

3.4.2 Improving Work Zone Traffic Analysis with GIS – the Development of an Enterprise Application at the Oregon Department of Transportation

Presenter

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Unprecedented demands are being put on the State of Oregon's transportation network. Increased construction needs over the next ten years put strain on ODOT's established work zone traffic analysis practices. The established work zone traffic analysis methodology is designed to predict the hours during which lanes or shoulders can be safely closed, and the approximate traffic queue length and resulting delays that would develop during such closures. Prior to 2006, this analysis was only performed by a few experienced ODOT employees and each iteration could take from one to four hours. If new traffic data was collected or project schedules were shifted, the entire process had to be repeated.

WZTA is a tool designed to automate and expedite work zone traffic analysis. A prototype was successfully deployed for work in planning repair/replacement of 365 bridges across the state. This spreadsheet solution is now being converted into an enterprise solution that includes several other state initiatives. Integrating GIS, transportation databases, and custom algorithms, this new application is a significant step toward integrated planning.

The presentation will focus on the advantages of including GIS as a business system, and its role in facilitating data linkage.