

## *What are the Safety Performance Measures?*

**SAFETY PERFORMANCE MEASURE: FATALITIES** (total number of reportable fatalities and rate per total vehicle revenue miles by mode)

Reducing the number of fatalities is a top priority for the entire Department of Transportation. As an industry, we must try to understand the factors involved in each fatality in order to prevent further occurrences. Measuring the number of fatalities over vehicle revenue miles, by mode, provides a fatality rate from which to assess future performance.

**SAFETY PERFORMANCE MEASURE: INJURIES** (total number of reportable<sup>8</sup> injuries and rate per total vehicle revenue miles by mode)

Many transit agencies have never had a fatality, and continued safe operation is exactly what is desired. However, injuries occur much more frequently, and are due to a wide variety of circumstances. Analyzing the factors that relate to injuries is a significant step in developing actions to prevent them. Again, measuring the number of injuries by mode, over vehicle revenue miles provides an injury rate from which to assess future performance.

**SAFETY PERFORMANCE MEASURE: SAFETY EVENTS** (total number of reportable events and rate per total vehicle revenue miles by mode)

The safety events measure captures all reported safety events that occur during transit operations and the performance of regular supervisory or maintenance activities. A reduction in safety events will support efforts to reduce fatalities and injuries, as well as damages to transit assets. Measuring the number of safety events by mode over vehicle

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<sup>8</sup> The thresholds for "reportable" fatalities, injuries, and events are defined in the NTD Safety and Security Reporting Manual.

revenue miles provides a safety event rate from which future performance can be compared.

**SAFETY PERFORMANCE MEASURE: SYSTEM RELIABILITY (mean distance between major mechanical failures by mode)**

The system reliability measure expresses the relationship between safety and asset condition. The rate of vehicle failures in service, defined as mean distance between major mechanical failures, is measured as revenue miles operated divided by the number of major mechanical failures.<sup>9</sup> This is a measure of how well a fleet of transit vehicles is maintained and operated. FTA recognizes the diversity of the transit industry, and that agencies have varied equipment types, with varied rates of performance, so this measure allows agencies to develop safety performance targets that are specific to their own fleet type, age, operating characteristics, and mode of operation.

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<sup>9</sup> Major Mechanical System Failures: Major mechanical system failures prevent a vehicle from completing or starting a scheduled revenue trip because actual movement is limited or because of safety concerns. Examples of major bus failures include breakdowns of brakes, doors, engine cooling systems, steering, axles, and suspension.

<sup>10</sup> Table 3-1 illustrates the types of information that is currently collected by the transit industry to measure its safety performance.