

Case Study 3: A Very Large Major Metropolitan Transit Authority in the Northeast

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Transit is a complex undertaking. Large fleets of vehicles must move through public streets on coordinated routes and schedules, consistently and reliably, day after day. The operational challenge is monumental, even for a modest-sized agency. Transit is also a very public undertaking, being publicly funded, providing a public service, and operating large vehicles on public streets. Thus, the nature of transit operations (i.e., coordinated passenger movement in public) dictates an ever-present awareness and concern with safety. Phrases like “Safety – Security – Schedule” used by one transit authority to describe their philosophy capture this priority. Safety programs are usually (but not always) fully integrated into the driver hiring process (referred to as “on-boarding”) and completion is a condition of employment. This situation creates a continuum between safety programs and individual performance/human relations concerns.

There is a heavy reliance on packaged/commercial safety programs. Packaged programs, or slightly modified packaged programs dominate the industry. Transit agencies are highly networked with each other and highly risk-adverse. Industry practice is a common criteria and justification for selecting a given program, followed by previous experience with similar systems in other agencies. Modifications, when they are present, are usually hybrids of multiple packaged programs or a modest tailoring of a commercial package.

The primary traffic safety programs used by the transit industry are Smith System, TAPTCO (Transit and Paratransit Company, described as a bus version of the Smith System), and USDOT TSI (USDOT Transportation Safety Institute, TAPTCO is said to be TSI based). Programs are typically delivered as a mixture of classroom training, in-vehicle monitoring, and trainer/supervisor observation of revenue service (picking up fare-paying passengers).

The physical and physiological challenges of bus driving are recognized and well understood within the transit industry. Most agencies have some form of wellness program designed for bus operators. These are so fully integrated into the fabric of the transit business that they are not seen as elements of a safety program per se, though the link to safety is recognized.

Transit safety programs are of interest to other transit organizations or quasi-transit organizations (e.g., corporate shuttles) as benchmarks, and to general safety program managers for their use of packaged safety programs and the size of their operations.

This example is a very large transit system operating nearly 1300 buses, over 950 heavy rail cars, and over 600 demand responsive paratransit vans. Basic Driver Training consists of 10 weeks with an explicit safety element which includes standard operating procedures (SOPs), situational notices to drivers, and basic Defensive Driving elements (Smith System clone) of in-

house design and creation. Philosophy is “Safety – Service – Schedule”. Training is repeated as a “refresher course” in an abbreviated form (two 8 hour increments) every two years and upon an “accident” (aka preventable crash) or “incident” from DriveCam. Also as FTA mandated Corrective Action Plans (CAPs).

DriveCam (a monitoring technology and system provided by Lytx) is the monitoring technology. Lytx provides the technology and manages it (meaning the hardware and the data collected, including screening and categorization). Deployed since 2010, this system is seen as “Behavior Modification through Performance Triggers” approach, is therefore proactive, especially regarding the environment (i.e., not necessarily punitive). Triggers are hard braking, hard acceleration, hard cornering, rough road / obstacles or manually. SMS (Safety Management System) is a separate overarching investigation system which defines preventable versus unpreventable, and major vs minor. DriveCam provides the details.

The primary goal of the program (including in part the 10 week course) is to “improve performance indicators,” meaning reduce crashes. The two day course is currently structured to focus on distractions and strategies to reduce for the first day and customer service and updates to company and federal policy the second day. Both days are classroom F2F. The first day’s material is based on DriveCam examples which are examined and discussed in terms of warning signs (aka “triggers” in Smith System parlance). The second day’s material is traditional classroom based lecture and discussion. For the refresher course, both days are classroom F2F. The 10 week basic course is a mix with substantial on-road skills development practice.

A Safety Blitz is an organized coordinated agency-wide action involving training, operations and security groups focused on incident “hotspot” locations. Investigation and intervention involving site visits, operator interviews, messages to operators and other general information and status communications. Described as a “show of safety” (as opposed to a “show of force”).

Comments & Takeaways

- This organization views in-vehicle monitoring as behavior modification via performance feedback triggers. For them cameras are a proactive intervention where risky behaviors such as hard braking are identified and immediately addressed. The purpose of monitoring is to change behavior, not to punish risky behavior.
- The “Safety Blitz” focuses on hotspot locations resulting in investigation and interventions. Presented and identified as “show of safety” as opposed to “show of force.” The impact is multi-dimensional. The problem is addressed, and management shows commitment and support for safety, as well as for broad input to the process.