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Future of Road Traffic Signs in Delhi: Application of Functional Analysis in TRIZ

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Road safety in India has had little improvement over the years with deaths per lakh population being just over 10 for the last five years. Cities in India are characterized by an increasing urban population coupled with rising mobility, busy lifestyles and constant movement and thus, it is a big challenge for populated cities like Delhi to reduce road accidents, traffic congestion, and vehicular pollution. Several causes are related to road accidents particularly the issues of road signs are identified through a functional tree diagram. The solutions to the problems are modeled using the contradiction matrix and the 40 inventive principles provided by the Theory of Inventive Problem Solving (TRIZ). Placement and design of road traffic signs are needed to gauge the behaviour of drivers in an effort to reduce road fatalities, injuries, congestion and travel time. This paper explains the steps in the TRIZ process that guides to inventive solutions to the problem of road traffic signs in Delhi. Furthermore, the study proposes that road markings, standardized color, projecting signs outwards and modification of road signs structural frame can be used effectively to curb the problem of traffic congestion in Delhi with the spin-off effect of drivers' education and to reduce road accidents.

Key words: *TRIZ, foresight, functional analysis, system parts diagram, road signs, contradiction matrix, 40 inventive principles*

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