Managing Uncertainty:
Using Security Assessment Tools to Support Decision Making in Transportation

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Overview of Presentation

• New challenges
• Vision and planning
• Scenarios and solutions
• Foundation for success
New Challenges

• Day-to-day risk management practices:
  • Will address “normal” events through procedures, training and insurance
  • May not prepare the agency for **LOW probability/HIGH consequence** events
Low Probability-High Consequence Events

- Terrorism and Acts of Extreme Violence
- Natural Disasters
- Civil Unrest
- Technological Disasters
Reactions to Recent Events

“THROW EVERYTHING AT SECURITY”

• The worst thing is to do nothing
• If everything is tried, something is sure to work
• Now is a time for action; analysts and specialists can sort out the details later
• Our customers and employees must be reassured

“IT WON’T HAPPEN HERE”

• Threat is uncertain
• Consequences are seen as remote
• Assumption of government “bailout”
• Unclear responsibilities
• Transportation is not the security or emergency response business
Process for Change

Where is the risk?  Whose responsibility is it?

LEADS TO??
Immortal Words

“If you don’t know where you are going, you might end up someplace else.”

Yogi Berra; Philosopher, Manager, and three-time MVP
Where Do We Want To Go?

TRANSPORTATION ORGANIZATIONS:
• PREVENT incidents within their control and responsibility, effectively protecting critical assets
• RESPOND decisively to events that cannot be prevented, mitigating loss and protecting employees, passengers, and emergency responders
• SUPPORT response to events that impact their communities, integrating their equipment and capabilities seamlessly into the total effort
• RECOVER from major events, taking full advantage of available resources and programs
How To Get There?

- Build on EXISTING resources
  - Risk management process
  - Emergency planning process
- Evaluate CURRENT position
- Set GOALS
- Develop METRICS
- Evaluate and refine
- Drill, drill, drill…
“The Plan is nothing, planning is everything”

FACTORS SUPPORTING EFFECTIVE RESPONSE

Significance of Y2K Planning

Emerging Role of Private Sector

Temporary EOCs

Satellite and electronic communications

Specialized engineering and environmental safety services
Planning Elements

• Planning Methodology
  – Critical Asset Protection – Part 1
  – Critical Asset Protection – Part 2
• Planning Objectives: NFPA 1600
• Planning Objectives: Security Needs
• Planning Solutions, Scenarios and Simulations
Planning Methodology: Critical Asset Protection – Part 1

- Address COMPLEXITY
- Identify CRITICAL ASSETS
- Establish LEVELS OF PROTECTION (LOPs)

RISK MANAGEMENT APPROACH

- Threat Assessment: Used to evaluate the likelihood of terrorist activity against a given asset
- Vulnerability Assessment: Used to identify weaknesses in facilities, procedures and processes that may be exploited
- Criticality Assessment: Used to identify and evaluate the importance of assets and infrastructure to system operations
- Homeland Security Program
Planning Methodology: Critical Asset Protection – Part 2

- Match Critical Assets to LOP
- Evaluate LOP countermeasures
  - Cost
  - Efficiency
  - Effectiveness
- Revise and implement lessons learned
Planning Objectives:
Meeting the NFPA 1600 Standard

- Laws & Authorities
- Hazard ID and Risk Assessment
- Hazard Mitigation
- Resource Management
- Planning
- Direction, Control & Coordination
- Communications and Warning

8. Operations and Procedures
- Logistics and Facilities
- Training
- Exercises, Evaluations and Corrective Actions
- Public Education and Information
- Finance and Administration
Planning Objectives: “Top Ten” Transportation Security Challenges

- Funding for security measures and personnel
- “Getting the attention” of local public safety organizations
- Absence of industry standards and clear expectations
- Screening of passengers and their belongings
- Access control for administrative facilities and offices
6. Protecting vehicle and fuel storage facilities
7. Availability of targeted training
8. Background checks for employees
9. Automated dispatch systems
10. Vehicle tracking
Developing Solutions

- Needs and Requirements guide development of program
- Comprehensive systems approach
- Concept must be evaluated using Performance Metrics
- Technical solutions with realistic cost are the result
Scenarios and Simulations

‘Getting out of the Box’

“One thing a person cannot do, no matter how rigorous his analysis or heroic his imagination, is to draw up a list of things that would never occur to him”

Thomas Schelling
Strategic Simulation Raises the Knowledge Level

TRADITIONAL INPUTS TO PLANNING
- Potential Future Surprises (Best guesses)
- Where We Are Today (Historical data)
- Predetermined Developments (What we plan to do)
- Critical Uncertainties (Risks - known & unrealized)

STRATEGIC DEVELOPMENT
- Analysis
- Proposed Strategy
- Traditional Analysis Stops Here

SIMULATION OPENS THE DOOR TO NEW INSIGHTS
- Alternative Modes of Attack
- Surprises
- Unexpected Friction
- How the Future May Evolve
Example Scenarios

**Biological Aerial Attack**
Line of Flight
Altitude: 1,000 ft
Release: 5km

- 50% infected
- 10% infected

**Biological Attack in Major Airport**
Objective

Analyze appropriate threat scenarios; overlay on conventional response capabilities

Scenario Analysis

- Start with Threat Scenarios
- Enlist subject-matter experts
- Use simulation tools to assess impact on target

Scenario Evolution

Predict Impact

Scenario Outcome

Casualties
Property Damage
Economic Impact
CBN INCIDENT EVENT HORIZON WITH WMD PREPAREDNESS

RECOGNIZE CBN INDICATORS
- SIZE-UP SITUATION
  -- WIND DIRECTION
  -- CONDITION
  -- PLUME DIRECTION
  -- ORIENTATION OF VICTIMS
  -- TYPE INJURIES, SIGNS/SYMPTOMS
  -- NATURE OF AGENTS
- PROTECTIVE ACTIONS & ORGANIZED RESPONSE
  -- DON PPE
  -- ASSESS FROM SAFE VANTAGE POINT
  -- SAFE ACCESS/STAGING
  -- CONTAIN (PERIMETER/ZONES)

FIRST RESPONDERS
- POLICE/FIRE/EMS
  -- APPROPRIATE PPE
  -- SITUATIONAL AWARENESS
  -- SELF AID/BUDDY AID
  -- DECON AS FIRST AID
  -- MOVE UNINVOLVED PERSONS
  -- STABILIZE INCIDENT
  -- AVOID SECONDARY CONTAMINATION
  -- SECURE EVIDENCE/Crime Scene
  -- PROTECT AGAINST SECONDARY ATTACK
  -- REQUEST PROPER RESOURCES

HAZMAT TEAMS
- AGENT ID
- HOT ZONE MGT.
- PRIMARY DECON
- REQUEST PROPER ASSISTANCE

MEDICAL TX/TRANSPORT
- TRIAGE
- DEFINITIVE DECON
- TREATMENT
- PATIENT EVAC
- DEFINITIVE FOLLOW-ON CARE
- DECON OF SELF-REFERRALS

SPECIALIZED ASSISTANCE
- MSCA
- MMST
- NMRT
- OTHERS

TOOLSET
- DECISION-MAKING
- C2 ARCHITECTURE
- INTEL (I&W)
- PROTECTIVE ACTIONS
- SCENE MANAGEMENT
- SPECIALIZED ASSISTANCE

CONTAMINATED MASS CASUALTIES

INCIDENT OCCURS

SITUATION NORMAL

RECOVERY
- REASSURANCE & PROPER MEDIA INFORMATION
Factors that complicate decision-making:

- Uncertainty
- Lack of timely information
- Conflicting information
- Too much information
Foundation of Success

Planning  Exercising  Evaluation