

TOP TEN

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Category: Road

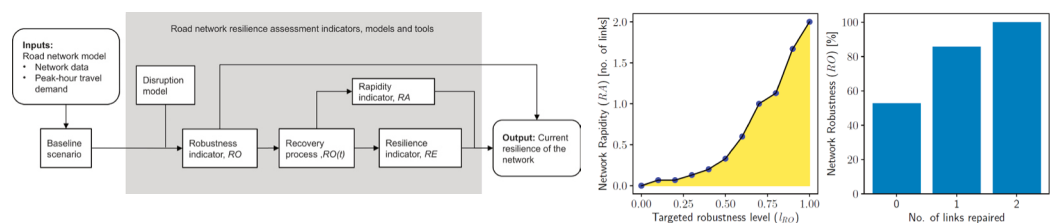
Country: United Kingdom

Research Area 1: Climate Change, Mitigation and Resilience

Idea Number: 124

ResilRoad- resilience indicators for road networks

Extreme weather events and human-made hazards could damage road infrastructures resulting in casualties, service disruptions and significant economic losses. The ability of these infrastructures to sustain, resist and recover from shocks (i.e. resilience) is thus essential for society. To manage the resilience of road networks, stakeholders need metrics; as these provide an effective tool to assess the current resilience of road networks, compare the different strategies for resilience enhancement and measure progress. The research project ResilRoad (Resilience indicators for road networks) addresses this need. ResilRoad seeks to deepen the understanding of the impact of extreme events (for example floods, road accidents and bridge collapse) on road networks usability and accordingly develop a resilience assessment and enhancement framework to support decision makers in predicting, assessing and reducing the impact of disruptive events on road networks. This framework will provide an accurate mean for quantifying road network resilience and effectively compare several resilience assessment possibilities. A literature survey is proposed and used to explore technology gaps that need to be addressed to improve current resilience assessment and enhancement methods. On this basis, the road network resilience assessment and enhancement framework developed in this research project is presented. This report shows that this framework provides a more accurate mean for quantifying road network resilience and effectively compare several resilience assessment possibilities. ResilRoad is connected with two of the priority research areas of the TRA 2020: "Climate Change, Mitigation and Resilience" (RA1) and "Planning, Modelling and System Design" (RA8).



Key Characteristics

Extreme events • Resilience assessment