

# Passenger Rail Equipment Collision Safety: Occupant Protection

## Program Description:

- Determine causal mechanisms for injury and fatality from field investigations
- Simulate occupant response in interior configurations associated with injury and fatality
- Evaluate interior modifications with simulations
- Build and test interior modifications which simulations indicate will be effective

## Scope of Problem Addressed:

- On average, one severe passenger train accident occurs every six months
- There are approximately 40 severe injuries per year



## Planned Milestones/Deliverables:

- Sled test of optimized commuter seats

## Lessons Learned:

- Improved workstation table
- Optimized commuter seat
- Lap and shoulder belts for passengers
- Inflatable structures for operator

## Strategic Goals and Benefits:

- Provides Technical Basis for Development of Regulations, Standards, and Specifications
  - Amtrak High-speed train specifications
  - 49CFR238
  - APTA Manual of Standards and Recommended Practices
  - Metrolink CEM Specification