Improving Bus Transit Safety Through Rewards and Discipline

Amber Reep and Jay Goodwill, CUTR

June 6, 2012  ●  FDOT/FPTA/CUTR Professional Development Workshop

TCRP Synthesis Program

- Synthesis of Information and Useful Knowledge
- Reports on Current Knowledge and Practice in a compact format
- Represents “Best Information Available”
- Not a typical research effort
Project Consultants

- University of South Florida Center for Urban Transportation Research
  - Jay Goodwill
  - Amber Reep

- Pine and Associates, Inc.
  - Randall Pine

Topic Panel

- Andrew Bata, MTA, New York City
- James Bradford, Jr., CT Transit
- Ben Gomez, Dallas Area Regional Transit
- Patrick Gough, Orange County Transportation Authority
- Richard Pain, TRB
- Blake Vaughan, First Group
- Ed Watt, TWU
- Carol Wright, SURTC, Fargo, ND
- Ryan Frigo, FTA
- Nichole Neal, FTA
- Joseph Niegoski, APTA
- Joseph Scott, NTSB
- Caryn Souza, Association of Commuter Transportation
Project Overview

- Addressed current practices and experiences of public transit agencies in applying both corrective actions and rewards to recognize, motivate, and reinforce a safety culture within their organization.
- Surveyed and interviewed a range of small to large transit agencies, including rural and urban multimodal systems.

Survey and Interview Focus

The survey and follow-up interviews were organized to address the following topics:

- Organizational commitment to safety
- Rewards and discipline
- Engagement of the work force
- Partnerships with organized labor
- Operations and maintenance
- Agency safety standards and practices
Study Organization:

- The Organization and its Approach to Safety
- Organizational Policies Related to Safety Discipline
- Organizational Policies Related to Safety Incentives and Award

Study Methodology:

- Literature Review
- Survey of Transit Agencies
- Telephone Interviews
- Development of Nine Case Examples
Literature Review Findings

“A connection between employee safety performance and reward programs appears to exist, substantially influenced by the safety culture of the organization, including management’s perception of safety”.

“However, the effectiveness of reward/discipline program or practice is difficult, if not impossible to measure because of systematic or on-going programs in general have no control group or baseline with which to compare results.”

Literature Review Findings (continued)

TCRP Synthesis #3 : Incentive Programs to Improve Transit Employee Performance (1994)

Highlights some of the challenges of public incentive programs:

- Finding funding source (tied to profits in private sector)
- Concept of “extra pay” for doing your job
- Public sector’s tendency not to differentiate among employees
- Difficulty in defining performance measures that are objective and in the employee’s control
- The impact of collective bargaining agreements
Survey Results

- Targeted transit agencies with active bus safety programs
- Identified 30 agencies
- Received 25 responses
- Included 15 states and Canada
- Good system size mix

Participating Agency
Geographical Distribution
Report Organization

- Organization and Safety
- Organizational Policies Related to Safety Discipline
- Safety Incentives and Rewards
- Challenges and Opportunities
- Case Examples
- Conclusions

Organization and Safety

- System Description and Type
- Organization Mission Statements & Culture
- System Safety Program Plans
- Employee Involvement
- Focus on Safety (new and existing employees)
- Hazard Identification Programs
### Survey Findings

#### Which modes does your agency either directly operate or operate using a contractor? (check all that apply)

<table>
<thead>
<tr>
<th>Mode</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed-route bus</td>
<td>100.0%</td>
<td>29</td>
</tr>
<tr>
<td>Paratransit</td>
<td>82.8%</td>
<td>24</td>
</tr>
<tr>
<td>Heavy rail/subway</td>
<td>6.9%</td>
<td>2</td>
</tr>
<tr>
<td>Light rail/streetcar</td>
<td>29.7%</td>
<td>6</td>
</tr>
<tr>
<td>Bus rapid transit</td>
<td>31.0%</td>
<td>9</td>
</tr>
<tr>
<td>Commuter rail</td>
<td>6.9%</td>
<td>2</td>
</tr>
<tr>
<td>Ferry</td>
<td>3.4%</td>
<td>1</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Answered question</td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>Skipped question</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

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#### Survey Findings

#### What type of areas does your transit system serve? (check all that apply)

<table>
<thead>
<tr>
<th>Area</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>82.8%</td>
<td>24</td>
</tr>
<tr>
<td>Suburban</td>
<td>75.0%</td>
<td>22</td>
</tr>
<tr>
<td>Regional</td>
<td>48.3%</td>
<td>14</td>
</tr>
<tr>
<td>Rural</td>
<td>44.8%</td>
<td>13</td>
</tr>
<tr>
<td>Answered question</td>
<td></td>
<td>29</td>
</tr>
<tr>
<td>Skipped question</td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>
**Survey Findings**

**Does your organization have a formal mission statement?**

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>100.0%</td>
<td>29</td>
</tr>
<tr>
<td>No</td>
<td>0.0%</td>
<td>0</td>
</tr>
</tbody>
</table>

answered question 29

skipped question 1

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**Survey Findings**

**If yes, is safety mentioned in the mission statement?**

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>58.6%</td>
<td>17</td>
</tr>
<tr>
<td>No</td>
<td>41.4%</td>
<td>12</td>
</tr>
</tbody>
</table>

answered question 29

skipped question 1
### Survey Findings

**Does your organization have a written Safety Program, System Safety Program Plan or similar document?**

<table>
<thead>
<tr>
<th>Response</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>100.0%</td>
<td>28</td>
</tr>
<tr>
<td>No</td>
<td>0.0%</td>
<td>0</td>
</tr>
</tbody>
</table>

answered question 28

skipped question 2

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### Survey Findings

**Is organized labor involved in the application of the safety program or process?**

<table>
<thead>
<tr>
<th>Response</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>50.0%</td>
<td>13</td>
</tr>
<tr>
<td>No</td>
<td>50.0%</td>
<td>13</td>
</tr>
</tbody>
</table>

answered question 26

skipped question 4
### Survey Findings

#### Is safety a part of recurring bus operator training or regular safety meetings?

<table>
<thead>
<tr>
<th>Response</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>96.2%</td>
<td>25</td>
</tr>
<tr>
<td>No</td>
<td>3.8%</td>
<td>1</td>
</tr>
</tbody>
</table>

- answered question: 26
- skipped question: 4

#### Survey Findings

#### Does your organization have a “hazard identification” process?

<table>
<thead>
<tr>
<th>Response</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>88.5%</td>
<td>23</td>
</tr>
<tr>
<td>No</td>
<td>11.5%</td>
<td>3</td>
</tr>
</tbody>
</table>

- answered question: 26
- skipped question: 4
Organizational Policies Related to Safety Discipline

- Employee Discipline Practices for Safety-Related Incidents
- Effectiveness of Safety Discipline Programs
- Customer Safety Complaints
- Potential Changes to Policies and Practices

Survey Findings

Can bus operators be discharged for safety related accidents or incidents?

<table>
<thead>
<tr>
<th>Response</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>95.6%</td>
<td>23</td>
</tr>
<tr>
<td>No</td>
<td>4.2%</td>
<td>1</td>
</tr>
</tbody>
</table>

answered question 24

skipped question 6
### Survey Findings

**Does your maintenance department or other departments have a same or similar disciplinary program or process?**

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>87.6%</td>
<td>20</td>
</tr>
<tr>
<td>No</td>
<td>12.4%</td>
<td>3</td>
</tr>
</tbody>
</table>

Answered question: 23
Skipped question: 7

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**Does your organization have any data that would indicate how effective your disciplinary process has been in impacting safety?**

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>36.4%</td>
<td>8</td>
</tr>
<tr>
<td>No</td>
<td>63.6%</td>
<td>14</td>
</tr>
</tbody>
</table>

Answered question: 22
Skipped question: 8
Safety Incentives and Rewards

- Organization Reward Practices for Safety
- Participation of Employees in Policy Development
- Involvement of Non-operator Work Units
- Effectiveness of Safety Incentive and Rewards Programs

Survey Findings

Does your organization offer individual or group rewards or incentives for safety performance?

<table>
<thead>
<tr>
<th>Response</th>
<th>Yes</th>
<th>No</th>
<th>Answered Question</th>
<th>Skipped Question</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>85.2%</td>
<td>14.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>23</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Survey Findings

#### Are your incentive or reward programs:

<table>
<thead>
<tr>
<th>Response</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ongoing</td>
<td>60.9%</td>
<td>14</td>
</tr>
<tr>
<td>Time Limited</td>
<td>8.7%</td>
<td>2</td>
</tr>
<tr>
<td>Both</td>
<td>30.4%</td>
<td>7</td>
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</tbody>
</table>

**Answered Question:** 23  
**Skipped Question:** 7

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#### Survey Findings

#### Were bus operators involved in the program development?

<table>
<thead>
<tr>
<th>Response</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>63.6%</td>
<td>14</td>
</tr>
<tr>
<td>No</td>
<td>36.4%</td>
<td>8</td>
</tr>
</tbody>
</table>

**Answered Question:** 22  
**Skipped Question:** 8
### Survey Findings

**Was organized labor involved in the program development?**

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>42.9%</td>
<td>9</td>
</tr>
<tr>
<td>No</td>
<td>57.1%</td>
<td>12</td>
</tr>
</tbody>
</table>

- answered question: 21
- skipped question: 9

### Survey Findings

**Does your maintenance department or other departments have a same or similar incentive or reward programs?**

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>42.3%</td>
<td>11</td>
</tr>
<tr>
<td>No</td>
<td>57.7%</td>
<td>15</td>
</tr>
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</table>

- answered question: 26
- skipped question: 4
Survey Findings

Does your organization have any data that would indicate how effective your incentive and rewards program has been in impacting safety?

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>37.5%</td>
<td>9</td>
</tr>
<tr>
<td>No</td>
<td>62.5%</td>
<td>15</td>
</tr>
</tbody>
</table>

- answered question 24
- skipped question 6

Challenges and Opportunities

- Employee Turnover Rate
- Impacts of Diversity of Workforce on Communication and Training
- Employee Wellness Programs
### Survey Findings

<table>
<thead>
<tr>
<th>Does your organization experience a high turnover of your bus operators?</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>40.0%</td>
<td>10</td>
</tr>
<tr>
<td>No</td>
<td>60.0%</td>
<td>15</td>
</tr>
</tbody>
</table>

- answered question 25
- skipped question 5

### Survey Findings

<table>
<thead>
<tr>
<th>Does your organization experience communication and training problems related to the diversity of your workforce (i.e., age differences, cultural differences, etc.)?</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>20.0%</td>
<td>5</td>
</tr>
<tr>
<td>No</td>
<td>80.0%</td>
<td>20</td>
</tr>
</tbody>
</table>

- answered question 25
- skipped question 5
Survey Findings

Does your organization have an employee wellness program that addresses issues such as sleep patterns, the use of over the counter medicines, and other issues that could impact bus operator performance?

<table>
<thead>
<tr>
<th>Response</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>76.0%</td>
<td>19</td>
</tr>
<tr>
<td>No</td>
<td>24.0%</td>
<td>6</td>
</tr>
<tr>
<td>answered question</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>skipped question</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>
Case Example Locations

Dallas Area Rapid Transit
Dallas, Texas

- **Organization Approach to Safety**
  - Safety part of mission statement
  - Comprehensive SSPP
  - Initiatives:
    - Mandatory operator safety meetings
    - Performance incentive programs – both individual and team
    - Improved hazard identification and resolution process
Dallas Area Rapid Transit
Dallas, Texas

• **Agency Discipline Process**
  – Progressive disciplinary process
  – Organized labor involvement

• **Incentives & Rewards Program**
  – Performance Incentive Program (team & individual)
    • On-time performance
    • Late pull-outs
    • Unscheduled absences
    • Complaints
    • Accidents per 100,000 miles

Fayetteville Area System of Transit
Fayetteville, North Carolina

• **Organization Approach to Safety**
  – Since 2008 has had a dedicated safety & training coordinator
  – Monthly safety meetings

• **Agency Discipline Process**
  – Traditional approach to progressive discipline related to accidents
  – Within 3 year period: 1st incident = one-day suspension; 2nd incident = three-day suspension, and, 3rd incident = grounds for termination

• **Incentives & Rewards Program**
  – No individual or group incentives or rewards due to limited budget and need to conform with other city departments
Go Transit
Southern Ontario, Canada

• **Organization Approach to Safety**
  – Internal mission statements – including “charters” with passengers
  – Safety is strongly emphasized
  – Comprehensive SSPP
  – Management-Labor safety committee
  – Supportive management
  – Safety is primary topic in training, 3rd year re-training, and remedial training

Go Transit
Southern Ontario, Canada

• **Agency Discipline Process**
  – Progressive discipline program

• **Incentives & Rewards Program**
  – Incentive-type safety program elements with competition between divisions and increased discussion and awareness of safety issues
  – Rewards administered five times per year
King County Metro
Seattle, Washington

• **Organization Approach to Safety**
  – Adopted safety program
  – Three “S” philosophy – safety, service & security
  – Utilizes Safety Officers and Safety Awareness Team

• **Agency Discipline Process**
  – Accident review process
  – All preventable accidents assigned points
  – Safety related discipline if based on matrix of points
  – Accident Review Committee

King County Metro
Seattle, Washington

• **Incentives & Rewards Program**
  – Uses National Safety Council’s reward/incentive program
  – Transit operators receive recognition award for each successful year of safe driving
  – Non-cash awards presented based on number of years
  – Operators recognized quarterly
  – Award winners displayed at agency headquarters
Minnesota Valley Transit Authority
Twin Cities Area, Minnesota

• Organization Approach to Safety
  – Motto is “Safety is Number One”
  – Designated safety officer that oversees the safety program and safety committee
  – Analyzes accidents
  – Extended training period from 62 to 90 hours

• Agency Discipline Process
  – Progressive discipline program
  – For safety related incidents, handled by Safety Committee

Minnesota Valley Transit Authority
Twin Cities Area, Minnesota

• Incentives & Rewards Program
  – Incidents are reviewed monthly for:
    • Driver complaints (including safety-related)
    • Missed trips
    • Fleet maintenance
  – Incentives and penalties assigned accordingly
  – Safety awards for bus operators
  – Two “Operators of the Year” selected and honored at ceremony and banquet
River Cities Public Transit
Pierre, South Dakota

- **Organization Approach to Safety**
  - “Practice safety in all work activities” one of 7 core values
  - Use CTAA Passenger Service and Safety training
  - Works closely with Dakota Transit Association for training and professional development
  - Employs a consultant to advise on safety programs
- **Agency Discipline Process**
  - Accident review committee – includes bus operator representatives
  - Cash penalty for any chargeable accident
    - $250 if reported promptly by operator
    - $500 if not reported

River Cities Public Transit
Pierre, South Dakota

- **Incentives & Rewards Program**
  - Working toward development an employee recognition program
  - Only recognition program is the Driver of the Year program
Southwest Transit
Eden Prairie, Minnesota

• **Organization Approach to Safety**
  – “Provide reliable, safe, comfortable, and customer friendly service”
  – Monthly driver safety meetings
  – Multi-discipline Safety Solution Teams meet monthly
  – Monthly safety campaign topics

• **Agency Discipline Process**
  – Standard approach of progressive discipline

Southwest Transit
Eden Prairie, Minnesota

• **Incentives & Rewards Program**
  – **Best Employee Succeed Together (BEST):**
    • Focuses on the concept the employees will help meet the Agency’s safety mission of safety by succeeding together
    • Budgeted annually at $100,000
    • Two components:
      – **Fixed Pool** – pays a fixed amount ($325) per quarter per operator who meet eligibility based on performance factors
      – **Variable Pool** – An annual base pool ($25,000) that changes based on cost of chargeable accidents and/or savings from Fixed Pool
Utah Transit Authority  
Salt Lake City, Utah  

• **Organization Approach to Safety**  
  – Empowers each of its five business units to be responsible for safety  
  – Safety committee meetings held bi-monthly  

• **Agency Discipline Process**  
  – Accident classification system used  
  – Based on damages, costs, number of occurrences  
  – Progressive discipline system  

Utah Transit Authority  
Salt Lake City, Utah  

• **Incentives & Rewards Program**  
  – Seven incentive award programs:  
    • Rising Star  
    • Perfect Attendance  
    • On the Spot  
    • Peer-to-Peer  
    • Golden Snitch Award  
    • Road Call Achievement Recognition and Reward  
    • Complaint Reduction Program
Wind River Transportation Authority
Riverton, Wyoming

- **Organization Approach to Safety**
  - Uses the Wyoming Public Transportation Authority resources
  - Requires operators to have prior transit experience and good attitude
- **Agency Discipline Process**
  - Progressive discipline process
  - After avoidable accident, a supervisor is assigned to ride with the operator
- **Incentives & Rewards Program**
  - Utilizes low cost recognition programs with a variety of awards such as food and dinner certificates

Conclusions

- Every transit agency emphasized the importance of safety – but many varied approaches were taken
- **One constant is the presence of disciplinary code for safety related matters**
- Safety incentive programs can be successful and help raise safety awareness
- A variety of safety reward programs have been used in conjunction with corrective action to recognize, motivate, and reinforce organizational safety culture
Conclusions (continued)

- Unfortunately, due to decreasing budgets and increasing operating costs, many systems are unable to implement or maintain reward programs
- Due to lack of data, the impact of wellness programs on safety was hard to quantify
- Many agencies reported success, some measured, with reward or incentive programs

Suggestions for Future Study

- A scientifically controlled study to evaluate the effectiveness of rewards/incentives in reducing accidents
- The development of a standardized, participatory process for implementing program or policy changes to improve safety
- Use of rewards and penalties in contracted service
- Evaluation of the effectiveness of employee wellness programs on organizational safety
- Identification of successful practices of developing and enhancing the safety culture of the transit agency -- expending the focus to all aspects of the organization
Improving Bus Transit Safety Through Rewards and Discipline

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CONTACT INFORMATION

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