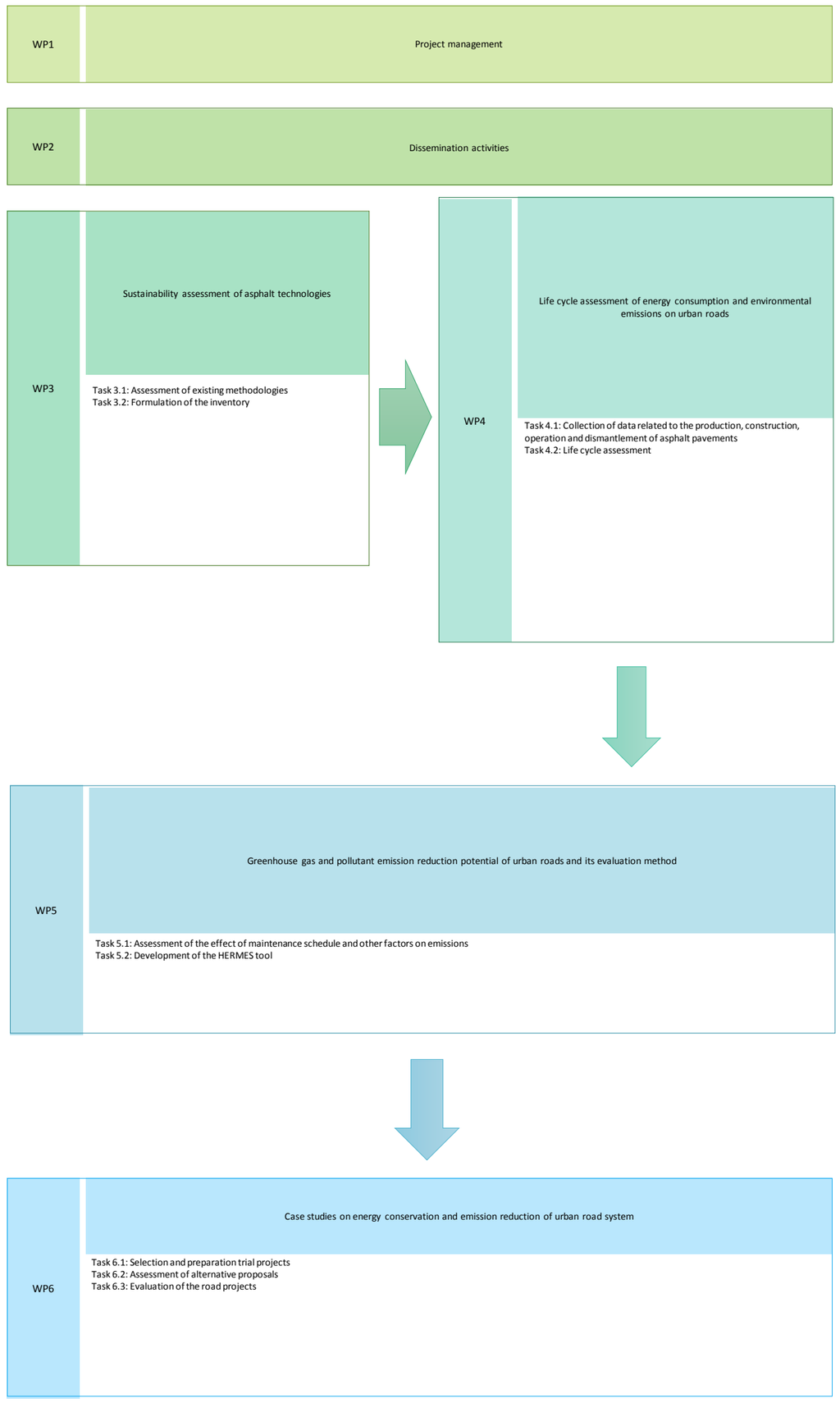
HERMES

More than 275 million tons of asphalt are produced every year in Europe alone for maintenance and rehabilitation of roads. It results in large amounts of greenhouse gasses (GHG) releases into the atmosphere and in the consumption of vast quantities of resources. To reduce the impact of road maintenance and rehabilitation, HERMES will provide a methodology able to aid in selection of the best available technology and strategies with the lowest cost for the environment and society.

HERMES aims to develop a practical method to rate “green asphalt”, based on principles from Life Cycle Assessments (LCA). For the reduction of GHG emissions, improved energy and material resource efficiency, and production of renewable energy have been identified as the most important.

The overall objective of the HERMES project is to establish a long-term dynamic inventory of carbon emissions from urban roads, explore the energy consumption and emission patterns of urban roads throughout the life cycle, identify the best available technologies for urban roads, clean and low-carbon construction, and repair and maintenance. The project aim to propose a more targeted and reasonable energy conservation and emission reduction management policy to be adopted to promote the sustainable development of urban road systems in China and Europe.



Aim/objective

- Review of the available methodologies/studies for the assessment of green asphalt (and other construction materials) technologies (WP3)
- Analyse the procurement processes including a sustainability assessment (WP3)
- Broaden and improve the data inventory including information about pavement life time prediction (WP3 and 4).
- Assess the effects of maintenance schedule on emissions (WP5).
- Assess the validity and usability of the HERMES tool (WP6
- Establish the bases for further implementation and cooperation (WP2, 3 and 6)

Expected results and impacts

The expected outcome of the project is that more effective ways of assessing environmental impact of urban road systems. This is mainly obtained through the interdisciplinary approach developed for the project, which enables the bridging between stakeholders of road construction projects, policy maker practices and sustainability assessments.

HERMES - Integrated evaluation of energy saving, emission reduction potential and management strategies for urban road systems

Duration: Starting in 2019, ending in 2022 at the latest
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Budget: €1,117,263
Partners: SINTEF AS, Norwegian University of Science and Technology (NTNU), Graz University of Technology (TU Graz), Zement+Beton Handels- und W. GmbH, Wuhan University of Technology (WUT), Huazhong University of Science and Technology (HUST).

Involved countries

- Austria
- China
- Norway

The Sustainable and Liveable Cities and Urban Areas call

The pilot call Sustainable and Liveable Cities and Urban Areas organized by JPI Urban Europe and the National Natural Science Foundation of China (NSFC), inviting interdisciplinary Sino-European consortia opened on January 31st, 2018.

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