

Safe Systems: Guiding Principles and International Applications

This is a two-part study that provides a comprehensive examination of the theoretical and practical applications of Safe Systems.

The first part examines the current literature on Safe Systems, as well as emerging knowledge in the related domains of organizational systems safety, traffic psychology, and behavioral economics.

A key finding of this effort was the need for a better understanding of the nature of crash causation, one that focused not only on the immediate pre-crash behaviors of road users involved in a crash event, but also on the underlying the "latent conditions" that may trigger, or prevent these behaviors.

Latent conditions are the underlying geometric and environmental design conditions the establish the transportation context in which operational decisions are made, and are influenced not only by a roadway's design, but also the upstream planning and policy decisions that influence the design and configuration of the transportation system.



This section details the policy and development process that may establish latent crash conditions, and presents a model process for the project planning and design process that can be applied to eliminate them.

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The second section of the report examines the policies and practices of the four countries that have the most well-established Safe Systems programs: Sweden, the Netherlands, Australia, and New Zealand. Specifically sought was an understanding of processes by which these programs were developed and implemented, as well as information on the success of their implementation.

Collectively, the findings from this report provide the most comprehensive examination of Safe Systems applications to date, identifying the current global state-of-the-practice, as well as presenting important future directions for reducing traffic-related deaths and injuries through a Safe Systems approach.