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A GIS-Based Framework for Modeling Non-Motorized Transportation

Presenter

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The Federal Highway Administration is currently participating in several related efforts to improve access to forecasting tools for non-motorized travel modes. In addition to research, reports and documentation of techniques that support improved non-motorized forecasting, an innovative element among these efforts is the development of a GIS-based non-motorized forecasting software framework in which planners have simple access to a range of available modeling strategies based on their own local data and planning needs. This presentation describes that framework, offers a brief demonstration of its capabilities, and shares plans for its future development.

The framework is an open-source software tool that can either be deployed as a standalone program or integrated into a web server. Within the framework, planners can establish a study area, import geospatial data in a variety of popular formats, conduct analyses, and retrieve results. The framework is designed to be readily extended as alternate modeling approaches become available. It initially supports several GIS based modeling techniques that are under development in existing research projects sponsored by FHWA and others.

This presentation will discuss the framework's architecture and capabilities, how it works, how it is deployed, and how it can improve access to the results of future research. In addition to providing an immediate practical tool for planners, the framework is also available as a means by which research results in non-motorized travel forecasting could be shared, applied in new study areas, and put into practical application.