AECOM and the Midlands Highway Alliance
Carbon Management Framework

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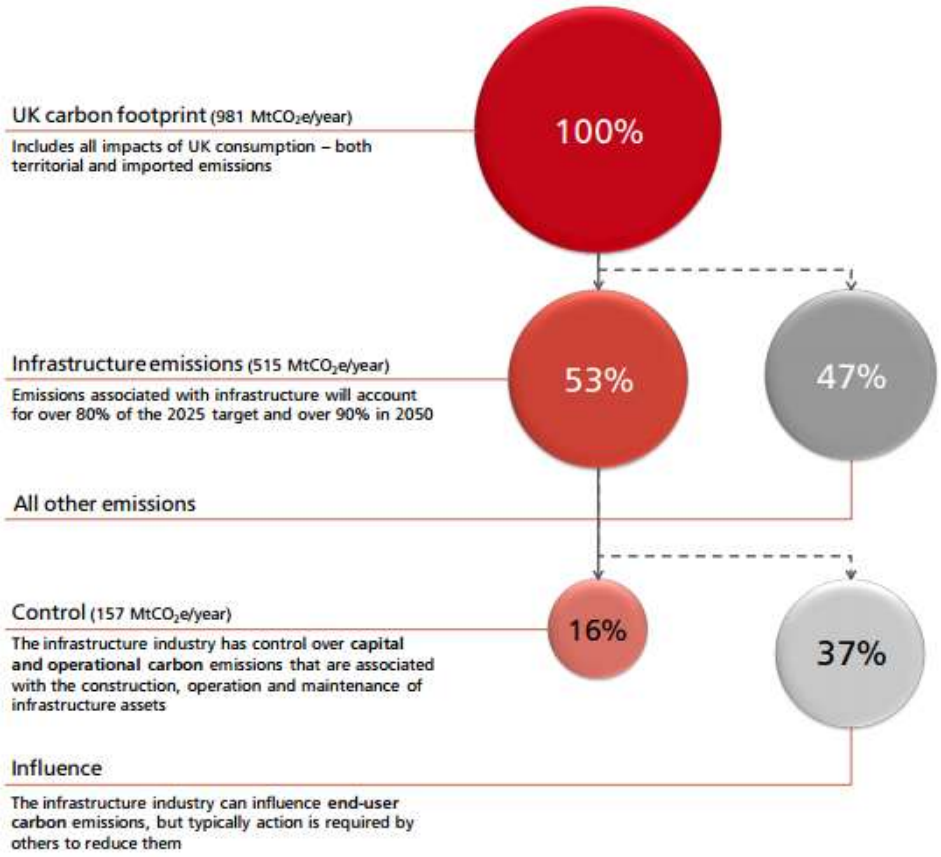
Background

- Infrastructure is associated with over half of all UK carbon emissions
- Effective and sustainable management of infrastructure assets is fundamental to the reduction of UK carbon emissions
- MHA has achieved best practice and continuous improvement in highway maintenance
- Area of opportunity – Highway network carbon management and reduction



Source: Green Construction Board

Aims

'The overarching aim of the project is develop a Highways Carbon Management Framework. The framework will enable MHA authorities to manage the carbon impacts of their highway design, maintenance and operational activities in a strategic, comprehensive, holistic and most importantly, sustainable manner and facilitate multiple, wider benefits in doing so'.

…Common, agreed approach to measuring and managing carbon impacts, which reflects latest legislation and science…

Tasks: Phase I

- **Task 1: Scoping Activities and Survey –** Desk-based study and online survey to MHA authorities to identify current approaches; best practice; progress against targets; and familiarity with PAS2080 and Infrastructure Carbon Review.

- **Task 2: Collaborative Workshop –** Requirements and tailoring the framework to authority needs.

- **Task 3: Review of Good Practice –** Desk-based study to identify wider, replicable, highway sector experience and best-practice of carbon management both nationally and internationally (where relevant). Opportunities for external funding opportunities and wider collaboration will be highlighted.

Tasks: Phase II

- **Task 4: Development of a Carbon Management Framework**

- **Task 5: Testing Workshop** – Second collaborative workshop to present the framework and seek feedback from attending MHA authorities.

- **Task 6: Framework Finalisation** – Incorporating feedback and issue of final version for dissemination and publication.

Outputs

Highways Carbon Management Framework - High-level, accessible toolkit, containing:

- Review of **existing approaches and 'best practice'** of MHA authorities to carbon management of highway assets supported by relevant case study material;
- Guidance on the **recommendations and requirements** placed upon Highway Authorities in regards to asset and infrastructure carbon management by policy documents;
- Relevant **signposting to** other relevant and wider **resources** such as tools, policies, plans etc.
- A **common method of carbon measurement for** use within highway design, maintenance and operational activities; and,
- Supporting **information outlining how wider multiple benefits can be derived.**

Benefits

- **Common method of** carbon **measurement** across projects and assets;
- Enables **progress to be tracked** accurately and a structured framework for reviewing performance;
- Ensures all parties are using **common data, methodologies and emission factors**;
- **Trends, opportunities and risks** are more likely to be identified in a reduced timeframe;
- **Commercial advantages**
- Increased **long-term sustainability of investment** and asset management decisions;
- Enhanced **education and awareness**;
- **Knowledge sharing** and resource efficiencies associated with collaborative working with the opportunity for partnership funding;
- Enhancement of **overall sustainability** of the network and other interdependent and interconnected systems;
- Potential partnership funding opportunities as a function of **collaborative working**;
- **Reduced reputational risk**;
- Effective understanding of and **response to relevant legislation and policy**; and,
- **Balance between** economic and environmental **drivers.**

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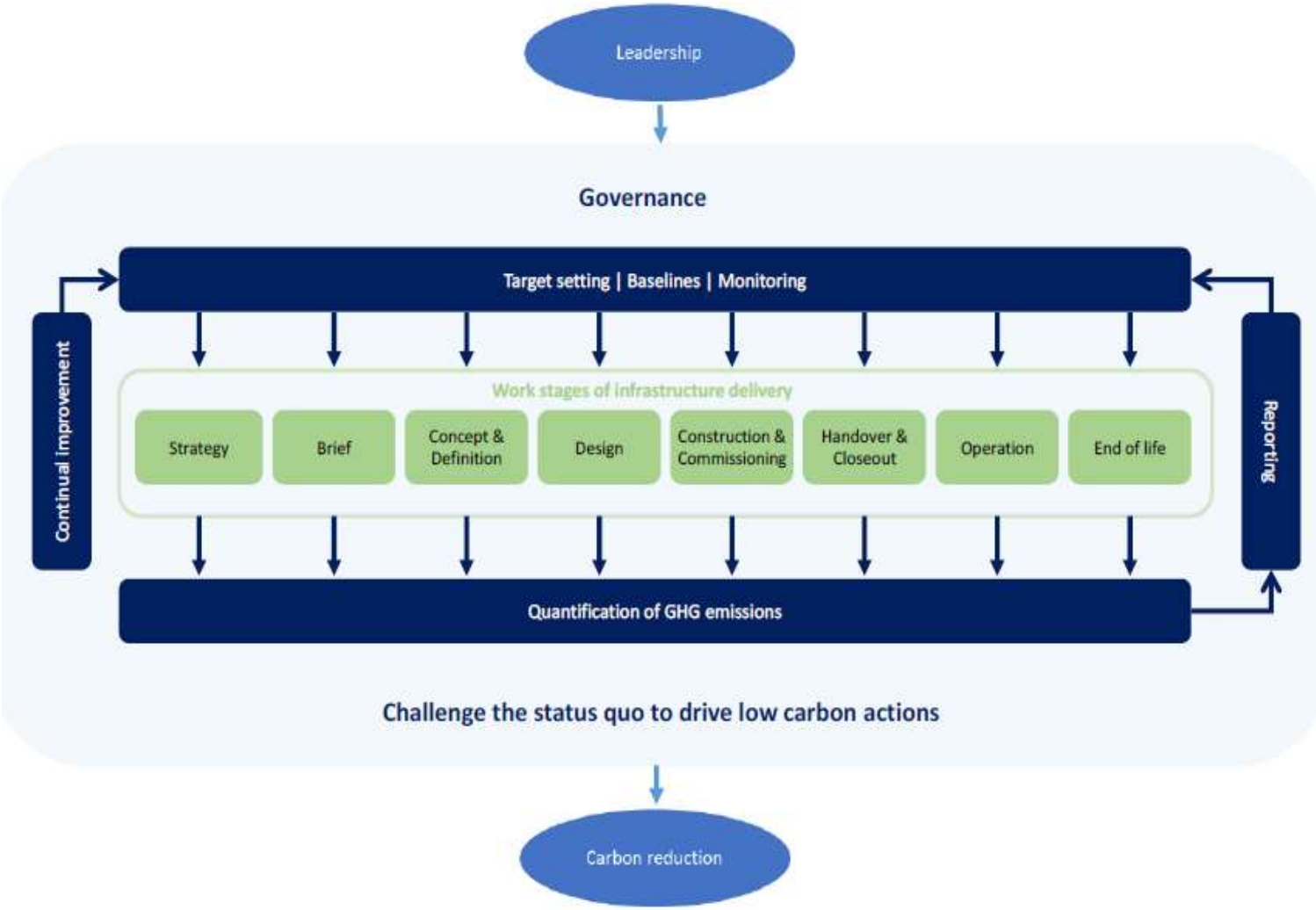
PAS 2080: Carbon Management in Infrastructure

- Practitioners concerned with assessing and managing GHG emissions associated with infrastructure;
- All parts of the infrastructure value chain have a role to play in realising the benefit of low carbon solutions

PAS 2080 aims to:

- Reduce whole life carbon and financial costs
- Provide a consistent approach to management to encourage wider uptake
- Improve the relevance, completeness and comparability of the management of GHG emissions
- Improve knowledge and understanding
- Support evidence-based decision making and identification of opportunities

PAS 2080: Carbon Management in Infrastructure



PAS 2080: Carbon Management in Infrastructure

PAS 2080 includes requirements for:

- Selecting GHG emissions **assessment methodologies**
- Setting appropriate GHG emissions **reduction targets** (including appropriate **baselines**) and assigning **roles and responsibilities** for their delivery
- Facilitate **multiple benefits** in regards to strategic goals
- Devise a **policy and strategy** which is communicated consistently across the value chain enabling **effective governance**
- Establishing measures for credible **measurement and reporting** of GHG emissions performance
- Clearly define and **communicate required outcomes**
- Ensure **materiality**
- Ensuring **continual improvement** of GHG emissions management and performance across stakeholders
- Ensure adequate **tools and training** are in place
- Facilitate **effective data collection, management, reporting and identification of best practice**

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Infrastructure Carbon Review

- Government and industry clients should work together to make carbon reduction a requirement on all infrastructure projects and programmes by 2016, and that central to this is collaboration and unleashing innovation.

- The framework will review and address the wider recommendations set out in the policy document, to allow MHA authorities to understand the relevance to their activities.

Next Steps

- Finalisation of desk-based study
- Online survey to be disseminated in due course
- Planning phase of collaborative workshop delivery

Conclusion

- Infrastructure is associated with a large proportion of all UK carbon emissions
- Therefore effective and sustainable management of infrastructure assets is essential
- MHA has made significant progress in regards to sustainable highways management and maintenance
- Opportunity for enhanced carbon management across highway network
- The aim of this project is to develop a common, agreed approach to measuring and managing carbon impacts in line with PAS 2080 and the Infrastructure Carbon Review
- Numerous **benefits** and multiple wider benefits.

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Thank You

Do you have any questions?

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