

# TRANSIT NATIONAL RAIL VEHICLE TRAINING STANDARDS COMMITTEE FINDINGS AND RECOMMENDATIONS

IMPLEMENTING STANDARDS-DRIVEN,  
PARTNERSHIP-BASED TRAINING:  
A NATIONAL TRANSIT PRIORITY

# Transit's Technical Skills Challenge

## Driven by:

1. **New Technology** - Electronics, Digital Systems, Communications and Signals, Propulsion . . .
2. **Growth in Ridership** - especially in Transit Rail:  
Up *75 percent* since 1995
3. **Pending Retirements** of Skilled Technicians – 1/3 or more of technical workforce eligible to retire in next five years

# Transit's Technical Skills Challenge

## Compounded by:

- **Historical Absence of Standards Based Training:**
  - Transit's legacy training world: Each location has to determine what technicians need to know, how best to teach it and then develop training materials etc.
- **Dramatic Underinvestment in Human Capital:**
  - Less than 1 percent of industry payroll invested in training, especially for front-line technicians
  - Training sacrificed when budgets are tight

# Transit Industry Response

- **Joint Effort by National Transit Industry: 2006-2013**
  - Developing National Training Standards and Systems
- **Broad Participation:**
  - National Organizations: ATU, TWU, APTA, IBEW, Rail Transit Authorities
  - Staffed by the Transportation Learning Center
  - Experts from Transit Systems (Trainers, Supervisors, Managers) and Local Unions
  - Expert Committee Co-Chairs
    - Jay Shah, NYCT, Co-Chair of APTA Rail Vehicle Inspection and Maintenance Committee
    - John Costa, International VP, ATU

# Major Milestones in a Seven Year Program

- 2006-2010 – National Training Standards – Adopted APTA Standards
- 2008-2010 – Design Framework for System of Qualification, with Grand-Parenting,
- 2009-2011 – Design & Submit National Rail Car Apprenticeship System
- 2009-2012 – Prepare System of Mentoring and On-the-Job Learning
- 2010-2012 – Validated Shareable Courseware – 100 and 200 Levels
- 2011-2012 – National Learning Information Management System (LIMS)
- 2011-2012 – Hands-On and Written Assessments to Validate Successful Training
- 2009-2012 – Design Course Master Documents: 100, 200, 250, 300 levels
- 2011-2013 – Train the Trainer for Strengthening Rail Car System of Qualification and Apprenticeship in Each Location and validation of On-The-Job training for 300 level

## Key Features

- **Standards- Driven Training:** National standards to be customized to local fleet and practices
- **Grand-parenting:** Protect incumbent workers' pay and status
- **System of Qualification:** Common framework of classroom and hands-on training with shared curriculum
- **Apprenticeship Framework:** Gold Standard of soup-to-nuts training
- **Mentoring:** Supports trainee success and assures integration of classroom and on-the-job learning
- **Train the Trainer:** Supports local development and implementation of standards-based training systems

## Cost Savings:

- **Standards-Driven, Partnership-Based Training Pays for Itself**
  - Fewer wasted parts, less wasted time
  - More efficient and effective diagnostics and maintenance practices
- **Return on Investment for Standards-Driven, Partnership-Based Training is 3 to 7 Times the Cost of New Training Investment**
  - ROI in first 18 months is 101 to 336 percent
  - Subsequent years' ROI is 500 to 1200 percent
  - Total average Return is 293 to 745 times higher than the increased investment for quality standards-based training partnerships
- **Quality Training Yields Greater Reliability**
  - Greater MDBF
  - More reliable service
  - Improved state of good repair
- **Reduces cost for maintenance and equipment out of service time**

## Standards-Driven, Partnership-Based Training Produces:

- **Safety:**
  - Quality maintenance skills with new technology produce more reliable, safer operating equipment
- **Risk Reduction:**
  - Workforce trained to national standards reduces risk and limits financial exposure
- **A Sustainable Workforce:**
  - The next generation qualified technical workforce
  - Capacity for sustaining workforce quality as Boomers retire
    - One third of technicians scheduled to retire within 5 years
  - Ability to skill up incumbent workers as well as new hires



# Next Steps: Ready for Implementation

1. Develop customized standards-based curriculum and training at each agency, using Skill Gap Analysis, and register training results with transit's national Learning Information Management System.
2. Get trainers, operations managers and workers working together as joint stakeholders in a quality training partnership, with expanded training investment.
3. Start using the new industry-wide curriculum and available training material now available for sharing across the industry.
4. Assure adequate investment in frontline workforce human capital – utilizing industry standards and partnerships to create *more efficient and effective human capital* with well prepared expert trainers.
5. Assure that today's workers are not put at any disadvantage in the implementation of standards-based training and apprenticeship by a robust approach to grand-parenting incumbents.

# Next Steps: Ready for Implementation (2)

6. Improve integration of classroom and shop floor learning systems with support from trained mentors and structured shop floor learning.
7. Proceed to formal workforce certification only after strong training systems are in place, and only with affirmative approval by management and labor representatives that effective training has been provided.
8. Start building together toward strong apprenticeship systems for both incumbents and new hires, utilizing validated assessments to demonstrate that training has been successful in building the knowledge and skill of transit's technical workforce.
9. Achieve college credit recognition for training and apprenticeship built on national standards.

***Start Moving Forward toward a Standards-Driven, Partnership-Based Training System: A Winner for Transit Agencies, Transit Workers, and the Riding Public***