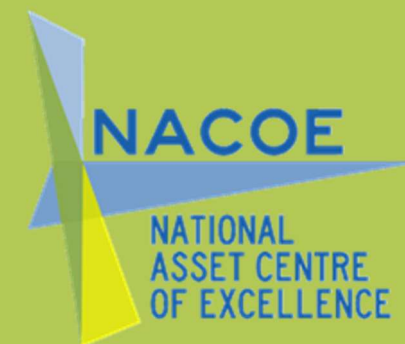




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Sustainability Assessment Tool for Innovative Pavements

*Presented by:
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AN INITIATIVE BY:



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Collaboration between WARRIP and NACOE



Problem Statement

- Tool to enable innovative pavement designs to be assessed
- Need for a tool to concurrently evaluate the economic and environmental sustainability impacts of pavement technologies
- Supplement Infrastructure Council Sustainability Assessment (ISCA) rating process



Project Objective

- Develop a user-friendly sustainability assessment tool to:
 - Enable comparison of lifecycle sustainability (emissions and waste) for innovative pavement technologies
 - Enable economic impacts to be viewed in conjunction with sustainability impacts

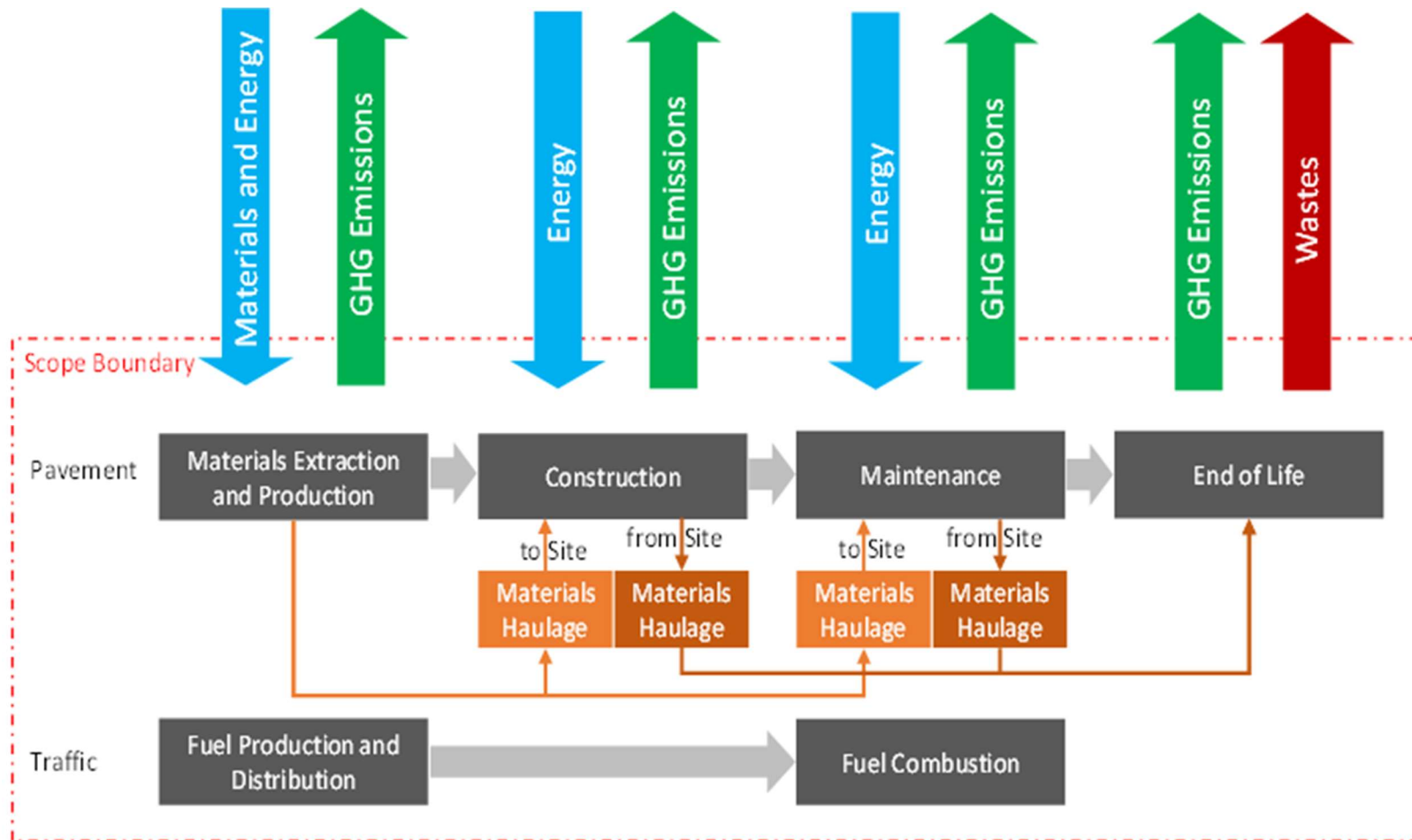
Sustainability
Policy

We are committed to **developing a transport network that meets social, economic and environmental needs.**

Methodology

- Step 1: User requirements review – Complete
- Step 2: Develop a minimum viable product & model enhancements - In Progress
- Step 3: User-Interface development – Starting Soon
- Step 4: Investigate opportunities to extend to boarder road infrastructure – Future development

Pavement lifecycle



Capabilities of the tool

- Compare base case pavement designs with up to 3 alternative cases
- Flexible assessment period (up to 100 years)
- Tailored materials, processes and cost databases
- Lifecycle outputs:
 - GHG emissions (tonne CO₂-e by emissions scope)
 - Costs (\$NPV)
 - Waste, reuse & recycled materials (tonnes)

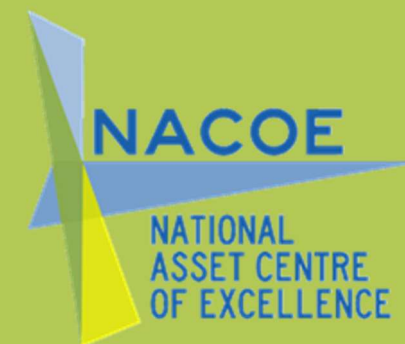
Next Steps

- Finalise minimum viable product (Excel-based tool)
- Investigate opportunities to enhance the tool, e.g. optimising outputs, expanding environmental impact analyses to include other airborne pollutants, water and energy use, further integration with ISCA rating process (IS Enviropoints).
- Develop user-friendly, web-based interface



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