Program Evaluation Briefing:
Florida Trespass Prevention Research Study

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U.S. Department of Transportation

Federal Railroad Administration

Office of Research and Development
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Office of the Assistant Secretary for Research and Technology
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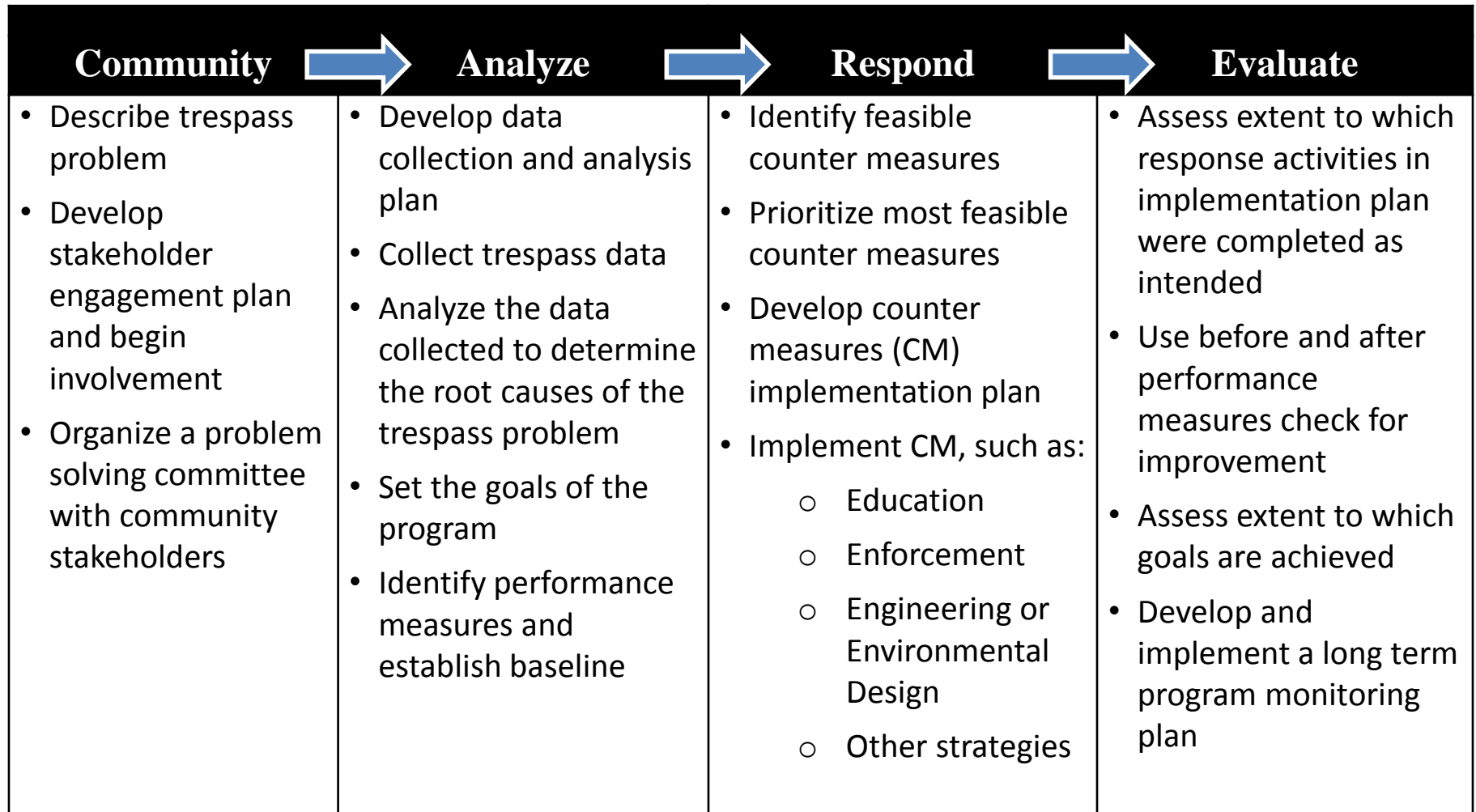
Volpe

Background

- ❑ FRA Trespass Prevention Research Study (TPRS)
  - ▪ Implemented by Volpe from 2009 – 2013 in West Palm Beach, Florida
  - ▪ Purpose: develop national guidelines for community-based trespass prevention (e.g., CARE model) via showing potential benefits, best practices and lessons learned
- ❑ FRA R&D Director asked Volpe to evaluate project to
  - ▪ Collect lessons-learned from TPRS
  - ▪ Inform design of future research
- ❑ Evaluation conducted by independent evaluation team
- ❑ Evaluation focused on implementation not impact

CARE Logic Model (Theory of Action)

Community	Analyze	Respond	Evaluate

• Describe trespass problem
 	
• Develop stakeholder engagement plan and begin involvement
 	
• Organize a problem solving committee with community stakeholders
	• Develop data collection and analysis plan
	
	• Collect trespass data
	
	• Analyze the data collected to determine the root causes of the trespass problem
	
	• Set the goals of the program
	
	• Identify performance measures and establish baseline
		• Identify feasible counter measures
		
		• Prioritize most feasible counter measures
		
		• Develop counter measures (CM) implementation plan
		
		• Implement CM, such as:
		   o Education
		   o Enforcement
		   o Engineering or Environmental Design
		   o Other strategies
			• Assess extent to which response activities in implementation plan were completed as intended
			
			• Use before and after performance measures check for improvement
			
			• Assess extent to which goals are achieved
			
			• Develop and implement a long term program monitoring plan

Evaluation Questions

Project Design

- What characteristics of design enabled completion as planned? How could design be improved in FOT#2? What methods/viewpoints could HF offer to improve design of FOT#2?

Project Operation

- How did the project's implementation affect extent goals achieved?
  - *Stakeholder Engagement* – approach to engaging stakeholders?
  - *Site Assessment and Response Planning* – process for assessing risks and designing countermeasures?
  - *Countermeasure Implementation* – What were key factors?

Project Setting

- What characteristics of community and site affected project's implementation?

Program Evaluation Methodology

❑ Developed logic model and refined evaluation questions

❑ Reviewed relevant project source materials

❑ Interviewed those involved in project implementation

❑ Reviewed studies of community-based safety interventions

❑ Compared and contrasted viewpoints expressed among all data sources (e.g., source documents & interview notes)

Evaluation Findings: Benefits

❑ Fostered relationships among core rail safety stakeholders (SFRTA, FDOT, City of West Palm Beach)

❑ Stakeholders praised technical rigor and use of train-mounted video to support hazard analysis

❑ Mobilized core stakeholders to support limited implementation of trespass prevention countermeasures

❑ Many lessons learned re: challenges of trespass prevention and stakeholder engagement

Evaluation Findings: Project Design

❑ CARE model was too general to guide specifics of TPRS project's implementation

❑ Important to consider lessons-learned from analogous community-based interventions

❑ Broader range of expertise needed on team to address stakeholder engagement and human factors issues associated with trespassing

Evaluation Finding: Project Operation

❑ SFRTA locomotive-mounted video data provided reliable dataset for (1) hazard analysis to identify highest trespasser exposure areas; and (2) problem solving on corrective actions

❑ Trespasser exposure rather than fatalities or near misses are most appropriate safety outcome measure for trespass prevention programs

Evaluation Findings: Project Setting

❑ Core stakeholders shared FRA's concerns and remained engaged

❑ Challenges sustaining broad stakeholder forums;

  ▪ lack of engaged local leadership;

  ▪ jurisdictional complexity; and

  ▪ unrealistic local stakeholder expectations

❑ Lack of clarity in roles and responsibilities: federal, state, local;

❑ Confusion re: project's goals; funding for corrective actions

Community-Based Safety Programs: Findings from Analogous Studies

❑ The steps outlined in the CARE model are similar to design of other community-based safety interventions

❑ Effectiveness of community-based interventions appears are highly contingent on site-specific variables

❑ Community based approaches are most effective when:

▪ Informed by understanding of community dynamics and capacity and responsive to community conditions, needs, and diversity

▪ Allow community input into issue selection, funding and project design

▪ Use participatory activities and peer-to-peer communications to reach stakeholders

▪ Interventions and funding are sustained for sufficient time period to institutionalize changes (*could mean 5+ years*)

Recommendations for design of future trespass prevention research

❑ Consider alternative approaches to community-based safety interventions (e.g., grant programs, regulation, best practice studies)

❑ In designing subsequent trespass prevention studies:

  ▪ Define project goals and success measures more explicitly

  ▪ Establish clear hypotheses, measure baseline, and measure intended outcomes using statistically sensitive indicators

  ▪ Screen and select sites based on: research, issue, funding, "readiness"

  ▪ Clarify roles and funding at onset

  ▪ Pursue more targeted stakeholder engagement strategies