

INTERNATIONAL SUSTAINABLE PAVEMENTS WORKSHOP

Fostering US-European Research Collaboration

Sustainable Pavement/ Asset Management



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How does it contribute to the development of more sustainable pavement solutions?

- **Finding policies/ strategies with lower life-cycle cost**
 - **Perpetual pavements**
 - **Preservation vs. rehabilitation**
 - **Use of existing pavement, etc.**
- **Link level of investment to performance (including sustainability measures)**
- **Measuring the impact of the new approaches, materials, and systems**

Gaps in Knowledge

- **Approaches & tools to facilitate the use of economic analysis at the network level**
 - **Better links between condition and user cost**
 - **Effects of preservation treatments, etc.**
- **Approaches to consider environmental (and social?) factors at the network and project levels**
- **Robust and Practical tools to incorporate non-economic effects into the decision-making process**
- **Approaches & tools to include multiple performance measures at the network and strategic levels**
 - **Multi-objective optimization**
 - **Cross asset tradeoffs and resource allocation**

Research Questions

- **What do we need to measure?**
 - **Choose the correct sustainability factors and appropriate metrics**
- **How do we quantify the impacts of the use of alternative materials/ systems/ M&R approaches?**
 - **Document actual performance through demonstration projects/ test sections**
 - **Develop models, and tools to apply these models**
- **How do we practically incorporate the selected factors into the decision making process?**
 - **Compatible scales across performance indicators and asset classes**