SHORT LINE SAFETY INSTITUTE
SAFETY MAKE $ENSE

TRACK 205 – FINANCE & ADMINISTRATION

DEFINING A SAFETY CULTURE

ASLRRRA 2015 CONNECTIONS
ORLANDO, FLORIDA
MARCH 31, 2015
Concept and Process

• Chairman Ed McKechnie announce the concept for the focus on safety culture at the Annual Meeting in Atlanta

• In January, 2014 in response to Secretary Foxx outreach to short lines, President Rich Timmons sent a letter setting forth the idea of establishing a short line safety initiative

• Initially the program will be directed at short lines and regionals that haul crude through a pilot project

• Over the next few years, it will be expanded to all short lines and regional railroads

• ASLRRRA is working with the FRA, UCONN, and Volpe to develop the project
# Short Line Safety Institute Development Team

<table>
<thead>
<tr>
<th>Team</th>
<th>Lead(s)</th>
<th>Role</th>
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<tbody>
<tr>
<td>ASLRRRA</td>
<td>Keith Borman</td>
<td>Counsel, Program Development</td>
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<td></td>
<td>Mike Ogborn</td>
<td>Team Leader, Program Development, Stakeholder Engagement, Liaison With ASLRRRA</td>
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<td></td>
<td>Jo Strang</td>
<td>Program Development, Subject Matter Expert Stakeholder Engagement</td>
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<td></td>
<td>Tom Streicher</td>
<td>Program Development, Subject Matter Expert</td>
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<tr>
<td>FRA R&amp;D</td>
<td>J R Sampson</td>
<td>Coordinator</td>
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<td></td>
<td>Michael Coplen, M.A.</td>
<td>Industrial/Organizational Development, Behavioral and Safety Culture Change, Program Evaluation</td>
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<td></td>
<td>Starr Kidda, Ph.D.</td>
<td>Job Analysis, Grants Management, Project Evaluation</td>
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<tr>
<td>Volpe</td>
<td>Nicole Boyko, M.A.</td>
<td>Safety Culture Measurement</td>
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<td></td>
<td>Juna Snow, Ph.D.</td>
<td>Program Evaluation, Educational Evaluation</td>
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<tr>
<td>UCONN</td>
<td>Janet Barnes-Farrell, Ph.D.</td>
<td>Safety Culture Measurement, Job Analysis</td>
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</table>
**Short Line Safety Institute Evaluation Framework**

**Mission:** Enhance safety culture and safety compliance of short line and regional railroads through voluntary, non-punitive partnerships.

**Context**

**Priority**
- Improve crude-by-rail transportation safety

**Situation**
- Rapid increase in crude oil production and related incidents

**Inputs**

**What we invest**

- **FRA R&D Funding**
  - ASLRRA grant
  - UCONN grant
  - Volpe grant
  - Congressional grant

**Activities**

- Needs assessments
- Job analyses
- Literature reviews
- Stakeholder engagement strategies
- Organizational planning

**Outputs**

**What we get**

- **FRA R&D Team**
  - Assessment Tools:
    - Safety culture
    - Safety compliance
    - Interview protocols
  - Educational Materials:
    - Employees
    - Managers

**ASLRRA Team**

- Onsite assessments
- Assessment reports
- Participant feedback
- Organizational structure

**For whom**

- Short line and regional railroads
- Management
- Employees
- FRA R&D
- Other railroads
- DOT at-large
- Congress
- Public

**Outcomes**

**What we see**

- Improved safety culture
- Fully-functioning Safety Institute
- Reduced accidents and injuries
- Ongoing assessments
- Education
- Research
- Increased safety conformance
- Use of Institute repository resources

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**Context, Input, Implementation, and Impact Evaluation**
Short Line Safety Institute
Vision, Mission, and Strategic Goals

• Vision: For the short line and regional railroad industry to perform at a superlative level of safety

• Mission: To provide the leadership to enhance the safety culture and safety conformance of short line and regional railroads through voluntary, non-punitive partnerships

• Strategic Goals: To enhance and improve safety practices and to increase the short line and regional railroad industry's culture of commitment to safety through assessing their safety culture, recommending how to improve it, and providing leadership, training and education about safety culture and conformance
Definition Of A Safety Culture

The shared values, actions, and behaviors that demonstrate a commitment to safety over competing goals and demands.
10 Core Elements of a Strong Safety Culture

1. Leadership Is Clearly Committed To Safety
2. The Railroad Practices Continuous Learning
3. Decisions Demonstrate That Safety Is Prioritized Over Competing Demands
4. Reporting Systems And Accountability Are Clearly Defined
5. There Is A Safety Conscious Work Environment
6. Employees Feel Personally Responsible For Safety
7. There Is Open And Effective Communication Across The Railroad
8. Mutual Trust Is Fostered Between Employees And The Railroad
9. The Railroad Is Fair And Consistent In Responding To Safety Concerns
10. Training And Resources Are Available To Support Safety
Compliance vs. Conformance

- Compliance is measured against an immovable standard
  - Because the standard cannot change, the behavior must
  - Compliance does not = Safety

- Conformance is measured against a chosen standard
  - Chosen as a necessity
  - Chosen as a best practice
  - If behavior can’t be changed, the standard may be changed.
Mission: Enhance safety culture and safety compliance of short line and regional railroads through voluntary, non-punitive partnerships.

Short Line Safety Institute Project Timeline

- **Pilot:** Sample of RRs hauling crude
  - Jan–June 2015

- **Expansion:** Additional RRs hauling crude

- **Roll-out:** RRs handling other hazardous materials
  - Post-Jan 2016

Ongoing Implementation and Impact Evaluation
Pilot Project Launch
Communication Process

- Pre-Launch planning with Management Team
- Expectation setting and planning with employees
- Run pilot with candor and commitment

- Safety Assessment Team
- Management Team
- SAT + Organization Stakeholders
Pilot Project - Phase 1

- Develop selection criteria for pilot sites - completed
- Choose initial railroads to be assessed -- completed
- Develop templates - completed
- Develop recruitment and training protocols for assessors - completed
- Recruit, interview, and contract with assessors - completed
- Train the assessors to conduct the assessments - completed
- Contact railroads to be assessed and start process – in progress
Pilot Project – Phase 2

• Prior to on-site assessment, the Coordinator discuss with senior manager the project, its scope, and the process and request safety related information
• All employees will be requested to complete surveys before assessors arrive
• Review will include field observations
• Assessors will review safety culture on the railroad through interviews with senior management, supervisory management, and employees on site
Pilot Project – Phase 3

- Assemble the data and analyze to determine elements to communicate back to railroad
- Assessors will brief management and leadership team on findings and recommendations
- Subsequent to the assessment, the assessors will provide management with written report on findings and recommendations
- ASLRRRA Team will work with senior management on implementation plan
- Assessors will conduct follow-up visits
Assessment and Transition

- ASLRRRA and R&D will assess the effectiveness of the Pilot Project and make adjustments as needed.
- Pilot Project will transition to a permanent expanded program.
- Over time the Institute will both conduct assessments and become an educational and training source for short lines.
- The Institute will also develop data analysis and research capabilities.
Short Line Safety Institute

The Institute will heighten the intensity of the safety focus and involvement of short line and regional railroads and their management.

The goal of the Institute is to facilitate the strongest safety culture possible in all short line and regional railroads.
Safety makes Sense

2015 ASLRAA Annual Convention
Orlando, Florida
Why $safety makes $ense (cents)

The 3 P’s of Risk

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<tr>
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<th>OURS</th>
<th>OTHERS</th>
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<tbody>
<tr>
<td>People</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Property</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Product</td>
<td>X</td>
<td>X</td>
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</tbody>
</table>

Why $afey makes $ense (cents)
Why $afety makes $ense (cents)

PEOPLE

In an unsafe environment:

• We Risk our people
• We put other people at Risk

Example:
• Lac Magantic
• Injuries
• Other (Evacuations)
Why $afety makes $ense (cents)

PROPERTY

In an unsafe environment:

• We Risk our property
• We Risk others property

Example:
• Damaged Track, Bridges
• Equipment
• Rail Cars
Why Safety makes $ense (cents) 

PRODUCT

In an unsafe environment:

• We Risk our product (which is our service)
• We Risk others product (our customers products)

Example:
• Service Issues - Delays
• Product we are Hauling
Why $afety makes $ense (cents)

Costs Associated with the “P’s”

PEOPLE

• Injuries – FELA claims
• Medical Costs
• Extra labor while recuperating
• Lawsuits
• Bad Press
• Insurance Costs
Why $afety makes $ense (cents)

Costs Associated with the “P’s”

PROPERTY

• Repair locomotive
• Repair Track
• Repair Cars
• Replace Cars
• Damage to others Property
• Lawsuits
Why Safety makes Sense (cents)

Costs Associated with the “P’s”

PRODUCT

• Loss of Customer Goodwill
• We may become a Questionable Carrier
• Lawsuits
• Lading Losses
• Clean-up Issues, EPA, etc.
• Insurance Costs
Why $safety makes $ense (cents)
Operating in a Safe Environment

Examples:

• Union Pacific
  – Reports Declines in Derailments (7% in 2014)
  – 38% over the past 10 years
  – Stock Price (value of company) has ZOOMED:
    • 28% in 1 year
    • 686% in 10 years

• CSX
  – Most admired company, but…
  – Derailment on February 16, 2015
  – Stock Price February 17, 2015: DOWN .6% in one day
  – Annualized decline of 219%
Why $safety makes $ense (cents)
A Short Line Story

- Year 1 - Derailment Costs $400,000
- Railroad’s Annual Loss ($259,000)

- One Year Later - NO Derailments
- Railroad’s Annual Profit $527,000

WHY?
- Started Program to Actively Improve Safety Culture
- Better Allocation of Resources
Why $safety makes $ense (cents)

A Short Line Story – Part 2

• Year 1 – (3) Derailments - Costs $600,000
• Reduced Profits

• One Year later - Spent $50,000 on a Safety Program
• NO Derailments
• NO Injuries

WHY?
• Started Program to Actively Improve Safety Culture
• Reduced Transportation Expenses by $300,000
• Better Allocation of Expense Dollars
Why $safety makes $ense (cents)

- Use 45G Tax Credit to Fund Infrastructure Costs which improves the physical plant and increases Safety

- Begin a Safety program today

- Improve your Bottom Line, by

  Protecting your P’s
Contact Information

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Safety Culture Change: Case Study
Examples of Bottom-Line Benefits

ASLRRA 2015 Connections
Finance and Administration Breakout Session 205
Safety Make Sense: The Short Line Safety Institute
March 31, 2015
Orlando, Florida

MICHAEL COPLEN
Senior Evaluator
Office of Research and Development
Office of Railroad Policy and Development
Federal Railroad Administration
1999 Study: Compliance with Railroad Operating Rules and Corporate Culture Influences
Safety Culture in U.S. Railroad Industry

Research and Evaluation Strategy, 2001

• Identify, develop, and implement innovative safety culture pilot projects in U.S. railroad industry
• Develop safety culture interventions applicable across different organizations and environments
• Evaluate utilization, impact, and effectiveness of pilot projects
• Where successful, support broad-scale adoption and implementation across industry

*Develop a “business case” for safety culture in the railroad industry*
## Impact of CSA (P2P) and C³RS in U.S. Railroad Industry

<table>
<thead>
<tr>
<th>Approach</th>
<th>Carriers</th>
<th>Start Date</th>
<th>Functions</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participative Safety Rules Revision</td>
<td>ACBL, CSXT, KCS, CN-IC</td>
<td>1999</td>
<td>All Operating</td>
<td>30% reduction in reportable injuries</td>
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<tr>
<td></td>
<td></td>
<td></td>
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<td>Drop in liability claims</td>
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<tr>
<td>Root-Cause Analysis Problem Solving</td>
<td>Canadian Pacific</td>
<td>2003</td>
<td>Mechanical</td>
<td>50% drop in injury rates (all injuries)</td>
</tr>
<tr>
<td>Clear Signal for Action (CSA)</td>
<td>Amtrak</td>
<td>2001</td>
<td>Station Services</td>
<td>76% drop in injury rates</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>71% drop in reportable injuries</td>
</tr>
<tr>
<td>• Peer-to-Peer Feedback</td>
<td>Union Pacific</td>
<td>2005</td>
<td>Road Crews</td>
<td>79% drop in L.E. decertification rates</td>
</tr>
<tr>
<td>• Continuous Improvement</td>
<td></td>
<td></td>
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<td>81% drop in derailments</td>
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<td>• Safety Leadership</td>
<td>Union Pacific</td>
<td>2006</td>
<td>Yard Crews</td>
<td>65% drop in yard-derailment rates</td>
</tr>
<tr>
<td>Confidential Close Call Reporting System (C³RS)</td>
<td>Union Pacific, Canadian Pacific, New Jersey Transit, Amtrak</td>
<td>2007-2011</td>
<td>Road &amp; Yard Crews</td>
<td>41% reduction in derailments at 1 site</td>
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<td>90% drop in discipline cases</td>
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Current R&D Safety Culture Evaluations: Company-wide and Industry-wide pilots

- Short Line Safety Institute
- Amtrak Safe-2-Safer
- BNSF Safety Culture Initiatives
- Passenger Ops CSA Training Materials
- C3RS
FRA R&D Safety Culture Selected Bibliography

FRA R&D Safety Culture Selected Bibliography (cont.)


Thanks to our team!

- **Sponsors (FRA)**
  - Michael Coplen, FRA Office of Research and Development
  - Tom Raslear, FRA Office of Research and Development

- **Volpe Center**
  - Joyce Ranney, Ph.D.
  - Michael Zuschlag, Ph.D.
  - Nicole Boyko, Ph.D.

- **Rail Industry Partners**
  - Amtrak
  - Union Pacific
  - Canadian Pacific
  - New Jersey Transit
  - CSXT
  - KCS
  - CN-IC
  - ACBL
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