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ANALYSIS OF FLORIDA TRANSIT BUS ACCIDENTS

PROBLEM STATEMENT

The safe operation of public transit vehicles is of utmost importance to the transit agency, its employees, and its passengers. Most transit agencies have hundreds of accidents per year. While each accident may be reviewed carefully as an individual incident, many Florida transit systems do little formal analysis of all accidents on an aggregate basis. A tool is needed to identify the effectiveness of operational safety programs.

OBJECTIVES

The goal of the project was to show transit systems, through demonstration, the simplicity by which accident data can be analyzed, how to use the data to identify the success of safety campaigns, and how a small investment in analysis might significantly help to reduce transit accidents and, thereby, lower operating costs and insurance premiums. The objective of this project was to create a simple spreadsheet-based tool for smaller transit systems that would facilitate improved accident data tracking, increase the level of data analysis performed and, ultimately, reduce transit accidents.

FINDINGS AND CONCLUSIONS

Low numbers of accidents affecting each of the four transit properties studied rendered detailed analysis of accident data infeasible; the analysis performed in this project may be regarded as preliminary (based on the amount and detail of accident information available). Consistency between among the transit properties, with respect to recording specific aspects of each bus accident, was another limitation encountered during the data analysis process. For example, some transit properties recorded the non-preventability or preventability status of each accident while others did not. Similarly, transit properties did not follow uniform processes for recording accident locations (e.g., with respect to the names of intersecting streets or prominent landmark adjacent to the accident site). In the absence of shared minimum requirements for recording accident data, only very limited comparative analysis could be performed during this study.

Researchers developed a user-friendly Microsoft Access database and analysis tool. The database includes the variables collected in this project along with some additional variables such as year and manufacturer of the vehicle, post accident testing and date of last training and type of training. In light of data availability issues, however, it is important to emphasize, as previous research (e.g., WPI# 0510870, *Enhancing Safety in Florida Transit Systems*) has done, that transit systems employ a systematic approach to track and analyze their bus crashes. Such a process is outlined in WPI# 0510870. It is important that public transit systems collect core crash occurrence characteristics, since doing so would allow not only for similar analyses and comparisons to be performed across systems, but allow for a comprehensive analysis of crash occurrence throughout the State.

Also, based on the results of the present research, it is apparent that a safety training program can have a positive influence on the number and type of bus accidents in the period following the program. The RTS case study showed this to be the case. Thus, training programs (held at least on an annual basis) may improve the rate at which accidents occur at a bus agency.

BENEFITS

The analysis tool developed through this research will help Florida transit agencies track and analyze their bus accident data. It will allow comparisons to be made of and similar analyses to be applied to transit systems. Finally, the results of this project, if used, will also make possible comprehensive analysis of crash occurrence throughout the State.

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