

# **PRIIA 305 Technical Subcommittee**

## **Systems Engineering Processes for Passenger Equipment Acquisition and Life Cycle Support**

Presented at:

The Technical Subcommittee Meeting  
Crystal City, VA

December 15, 2010



# The Need

- The NGEC charged with establishing a nationwide equipment pool
- Requirements and Specifications developed.
- Further documentation will be developed to support equipment acquisition and maintenance
- Systems Engineering processes needed to assure the documentation meets stakeholder needs and is kept current.



# The Need (cont'd)

- **Required Documentation and Processes**
  - **Requirements** - elicitation, analysis, validation & documentation
  - **Specifications** - development & validation
  - **RFP Documentation and Procedures** (source material)
    - Proposal Evaluation Criteria
    - Acceptance Criteria
  - **Independent Verification & Validation-**
    - Specification & the Final Product
  - **Maintenance Plans & Life Cycle Support**
    - Warranties
    - Problem Identification / Resolution
    - Spares and Special Tooling
    - Upgrades
    - Major Maintenance. Overhauls and Rebuilds
  - **Configuration Management & Document Control**
    - Version Control
    - Equipment Pool Inventory
    - Spares Inventory Support
  - **Standardization –**
    - Candidate Components / Systems
    - Approach for achieving



# Goals

- Long Term:
  - Develop, implement & maintain a Systems Engineering process that meets the needs of the Corridor Equipment Pool and the NGEC Stakeholders
- Immediate Term
  - Assemble working group to define desired documents and procedures
  - Estimate level of effort, budget and schedule needed to develop documents and procedures
  - Estimate annual level of effort and budget to support NGEC Systems Engineering functions
  - Recommend a NGEC Systems Engineering organization and responsibilities of stakeholders and participants
  - Present recommendations to the ‘Executive Committee’ during the February Annual meeting
  - Secure Funding and support for the Systems Engineering Process



# Work Plan, Schedule & Team

- Activities of the core group have been initiated
  - FRA lead, NY DOT and CalTrans advisors
  - Others invited to join
- Weekly conference calls to achieve short term goals (through February)
- Draft document 1 week prior to the Annual Meeting
- Please contact Jeff Gordon - Volpe if interested in joining effort.
- 2pm Tuesday Conference Call – (877)-336-1274 Num 3160346#



# Introduction

- Most people in this room are familiar with activities such as:
  - Requirements Analysis & Documentation
  - Specification Development
  - Verification & Validation
  - Configuration Management, etc.
- In fact, several of us are actively involved in one or more of these activities as part of our normal professional routines.
- “Systems Engineering” provides a framework for such activities, and is intended to formalize both the Technical & Management processes, protocols, and structures needed for a successful project.

