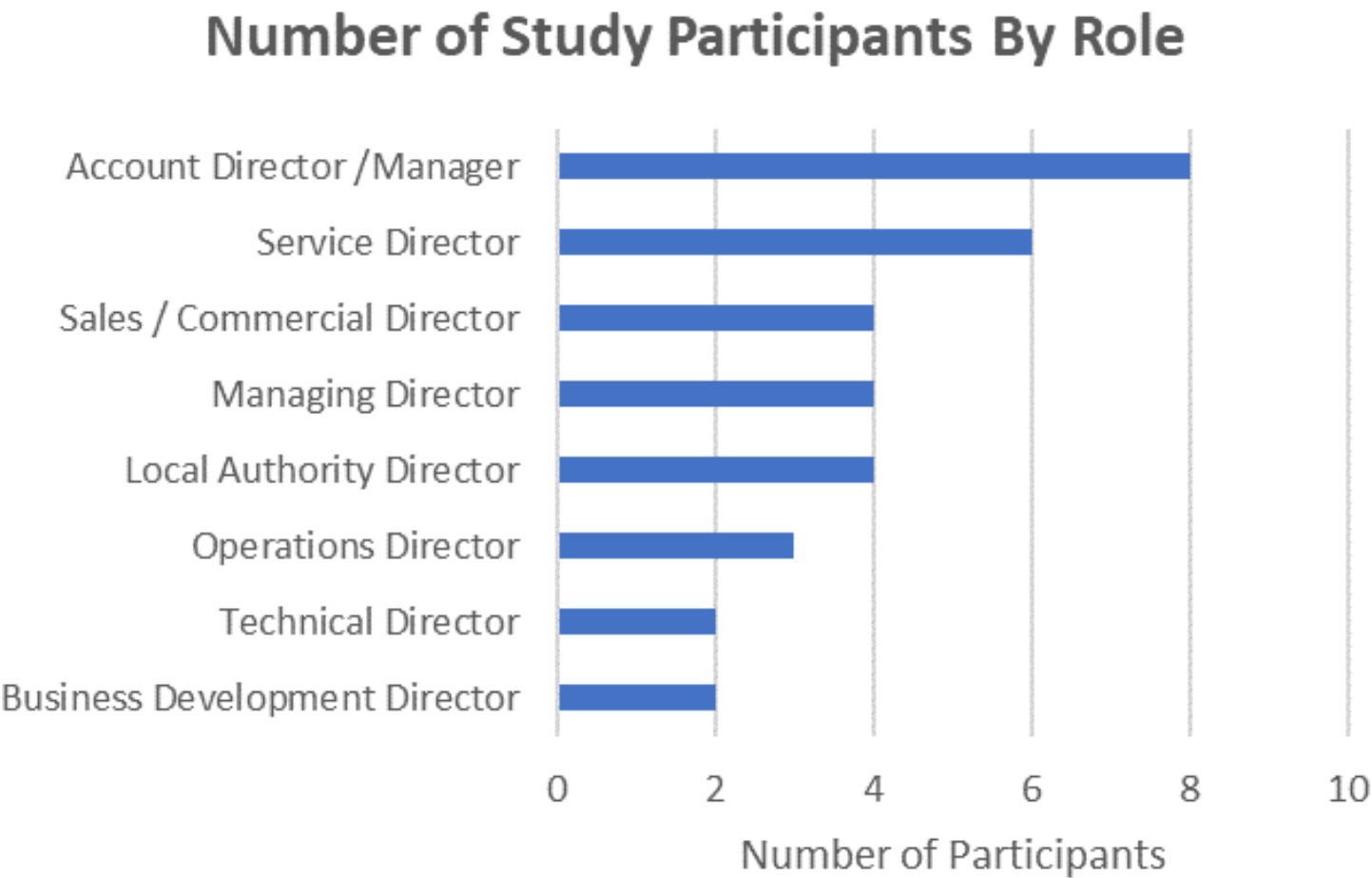
Within the next five years, twenty-four local highways authorities will be coming to the end of their current highways delivery arrangements. Seven of these authorities, who are also members of the FHRG, commissioned Proving to undertake a review of the marketplace and evaluate future service delivery options.

A key objective of the review is to better understand how authorities and their partners can improve contractual and collaborative relationships to deliver mutually beneficial outcomes.

Provider Participation

- Amey
- Atkins
- Balfour Beatty
- Costain
- Jacobs
- Kier
- Ringway
- VolkerHighways
- Ringway Jacobs
- Skanska
- Tarmac
- WSP
- SSE
- Bird & Bird (Procurement Specialists)
- BT (Informal Discussion)

Analysis of Participants

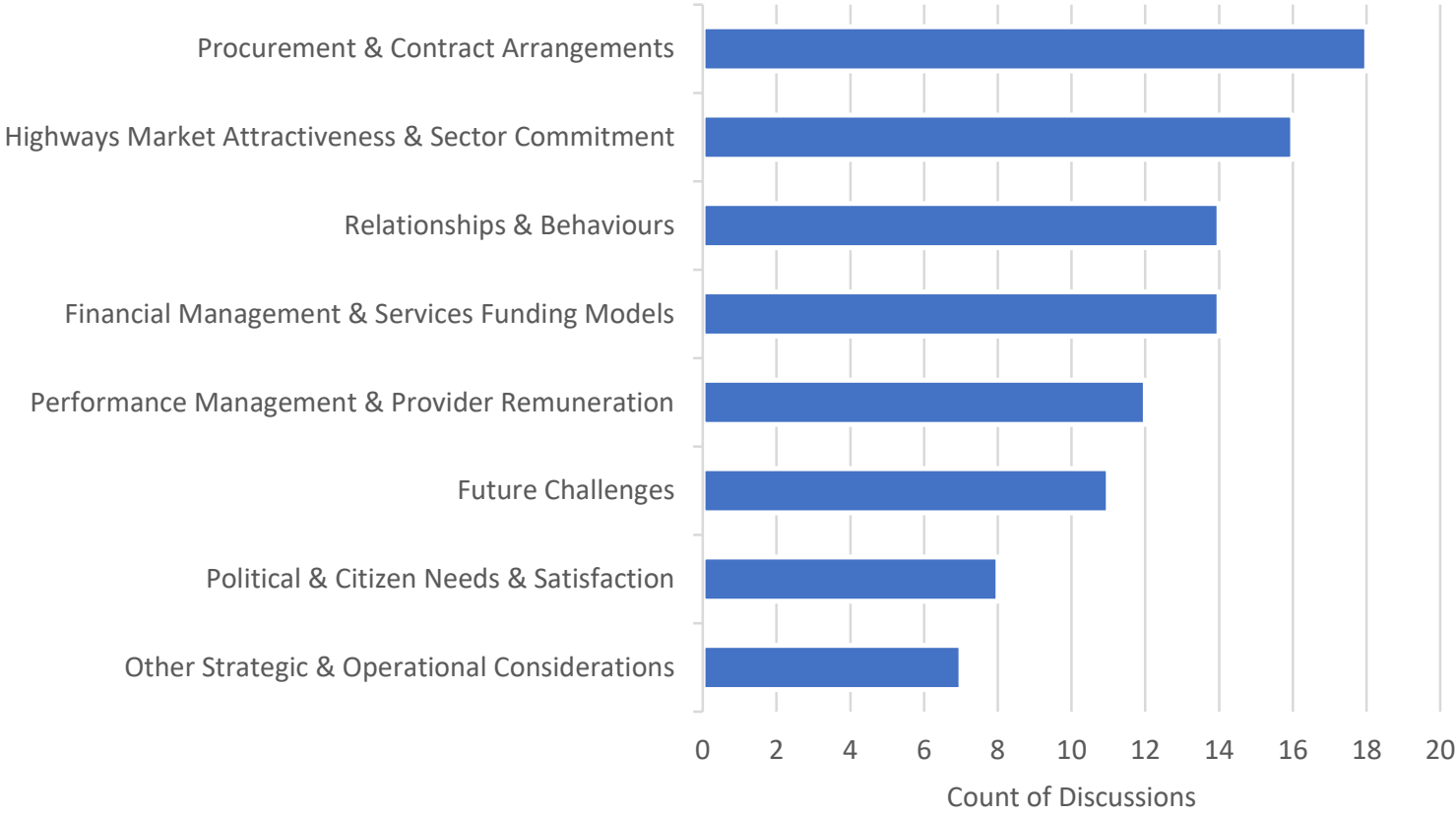


Scope of Discussions

- **Highways Market & Sector Commitment.**
 - Perceptions of clients and client behaviours, market ambitions, target clients and readiness to bid.
- **Procurement & Contract Arrangements.**
 - Including post-OJEU procurements, early engagement and flexible contracting frameworks.
- **Financial Management & Services Funding Models.**
 - Costs transparency, ensuring services are properly funded and future revenue generation and sharing.
- **Performance Management & Provider Remuneration.**
 - Simplified KPIs, rebalanced client / provider roles and accountability and better gain / share arrangements.
- **Future Challenges.**
 - Condition of the network, asset uses, shifting priorities expectations, evolving operating models.
- **Relationships & Behaviours.**
 - Better collaboration, client / provider mutuality, developing and sustaining trust.
- **Political & Citizen Needs & Satisfaction.**
 - Engaging with the public, prioritising and meeting citizen demands, accommodating political volatility.
- **Other Strategic & Operational Considerations.**
 - Preparing for post-COVID operations, carbon-neutral services, commercialisation and succession management.

Focus of Discussions

Count of Discussions by Topics



Overview

- **The local authority highways sector is still an attractive market for the private sector, but:**
 - Specific providers may be seeking to divest their highways services business.
 - Providers will be increasingly selective as to which contracts they bid for.
- **Providers are seeking to work with authorities that are willing and able to build truly collaborative and strategic partnerships**
 - This was described as the 'golden thread' of success that runs through the process from early market engagement, through procurement and contracting, and on to delivery.
- **Relationships should be outcomes-based rather than transactional agreements, with a fair and proportionate allocation of risk and reward.**
 - This will help ensure the agility and commitment of all partners, such that the current and emerging sector challenges can be jointly and promptly addressed, and the opportunities presented by new technologies and innovation fully realised.
- **Providers preferences as to specific service delivery models largely reflected the model that each provider is structured to deliver.**
 - General consensus that an integrated or small number of single providers, working as a collaborative partnership, provides the best opportunity to realise efficiencies, exploit innovation and new technologies, and access specialist skills and additional capacity.

Market Attractiveness – Providers' bid criteria

1. The reputation of the highways authority as a good client.
2. The calibre of key staff, including the Chief Executive, Director of Service and the Senior Highways Officer.
3. The willingness and ability of the authority to build a true collaborative and strategic partnership, based on trust, to the benefit of all parties.
4. The ability to achieve an agreed contractual rate of return and to grow their business profitably.
5. The proposed level and stability of funding for the service required.
6. The scope and scale of services on offer and the length of contract, ideally 8-10 years.
7. The geographical location of the authority in proximity to current operations. (approx. 50% of the providers).
8. The strength of the existing relationship, either as the incumbent or as established through contacts within the sector.
9. Early engagement and consultation by the authority with the market, demonstrating a willingness to listen, discuss and evolve their thinking and requirements.
10. The quality of dialogue during the procurement process i.e. being open, responsive and transparent.
11. The skills, attitude and cohesiveness of the procurement team.
12. Timing with other active contracts or bids.

Relationships and Behaviours

All providers stressed the critical importance of trust and the building of strong relationships from the start and throughout the life of the contract. The following factors were identified as those contributing towards the building and sustaining of trust and ensuring effective collaboration:

- The quality, continuity and strength of leadership of both the client and provider.
- The level of respect, cohesiveness and collaboration, both within the respective client and provider management teams, and then extended to the joint management of the service.
- The degree of political support from members and the scale of constructive involvement during the life of the contract.
- Agreed behaviours between client and provider, represented in shared behavioural KPI's (*where possible*).
- The adoption of ISO 44001 and the principles of mutuality (bi-lateral non-exploitation agreements and the balanced realisation of each parties strategic goals); embedding these philosophies within the contract terms and services delivery model.
- Recognition from the start of the contract that there will be inevitable problems, and that these will require an agreed governance structure for prompt and fair resolution.
- Establishing an effective and fair process for the identification, resolution and cost allocation of risk.
- The behaviours and attitude of the client during the procurement process.
 - Was the client open, helpful, and responsive to questions, transparent and fair?
 - Was there continued pressure to keep reducing costs?

Providers offered a number of suggestions and comments relating to the procurement process and contract arrangements, including:

- The quality of tender documentation varies enormously. It was suggested authorities should try and respond to their own tender before the document is issued to the market.
- It would be helpful to establish a suite of standard contracts (similar to HMEP) that evolve, capturing the learning from each procurement. Providers would welcome the opportunity to collaborate with authorities to develop this suite.
- A level of quality dialogue is required for a successful tender process, starting well before the tender is issued.
- Several providers suggested that when local authority central procurement teams take a leading role, the exercise can become more about process than desired outcomes.
- Ensure clarity, consistency and agreement as to the criteria on which the contract will be awarded, i.e. the balance of Price vs. Quality vs. Extras, such Social Value or Innovation.
 - Price often becomes the key criteria.
- The contract should reflect the intended benefits of the relationship for both parties.
- The use of professional procurement consultants can provide valuable support for an often complex process; helping to ensure objectivity, consistency and rigour.
 - However, the authority still needs to ensure it has the necessary oversight and takes full responsibility for the procurement process and success of the contract awarded.

Other Key Observations

Providers made a number of key observations which are detailed further in the report. These include:

- **Financial Management and Services Funding Models** – long term planning is key; authorities should recognise it can be beneficial to invest more funding in the early years of a contract to reduce maintenance costs in future years.
- **Performance Management and Provider Remuneration** – risk and reward needs to be proportionate and fair. The preferred performance management framework would feature two-way KPIs linked to joint objectives which are regularly reviewed.
- **Other Strategic and Operational Considerations**
 - Providers are keen to support authorities to deliver their sustainability and social value strategies, but few authorities have yet articulated the tangible outcomes they are seeking to achieve.
 - All providers stressed the need for an ‘intelligent client’; a cohesive client team that has a good understanding of the asset, with a clear and realistic asset management plan and strategy.
 - New entrants suggest that the traditional providers are not well placed to offer specialist services, as they do not possess the necessary skills, experience, and lack access to the most effective new technologies.
 - This observation generated a firm response from traditional providers who stated they would very much welcome the opportunity to become more involved in these discussions.

Next Steps

- **Report has been shared with ADEPT, FHRG and participating Providers.**
- **The response has been very positive – ‘a useful and accurate report’.**
- **Proposed to refresh the review every two years (Spring 2022).**
- **Link to the proposed FHRG Human Capital Management research theme.**

Future Service Delivery Options

Interim Update

Future Service Delivery Options

FHRG Participants

Authority	Workshop 1 Strategic Drivers	Workshop 2 Option Scoring – Strategic Fit	Workshop 3 Option Scoring – Attractiveness & Achievability
Buckinghamshire	2 March	22 May	28 May
East Sussex	16 April	23 April	27 April
Hertfordshire	20 May	30 June	28 July
Oxfordshire	7 Sept	14 Sept	30 Sept
Somerset	18 May	4 June	1 Sept
Suffolk	4 Sept	9 Sept	18 Sept
Surrey	30 April	5 May	6 May
Central Beds	10 Sept	23 Sept	2 Oct

These authorities represent eight of the 24 authorities coming to market over the next three years.

Consolidated Strategic Goals of Highways Authorities

Updated June 2020

- **Support initiatives that deliver carbon neutral services, schemes and incentives.**
- **Optimise and improve network performance for all users under all conditions.**
- **Enhance the local economy through network expansion and improvement to meet the growth agenda.**
- **Sustain a financially resilient service that delivers best value with the resources available.**
- **Engage effectively to understand and meet the needs of our citizens and communities.**
- **Embrace best practice, innovations and new technologies enabling the service to continuously evolve.**
- **Develop and sustain collaborative partnerships that deliver the objectives of all partners.**
- **Attract, develop, empower and retain the best people capable of driving a dynamic and agile service.**

All participant authorities adopted very similar strategic objectives following Workshop One, with local variations of the above themes. This further evidences the strategic convergence across the sector.

The Options Analysis Tool (Illustrative scoring)

Decision Equipped.

proving

Future Highways
Research Group



Refresh Data

Future Highways
Research Group



Option Family	#	Option Name
Do Nothing	1	Current Service Model
Single Provider	2	Contractor & Designer (Separate)
	3	Integrated (Contractor + Designer)
Multiple Providers	4	Multiple Providers Per Service Area
	5	Function-Orientated Service Providers
Framework	6	Primary + Secondary (Risk Sharing)
	7	4-Year Framework Agreement
	8	JV
	9	Pseudo JV (Partner + Profits Sharing)
Teckal	10	Arms-Length Company
Private Finance	11	PF2
Mixed Economy	12	Cyclical & Reactive In-House
	13	Best Option By Function / Service
	14	Highways Alliance
	15	All In-House
Shared Services	16	Primary Design + Add On
	17	Shared Service (Neighbouring Authority)
	18	Regional Combined Service

Strategic Performance									Total	Weight-Adjusted Score
Optimise and improve network performance for all users under all conditions.	Enhance the local economy through network expansion and improvement to meet the growth agenda.	Sustain a financially resilient service that delivers best value with the resources available.	Engage effectively to understand and meet the needs of our citizens and communities.	Embrace best practice, innovations and new technologies enabling the service to continuously evolve.	Develop and sustain collaborative partnerships that deliver the objectives of all partners.	Attract, develop, empower and retain the best people capable of driving a dynamic and agile service.				
66	66	66	66	66	66	66			66	58
66	100	66	33	66	100	100			76	66
66	100	66	100	66	100	100			85	75
33	33	33	33	33	33	66			38	33
100	33	100	66	66	66	66			71	62
0	0	0	0	0	0	0			0	0
33	33	33	33	33	33	33			33	29
66	100	33	100	66	100	66			76	66
33	66	66	100	66	100	66			71	62
66	100	33	100	66	66	66			71	62
0	0	0	0	0	0	0			0	0
66	33	66	33	33	66	66			52	45
100	66	100	66	66	66	66			76	66
									0	0
100	100	33	100	33	33	66			66	58
66	66	66	66	66	66	33			61	54
33	66	100	66	100	66	33			66	58
0	0	0	0	0	0	0			0	0

Factor Importance	100	100	100	100	100	100	100	100
Average Factor Score	53	57	51	57	49	57	53	0

Attractiveness Analysis (VfM)							Total	Weight-Adjusted Score
Economy	Efficiency	Effectiveness	Stakeholder Value					
66	66	66	66	66	66	66		
100	66	66	66	75	75			
33	100	66	66	66	66			
33	33	33	33	33	33			
66	100	66	66	75	75			
0	0	0	0	0	0			
33	33	66	66	50	50			
66	66	66	33	58	58			
100	66	66	66	75	75			
66	66	66	33	58	58			
0	0	0	0	0	0			
33	33	66	33	41	41			
66	100	66	66	75	75			
				0	0			
66	66	66	66	66	66			
66	66	100	66	75	75			
100	33	33	33	50	50			
0	0	0	0	0	0			

100	100	100	100
53	53	52	45
	47	47	47

Achievability Analysis													Total	Weight-Adjusted Score
Complexity (Inherent Risk)	Capability & Capacity	Affordability	Authority Readiness	Provider Readiness	Sector Success Stories	Governance & Reporting	Partner Management	Cultural Alignment						
100	100	100	66	66	66	33	33	66					70	65
66	100	100	100	100	100	100	100	66					92	78
66	100	100	100	100	66	100	100	66					89	75
33	66	33	33	33	33	33	33	33					37	32
100	100	100	100	100	100	66	66	66					89	79
0	0	0	0	0	0	0	0	0					0	0
33	66	66	33	33	33	33	33	33					40	36
33	33	33	33	33	33	33	33	66					40	33
66	66	66	66	66	33	66	100	66					66	55
33	33	33	33	66	33	33	66	66					44	37
0	0	0	0	0	0	0	0	0					0	0
33	66	33	66	33	66	66	66	66					55	44
100	100	100	66	66	66	66	66	66					77	68
													0	0
33	33	66	33		66	66	100	100					62	42
100	100	100	100	66	66	66	33	66					77	69
33	66	66	100	66	33	33	66	66					59	51
0	0	0	0	0	0	0	0	0					0	0

100	100	100	75	100	75	25	50	75
49	61	59	55	52	47	47	55	52
	38	32						

Key: Anticipated Performance	
	Not Applicable (In This Context)
0	Critical Issue / Barrier to Implementation
33	Poorer Than Current Performance
66	Unknown or Parity (At Best) Performance
100	Parity Or Better Than Current Performance

Position Analysis	
Attractiveness, Achievability & Strategic Performance	Rank
63.0	7
72.8	1
71.8	2
32.7	13
71.8	3
0.0	14
38.1	12
52.4	9
63.9	6
52.3	10
0.0	14
43.5	11
69.7	4
0.0	14
55.4	7
65.9	5
52.9	8
0.0	14

Favoured Future Options – Early Observations

- The early observations below are based on the completed scoring exercises for only a small number of authorities; a fuller picture will be presented at the conclusion of all eight studies.
- Given the extent of convergence across strategic drivers, there is less consensus as to preferred future service delivery options than may be expected.
- Political preference and experience of the most recent contract both carry significant weight for participants in the scoring workshops.
- Authorities tend to favour a hybrid of the models under consideration as their preferred future service delivery option.
- There is general consensus towards models that feature a properly resourced, ‘intelligent’ client and a small number of external partners.
- Authorities are generally quite conservative in the range of options considered, although the less common models such as JV or Arms Length Company can score well where they are included.
- There is little appetite for shared services.

ADEPT Private Sector Innovation Conference

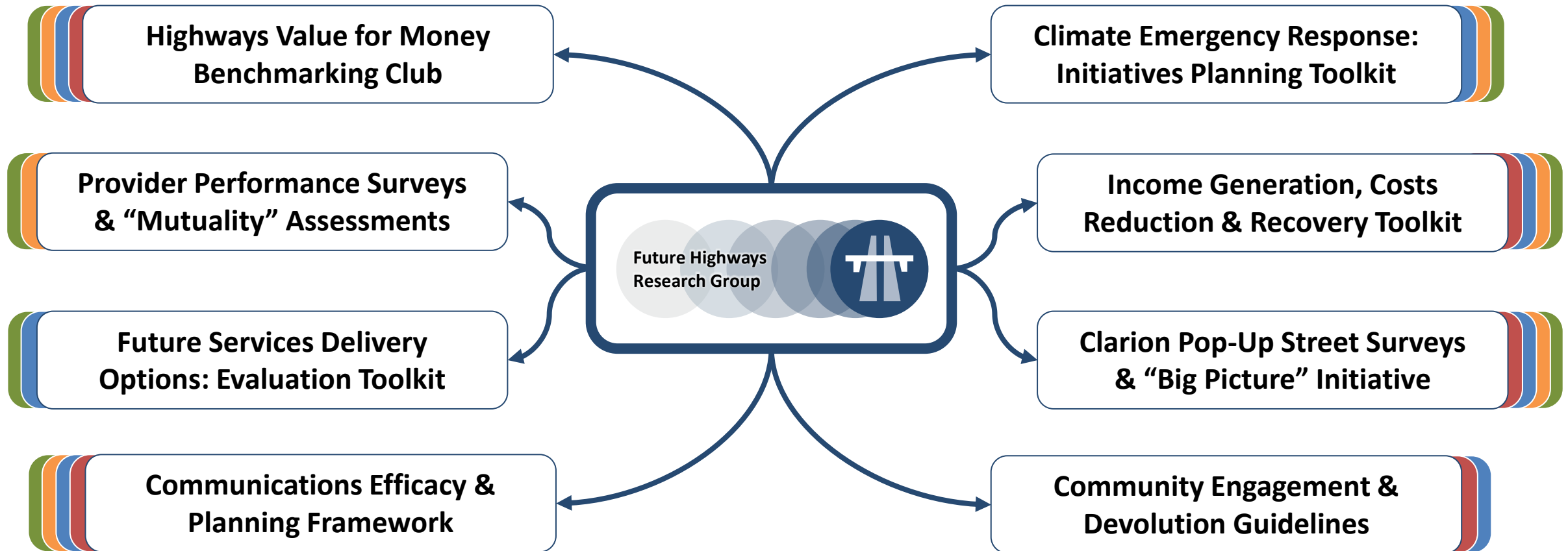
December 2020

Conference Overview

- **All ADEPT private sector partners invited.**
 - Promoted by ADEPT to share our interests and activities with provider organisations.
- **20 to 30 seats.**
 - Senior staff and innovators only.
 - The previous event was oversubscribed.
- **Presented the FHRG programme and authority-based initiatives.**
 - Head-to-head presentations of the ambitions and the evolving needs of client organisations.
 - Case studies from FHRG members.

Research Outputs

Toolkits, Processes, Data Sharing & Guidelines



■ Software Toolkits ■ Data Sets & Analysis ■ Template Processes ■ Guidelines & Case Studies

Smart Place Working Group: Update

Post-COVID-19 Restart

Conference Overview

- **Scope explored and defined.**
 - Solar to Load, Solar to Grid, Solar to EV, Solar to Store and Solar to Plaza.
 - Heat Networks & Under-Road Heat Storage
 - Multi-Trenching
 - 5G, 4G Infill, LoRa & Fibre to Campus
 - Sensor Networks & Sensor-Driven Services
 - Virtual Environments (Remote Working, Technical, Social & Education)
 - EV Fleet & Transport
 - Machine Learning, AI & Future Workforce
 - Drones (Observation & Intervention)
- **Working Group Meetings**
 - Five initial exploration meetings with working group members.
 - COVID-19 interrupted the schedule.
- **Private Sector Engagement**
 - Schedule Follow-Ups With SSE, BT
- **Restart this theme in October 2020.**

Next Meeting

21st January 2021

Physical or virtual?