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# Editorial: Vision zero: the safe system approach and traffic safety culture

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## Editorial on the Research Topic

[Vision zero: the safe system approach and traffic safety culture](#)

## The safe system approach: a new paradigm for traffic safety?

According to the World Health Organization, in 2018, traffic crashes killed over 1.35 million people (WHO, 2018). While some nations have seen declining trends in traffic fatalities post-COVID-19, for many nations, especially the United States, traffic fatalities continue to grow at an alarming rate. This rise is especially problematic for the most vulnerable, as pedestrians and bicyclists continue to be killed at disproportionate rates in many countries (ITF, 2022). Thus, for much of the world, a new traffic safety management paradigm is needed.

An examination of traffic fatality trends (ITF, 2022) reveals that many of the nations that have exhibited downward trends in traffic safety are those that have adopted the Safe System Approach. The Safe System Approach is a human-centered paradigm of traffic safety that rejects traffic fatalities and injuries as systemic failures and seeks to proactively leverage overlapping protections from the roadway environment, technology, enforcement efforts, and cultural elements to keep road users safe. Despite its relative novelty in traffic safety management practice in the United States (U.S. DOT, 2022) and some other countries, research indicates that those nations that have long abided by Safe System principles (e.g., Sweden, Norway, New Zealand, and more) are those with much safer roadways (Dumbaugh et al., 2019).

However, implementing a Safe System Approach and truly producing a transportation system in which no persons will suffer death or injury requires cultural shifts and careful recognition of the unique policy environments in which traffic safety stakeholders must operate. This *Frontiers in Future Transportation* Research Topic, *Vision Zero: The safe system approach and traffic safety culture* collects a variety of articles spanning research into culture and practice and presenting case studies on aligning local goals with Vision Zero. The collected works provide a unique lens into making major shifts in how transportation safety practice and the steps needed to produce this readiness.

## Organizational culture and local culture: a summary of research topics

This Research Topic, *Vision Zero: The safe system approach and traffic safety culture*, includes seven articles that address the Safe System Approach from a cultural perspective. These articles range from localized perspectives on implementation to organizational factors that support a Safe System Approach to the technologies that can help make Vision Zero a reality.

For the local context, [Safarpour et al.](#) surveyed 14 road safety experts in Iran and identified administrative barriers to address roadway risks. They concluded that “one of the most significant problems in Iran’s Vision Zero implementation is the lack of a lead agency.” [Grove and Lynn](#) discussed Vision Zero in a major United States metropolitan area, narrowing in on the cultural obstacle of automobility and concluding that, “For a safety culture change, where the shared values, actions, and behaviors demonstrate a commitment to safety over competing goals and demands, the City of Houston is beginning to shift to one that is less about cars and more about accommodating people of all ages and abilities who use many modes of transportation.”

Complementing these locally contextualized articles, [Austin et al.](#) provided a systematic analysis of peer-reviewed cultural interventions to identify conceptual ties between the Safe System Approach and traffic safety culture. Their paper concludes that “there is wide-spread evidence across the literature indicating that initiatives to influence organizational culture or safety culture more narrowly . . . can be effective.” However, they also noted that many studies lack a clear definition or model of culture. [Otto et al.](#) address this limitation by presenting a case study of the Washington Traffic Safety Commission and how it became organizationally ready to make changes aligned with the Safe System Approach.

[Schell and Ward](#) provide a perspective on how to initiate and manage the organizational culture shift necessary to align with the Safe System Approach, arguing that, “coalition [s] should be selecting initial actions to take, identifying core limitations that must be addressed, and enabling team members and partners to remove those limitations” because the execution phase of a Vision Zero goal is when change really takes root. Accordingly, [Naumann et al.](#) present evidence for how leadership training can shift confidence toward achieving Vision Zero, concluding, “that the application of this [Community Coalition Action Theory (CCAT)] model was associated with an increase in participants’ confidence in several critical skills related to coalition development and initiative planning processes.”

## References

Dumbaugh, E., Signor, K., Kumer, W., LaJeunesse, S., Carter, D., and Merlin, L. (2019). *Implementing safe systems in the United States: Guiding principles and lessons from international practice (report No. CSCRS-R7)*. Chapel Hill: Collaborative Sciences Center for Road Safety. <https://www.roadsafety.unc.edu/research/projects/2017r3/>.

ITF (2022). *Road safety annual report 2022*. Tokyo: OECD Publishing. <https://www.itf-oecd.org/road-safety-annual-report-2022>.

## Supporting the safe system approach

These articles present useful contributions to the body of literature on both traffic safety culture and the Safe System Approach. Considered together, they provide multiple steps within a framework for challenging social norms organizationally, self-assessing readiness, and then progressing through a series of steps until road safety professionals have aligned their internal processes with an external vision of zero traffic fatalities and injuries. The Research Topic discussed throughout identify common barriers, provide evidence for how and why those barriers should be overcome, and ultimately produce new tools and process that can help make the Safe System Approach an effective and sustainable paradigm for traffic safety management. Given the complex nature of traffic safety and growing inequity between countries and regions, the need for further research to support the implementation of the Safe System approach in different cultures is essential. Because change is difficult and can face resistance, changing to the Safe System approach will require a change management plan that aligns with the culture, including the creation of sufficient readiness for change.

## Author contributions

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

## Conflict of interest

NW was employed by Leidos (United States).

The remaining authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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