

# ADEPT

Association of Directors of  
Environment, Economy, Planning & Transport

Future Highways  
Research Group



Decision Equipped.

## proving

# ADEPT Innovation Conference 2020

## Future Highways Research Group: Briefing for ADEPT Members

Research Programme, Benchmarking Programme  
& Research Outputs

# Agenda

- **Welcome to the ADEPT/FHRG Innovation Conference**
  - Hannah Bartram, Our Research Association
  - Simon Wilson, Research Programme Director, Future Highways Research Group
- **The New Economy** (Steve Stead, SSE Enterprises & Simon Wilson, Future Highways Research Group)
  - The opportunity.
    - Drivers of the new economy.
    - Thinking BIG.
  - The critical components.
    - Capabilities, culture and attitudes.
    - Asset portfolios and prospectuses.
  - The Benefits and Dis-Benefits
    - Example

## Agenda (Continued...)

- **“Climate Emergency”** (Simon Wilson, Future Highways Research Group)
  - What does it mean for highways and transportation services?
  - Collateral damage: measuring the social and economic impact.
- **Strategic Options Analyser**
  - Tools, options and processes for planning & prioritising responses.
  - 49-option starter portfolio.
- **Interactive Session: What climate emergency response initiatives are you planning?**
- **Morning Coffee**

## Agenda (Continued...)

- **Better Data: Creating a “Big Picture” for Highways Services**
  - Better data for assessing and planning services.
  - Sector-owned data with collaboration and elective sharing.
- **Pop-Up Street Surveys** (Project Clarion)
  - Connecting with served communities.
- **Value for Money Benchmarking Club 2020**
  - New tools, an upgraded approach and peer reviews.
- **Lunch & Networking**

# Agenda (Sector Success Stories)

- **Value for Money Assurance & Continuous Improvement**
  - Paul Rusted, Head of Highway Services, Lincolnshire County Council
- **Community Engagement & Community Resources Utilisation**
  - Owen Jenkins, Director for Growth and Economy, Oxfordshire County Council
- **Market Intelligence Gathering & Effective Communications**
  - Geoff Pickford, Service Director (Highways), Derbyshire County Council
- **Future Services Delivery Options & Client/Provider Mutuality**
  - Mark Stevens, Assistant Director Operational Highways, Suffolk County Council
- **Devolution & Democratising Services**
  - Jack Wiltshire, Head of Highways, Dorset Council
- **Questions & Answers**

# Agenda (Continued...)

- **Wrap-Up & Close**
  - Thoughts and observations.
  - Next session and individual follow-up sessions.
  - Becoming involved.



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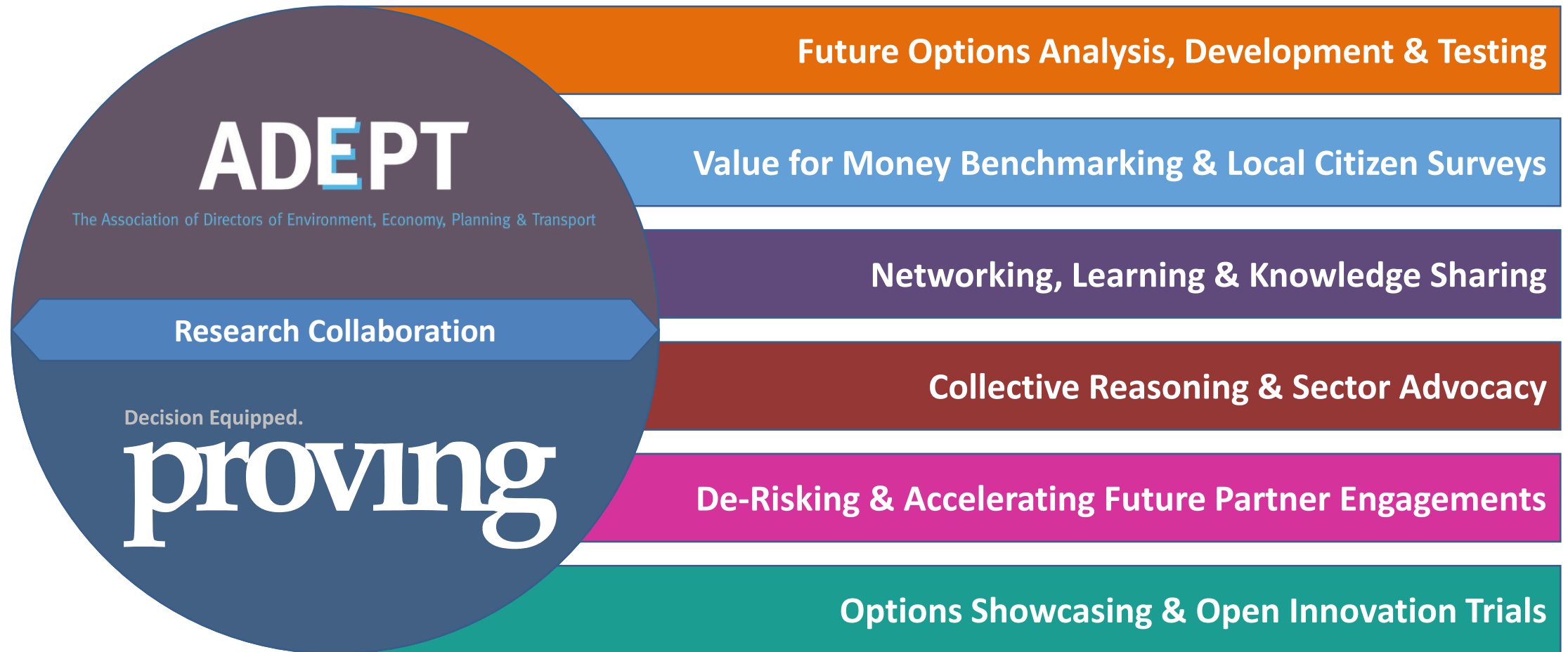
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# ADEPT/FHRG Innovation Conference 2020

ADEPT Research Partnership & Future Highways Research Group

# ADEPT / Proving: Research Collaboration Objectives





# The Future Highways Research Group (FHRG)

Participatory, Action-Based Research



- **Identify, develop and assess innovations with the potential to transform the sector.**
  - Applying academic research frameworks and methods.
- **Provide a forum for sector thought leaders.**
  - Share knowledge and experiences.
- **Develop and pioneer transferrable methods, structures, tools and processes.**
  - As proven approaches; defining best practice.
- **Engage with new sector entrants.**
  - Including: energy generation, electric vehicle and served communities as delivery partners.
- **Attract funding for new concepts development and piloting.**
  - Bidding for innovation funding.
- **Publish our findings; ensuring members are recognised as sector innovators.**
- **Develop meaningful benchmarking frameworks based on Value for Money (VfM).**

# Future Highways Research Group Membership

As of October 2019



- **Hannah Bartram, COO, ADEPT**
  - All ADEPT members, as Research Associates
- **Dominic Browne, Editor, Highways Magazine**
- **Mark Stevens, Suffolk County Council**
- **Geoff Pickford, Derbyshire County Council**
- **Paul Rusted, Lincolnshire County Council**
- **Owen Jenkins, Oxfordshire County Council**
- **Jack Wiltshire, Dorset County Council**
- **Jamie Cooke, London Borough of Barnet**
- **David Kinsey, Derby City Council**
- **James Bailey, Staffordshire County Council**
- **David Jones, Somerset County Council**
- **Mark Kemp, Hertfordshire County Council**
- **Andrew Cook, Essex County Council**
- **David Laux, Northumberland County Council**
- **David Farquhar, Buckinghamshire County Council**
- **Matt Davey, West Sussex County Council**
- **Lucy Monie, Surrey County Council**
- **Barry Mason, North Yorkshire County Council**
- **Adrian Gray, Hampshire County Council**
- **Kathryn Broadbent, Kirklees Council**
- **Ann Carruthers, Leicestershire County Council**
- **Davina Millership, Milton Keynes Council**
- **Andrew Davis, Cheshire East**
- **Jade Jones, Central Bedfordshire**
- **ADEPT members are research associates by default.**



# Future Highways: Research Programme

Strategic Programmes, Research Themes & Research Outputs

# Strategic Options & Analysis

## Member-Selected Strategic Options

	Research Options
1	<b>VfM Assurance &amp; Continuous Improvement (A)</b>
2	<b>Income Generation</b> (Commercialisation, Costs Recovery & Costs Offsetting) <b>(H)</b>
3	<b>Network &amp; Assets Prospectuses &amp; Access Concessions*</b> <b>(G)</b>
4	<b>Community Engagement &amp; Resources Utilisation</b> (CC/CR/CD/CF Initiatives <sup>1</sup> ) <b>(E)</b>
5	<b>Intelligence Gathering: Citizen Perceptions, Concerns &amp; Priorities (C)</b>
6	<b>Effective Communications (D)</b>
7	<b>Agile Commissioning &amp; Client / Provider Mutuality<sup>4</sup> (I) / (J)</b>
8	<b>Services Devolution &amp; Democratising Services (Districts, Towns &amp; Parishes) (F)</b>
9	<b>Climate Emergency Response Planning (L)</b>

\*Live Labs project being developed with SSE and ADEPT.

<sup>1</sup>Community Commissioned, Community Resourced, Community Delivered and / or Community Funded.

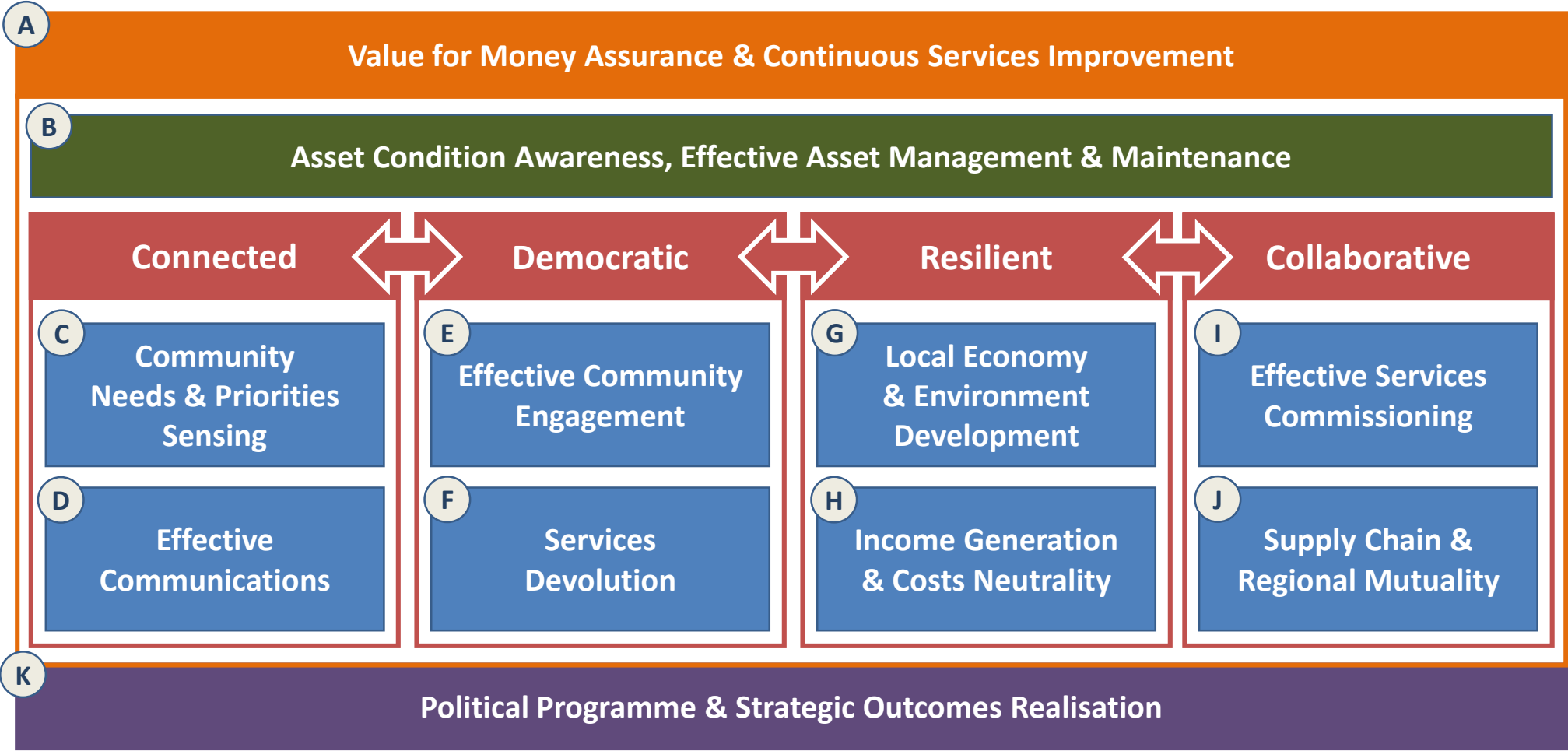
<sup>2</sup>Cashable Economy Improvement, Cashable Efficiency Gains, Cost Offsets, Increasing Revenues.

<sup>3</sup>Political, Social, Environmental, Reputational.

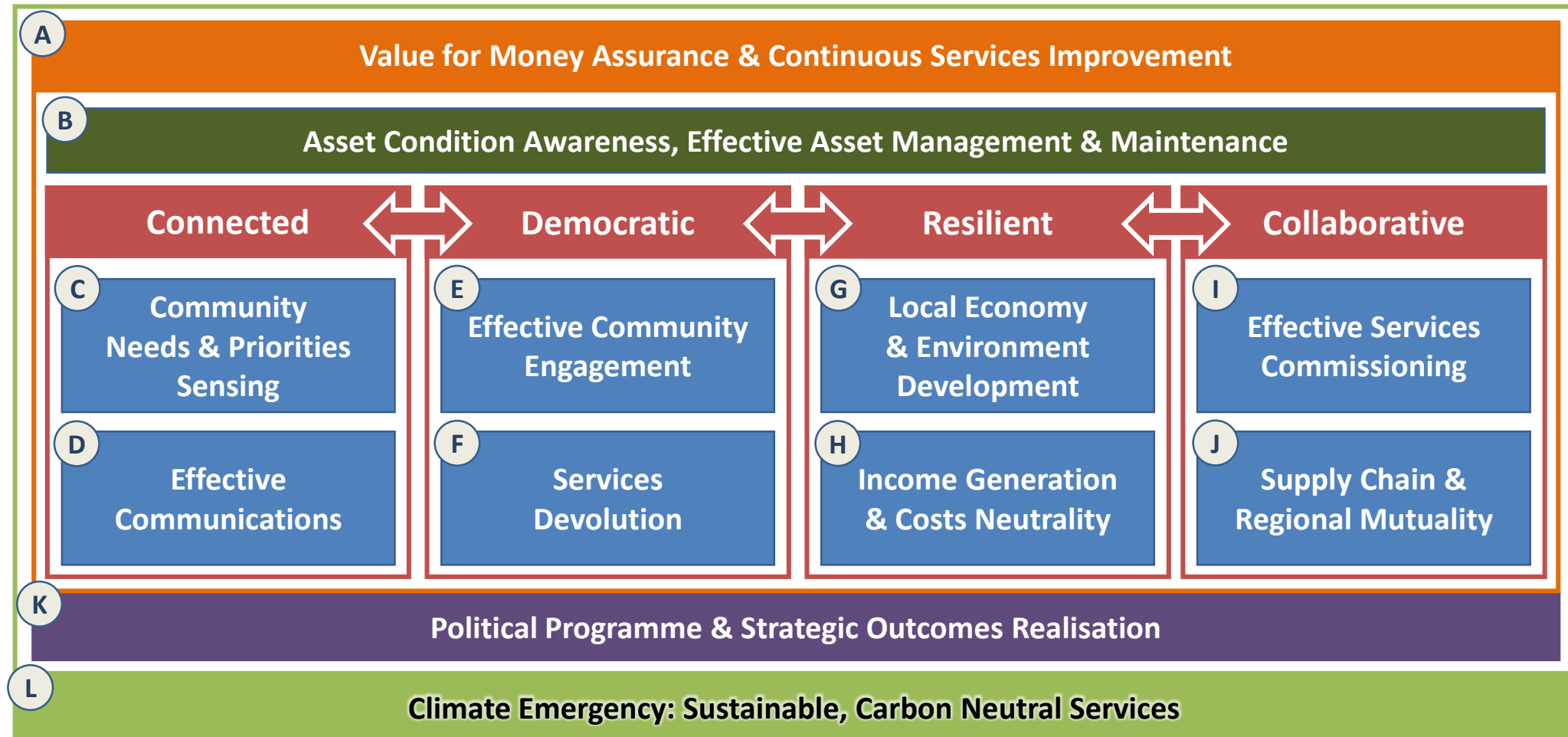
<sup>4</sup>Previously "Sector Relationships Evolution".

Options Analysis Elements	
<b>A</b>	Option definition (description and scope).
<b>B</b>	Structural changes and enablers.
<b>C</b>	People, processes and systems changes.
<b>D</b>	Strategic and political rationale.
<b>E</b>	Whole life costs.
<b>F</b>	Cashable business benefits <sup>2</sup> .
<b>G</b>	Non-cashable business benefits <sup>3</sup> .
<b>H</b>	Dis-benefits.
<b>I</b>	Implementation and operational risks.
<b>J</b>	Impacts on stakeholders and communities.
<b>K</b>	Sector readiness and barriers to success.
<b>L</b>	Retreat options.

# Convergent Strategic Programmes



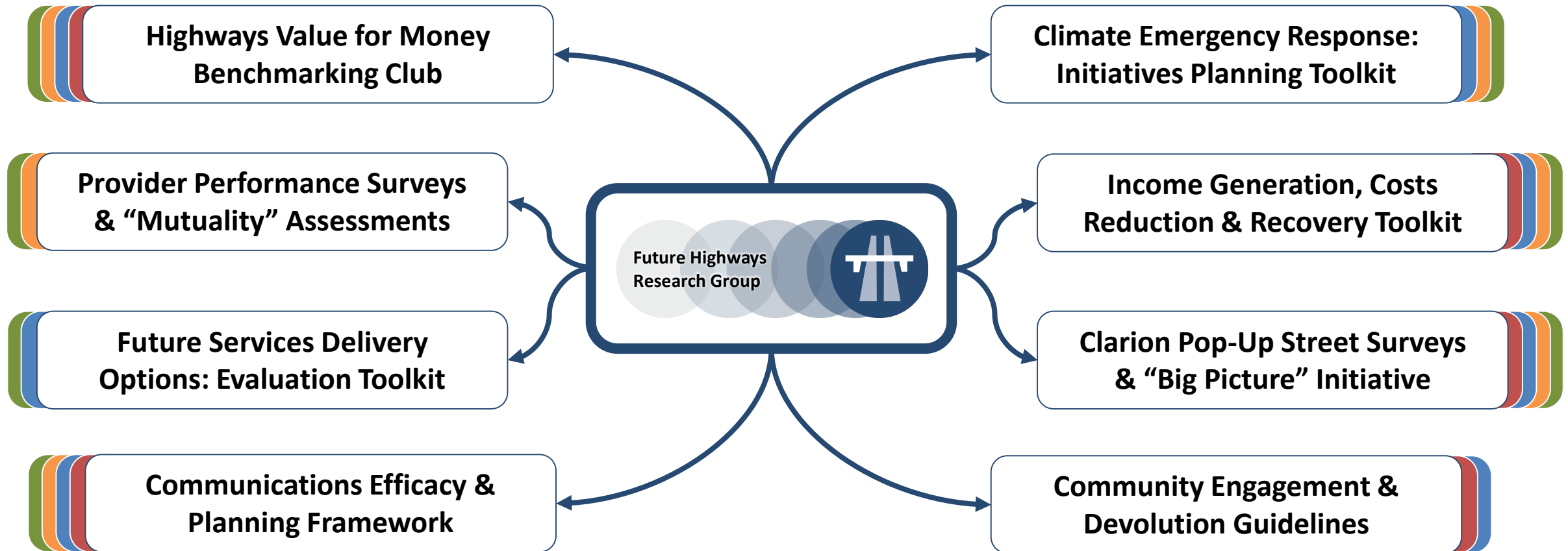
# New, Overarching Strategic Theme





# Research Outputs

Toolkits, Processes, Data Sharing & Guidelines



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



# The New Economy

## Drivers for Change

# New Economy Drivers

- **Micro-cellular 5G rollout and 4G infill.**
  - Effective collaboration with communications company to ensure rollout.
  - **Better, more homogeneous, connectivity and data. Utilising highways assets (e.g. street furniture) and power.**
- **High-speed fibre rollout.**
  - High speed “to premises” connections.
  - **Remote working. Assets damage and network disruption during rollout.**
- **Climate Emergency (or climate crisis, depending on authority).**
  - Green energy generation, distribution and storage.
  - Heat networks for new housing developments, commercial and industrial centres.
  - Re-purposing old “carbon economy” sites (i.e. petrol filling stations and fuel depots).
  - **Traditional assets become services access points. Assets damage and network disruption during rollout.**
- **Accelerated replacement of diesel and petrol light vehicles with Electric Vehicles (EVs).**
  - Major electricity network upgrades.
  - New EV infrastructure (e.g. charging plazas, home, destination and on-street charging).
  - **Improved air quality and reduced greenhouse gases. Assets damage and network disruption during rollout.**
- **Smart vehicles and smart places.**
  - Rollout of new sensors and V2X infrastructure.
  - Managed decline of “human driven” vehicles (20 year timeline).
  - **Improved road safety and capacity. More complex assets demanding new partners, skills and capabilities.**

# Never Happen?

Smart Places & Artificial General Intelligence

**“We expect the AI singularity to occur earlier than previously predicted. This event is now expected within one to three years. ”**

**“Artificial General Intelligence (AGI) is a huge opportunity for humankind, but it is also a very significant risk. However it plays out, it is inevitable...**

**...Our infrastructure will need to be transformed to enable this new technology to benefit our lives.”**

Opening Address, World Economic Forum, 19 Jan 2020



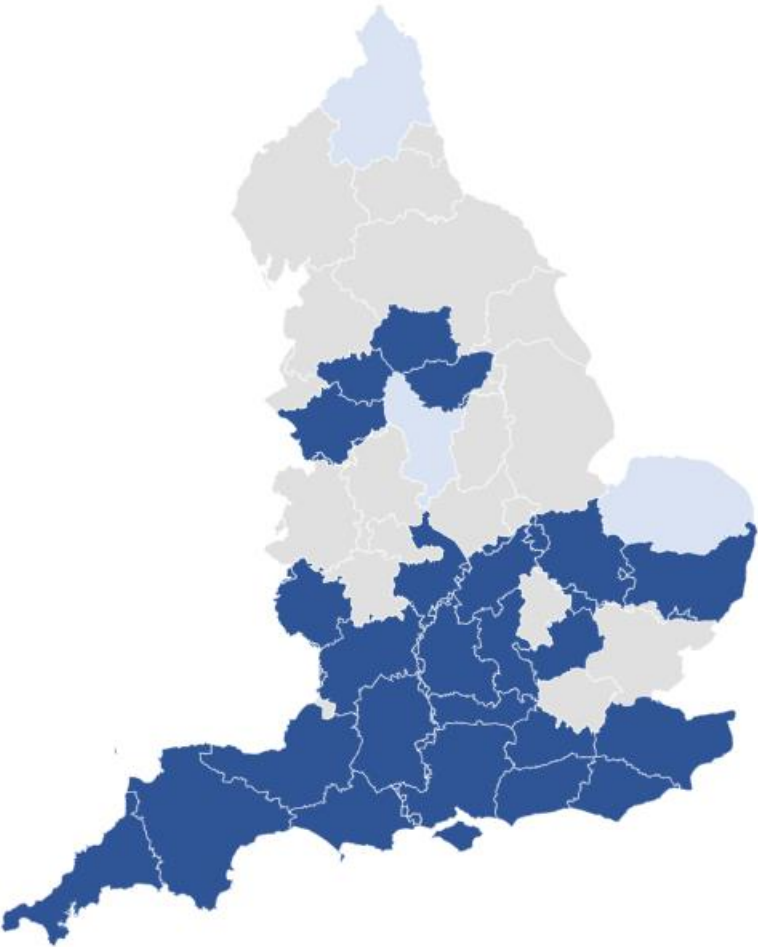
**“I’m sorry Dave...”**

# Climate Emergency Declarations

As Of December 2019

Climate Emergency Declarations (Provisional)

- Not Declared
- Climate Crisis
- Climate Emergency



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**UK Climate Action Survey**  
“Climate breakdown is viewed as the most important issue facing the world, ahead of migration, terrorism and the global economy.”  
**The Guardian, September 2019**