



# INCORPORATING SAFETY INTO THE PLANNING PROCESS





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# Session Learning Objectives

1. Understanding TSP

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2. Integrating Safety into the  
Transportation Planning Process

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3. Resources

# Objective 1

## Understanding TSP

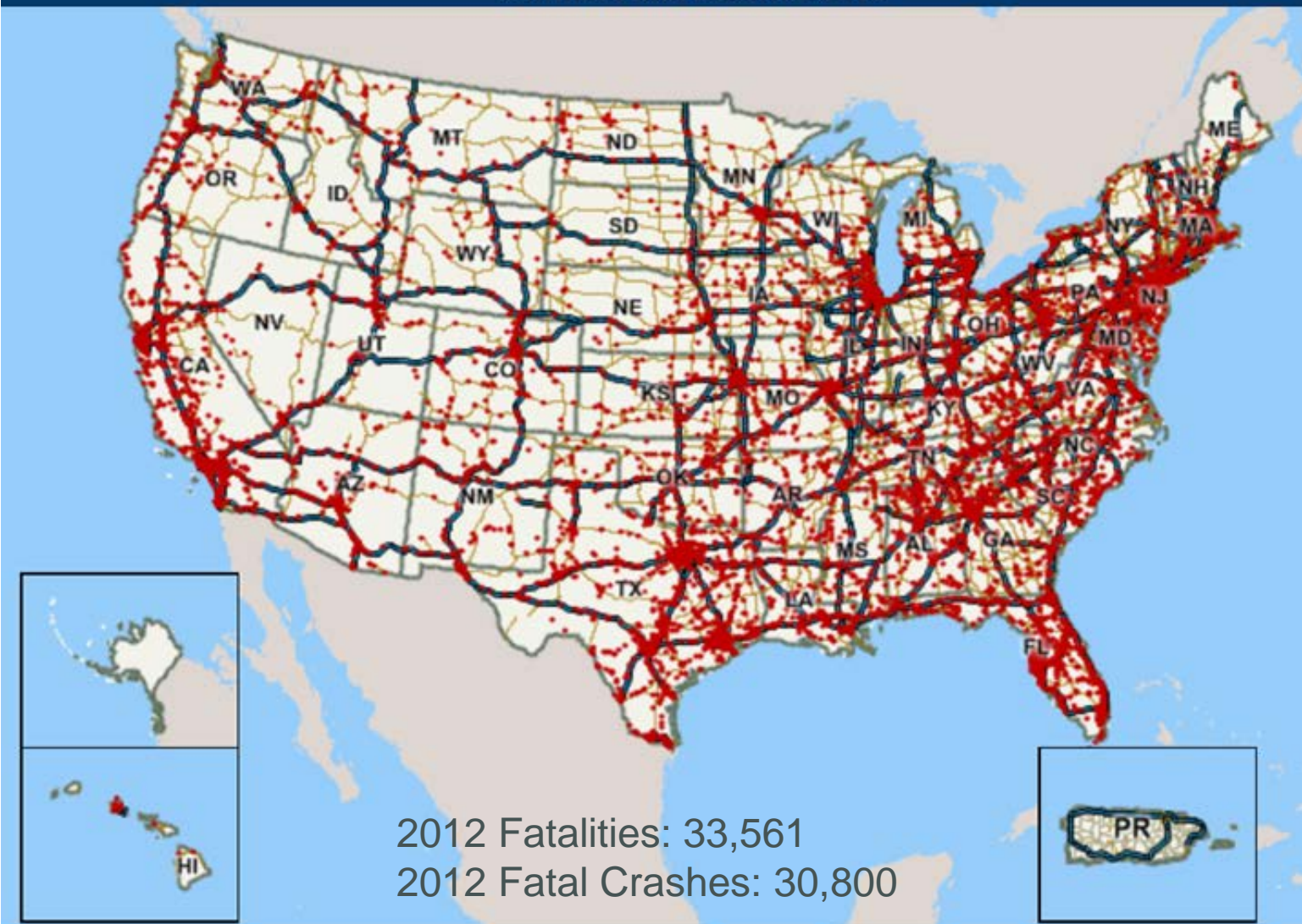
- Definition
- Scope of the Problem
- MAP-21







## Annual Fatal Crashes 2012





## 2012 Snapshot

**Over 33,000 people  
died in a crash**

**About 90 people died each  
day on U.S. roads**

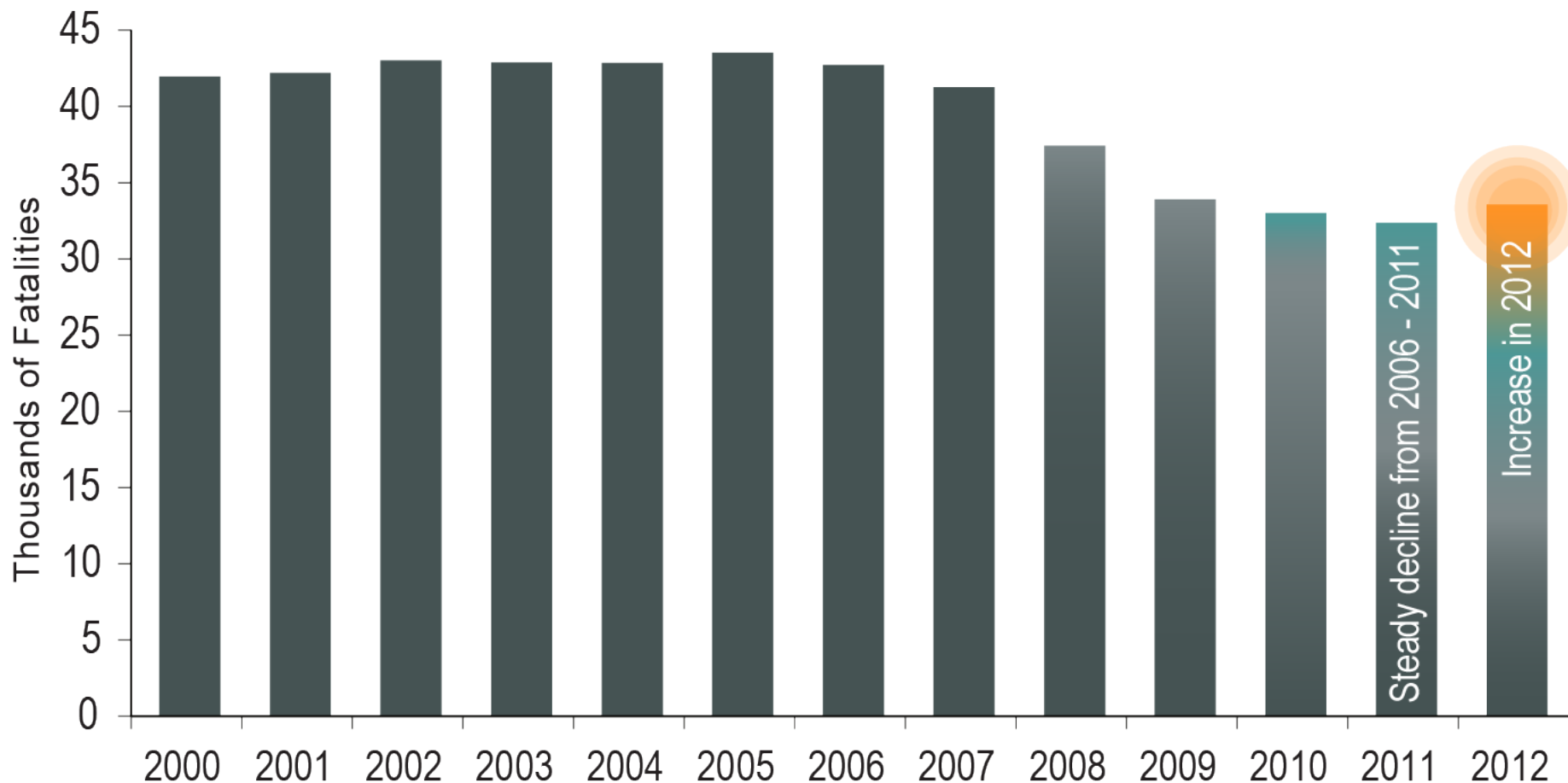
**Crashes were the leading cause  
of death in those under 30**

**10,322 people died due to  
alcohol-impaired drivers**

**Crashes cost \$99 billion in medical care,  
rehabilitation and lost wages**



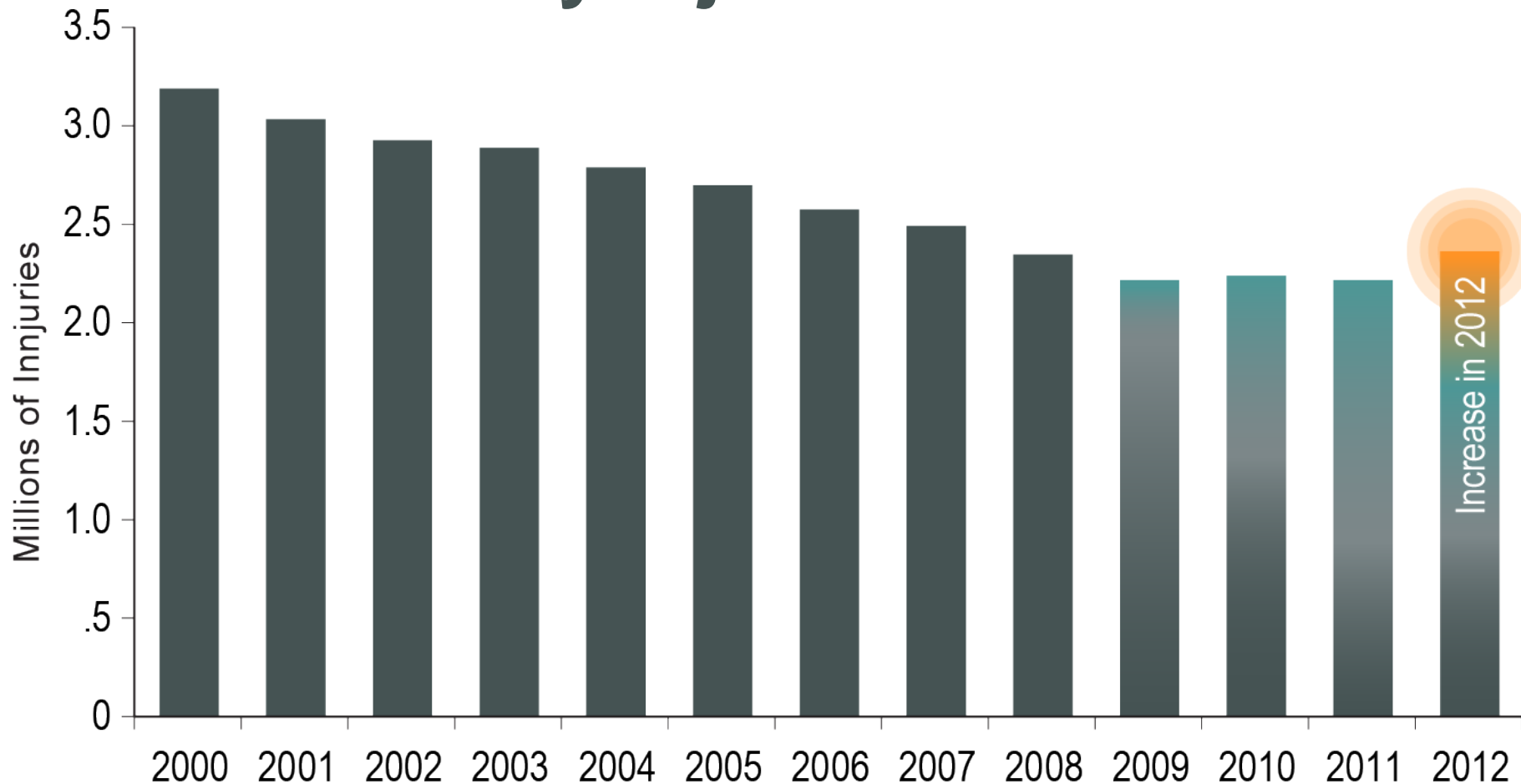
# Roadway Fatalities 2000-2012



Data Source:  
USDOT, NHTSA, Traffic Safety Facts



## Roadway Injuries 2000-2012



Data Source:  
USDOT, NHTSA, Traffic Safety Facts

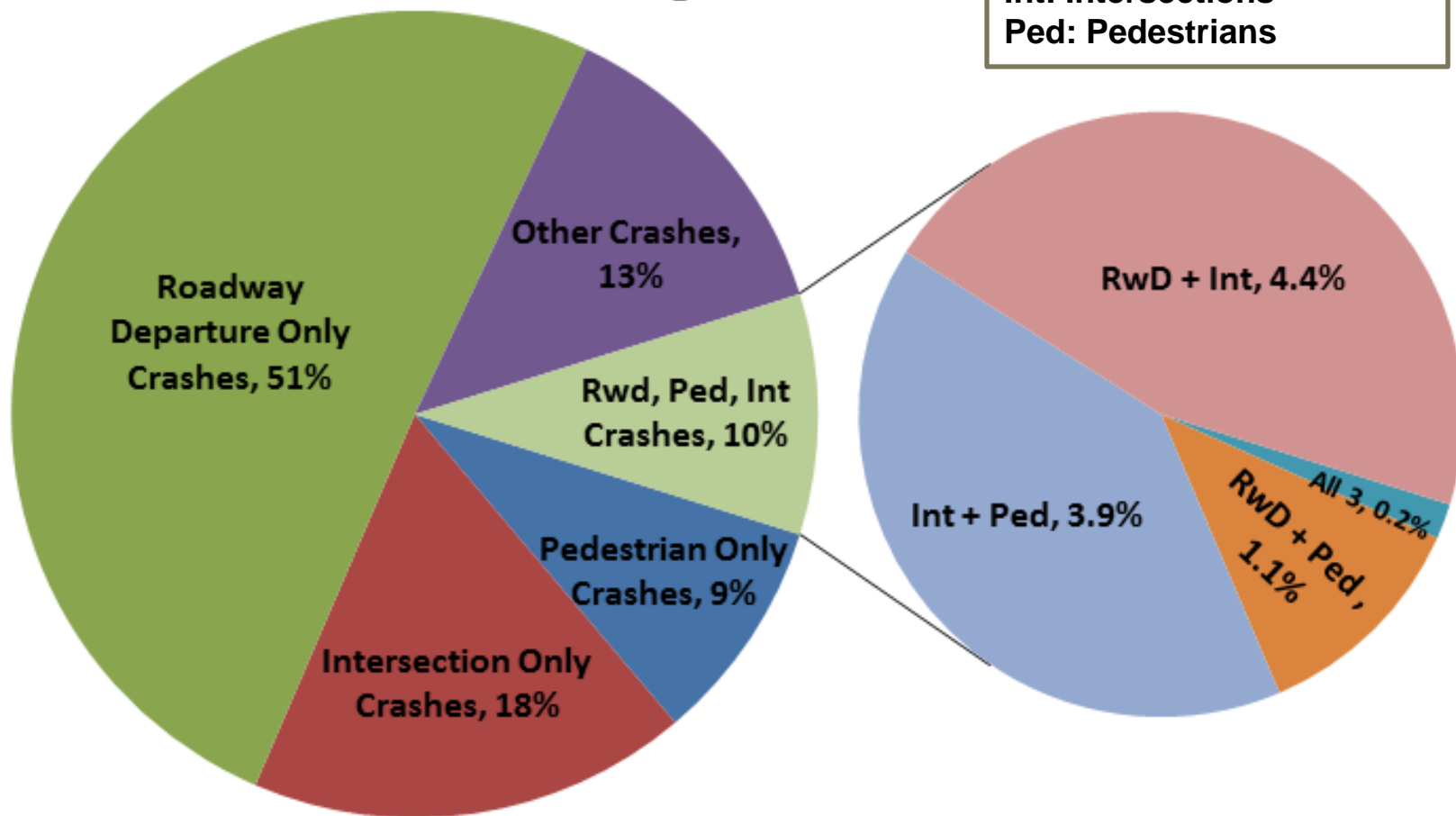




## Fatalities

Average 2010-2012

RwD: Roadway Departure  
Int: Intersections  
Ped: Pedestrians





## Legislation

**On July 6, 2012,  
President Obama signed into law  
P.L. 112-141, the *Moving Ahead for  
Progress in the 21st Century Act*  
(MAP-21)**



## Major Themes of MAP-21

- Strengthens America's highway & public transportation systems & economy.
- Establishes a performance-based Federal program.
- Supports USDOT's safety agenda.
- Simplifies & focuses the Federal program.
- Accelerates project delivery & promotes innovation.



# National Goal Areas

[§1203; 23 USC 150(b)]

- Safety
- Infrastructure condition
- Congestion reduction
- System reliability
- Freight movement and economic vitality
- Environmental sustainability
- Reduced project delivery delays

**Safety** – To achieve a significant reduction in traffic fatalities and serious injuries on public roads



# Key Safety-Related Features of MAP-21

## Metropolitan & Statewide plans must:

- Integrate performance goals, measures and targets.
- Report on the overall effectiveness of performance-based planning.

## Highway Safety Improvement Plan (HSIP)

- Increases size of existing HSIP.
- Requires Secretary to establish measures and States to set targets for number and rate of serious injuries & fatalities.
- Strengthens links between HSIP & NHTSA programs.





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# State Highway Safety Improvement Program (HSIP)

- Advances capabilities of States to conduct safety data collection, analysis, and integration.



# Strategic Highway Safety Plan (SHSP)

- Expands consultation (County transportation officials, State reps of non-motorized users, & other major Federal, State, tribal & local safety stakeholders).
- Requires adoption of strategic & performance-based goals.
- Considers additional data and safety factors.
- Requires regular (SHSP) updates.

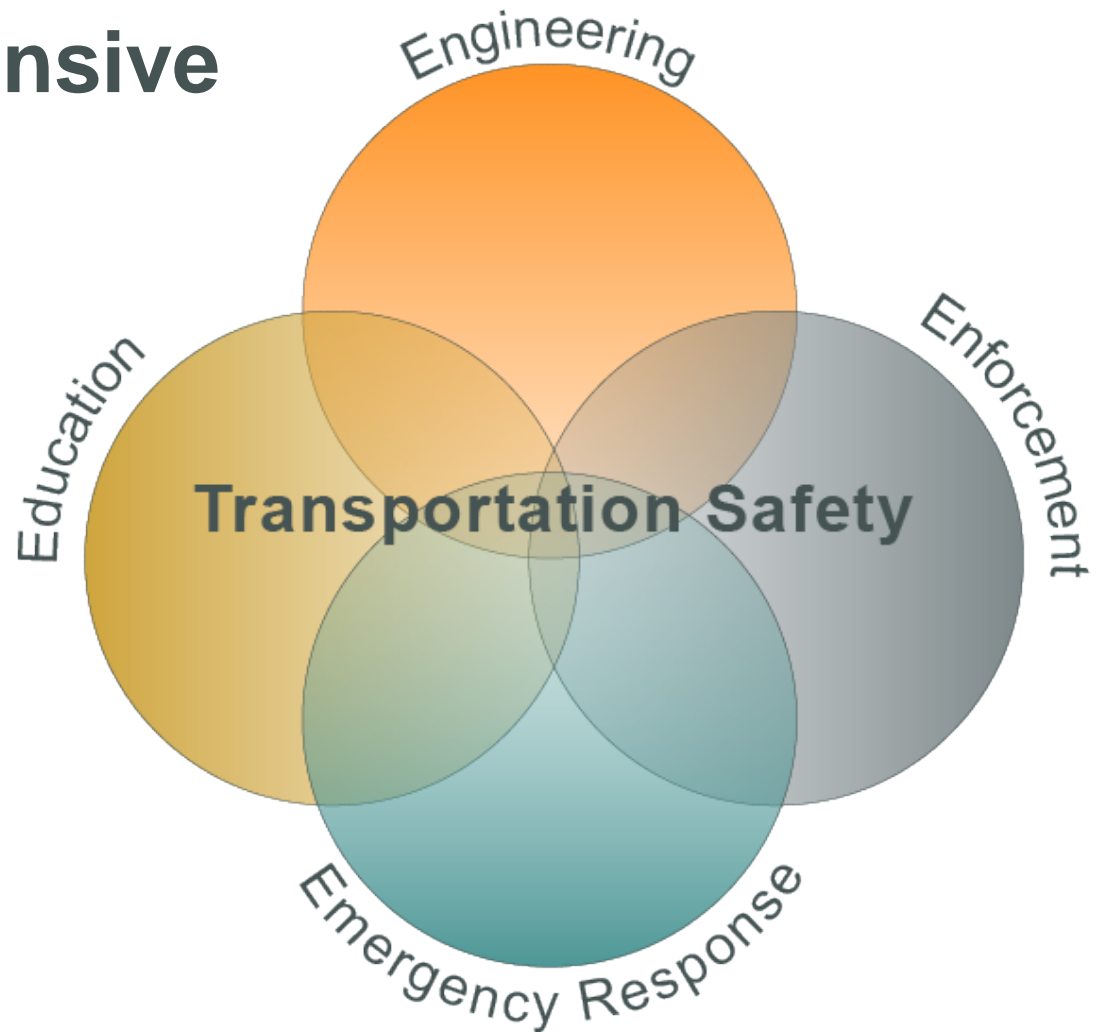
## Objective 2

# Integration of Safety into the Transportation Planning Process

- Overview
- Identify Opportunities
- Practical Approaches



## The Comprehensive 4E Approach





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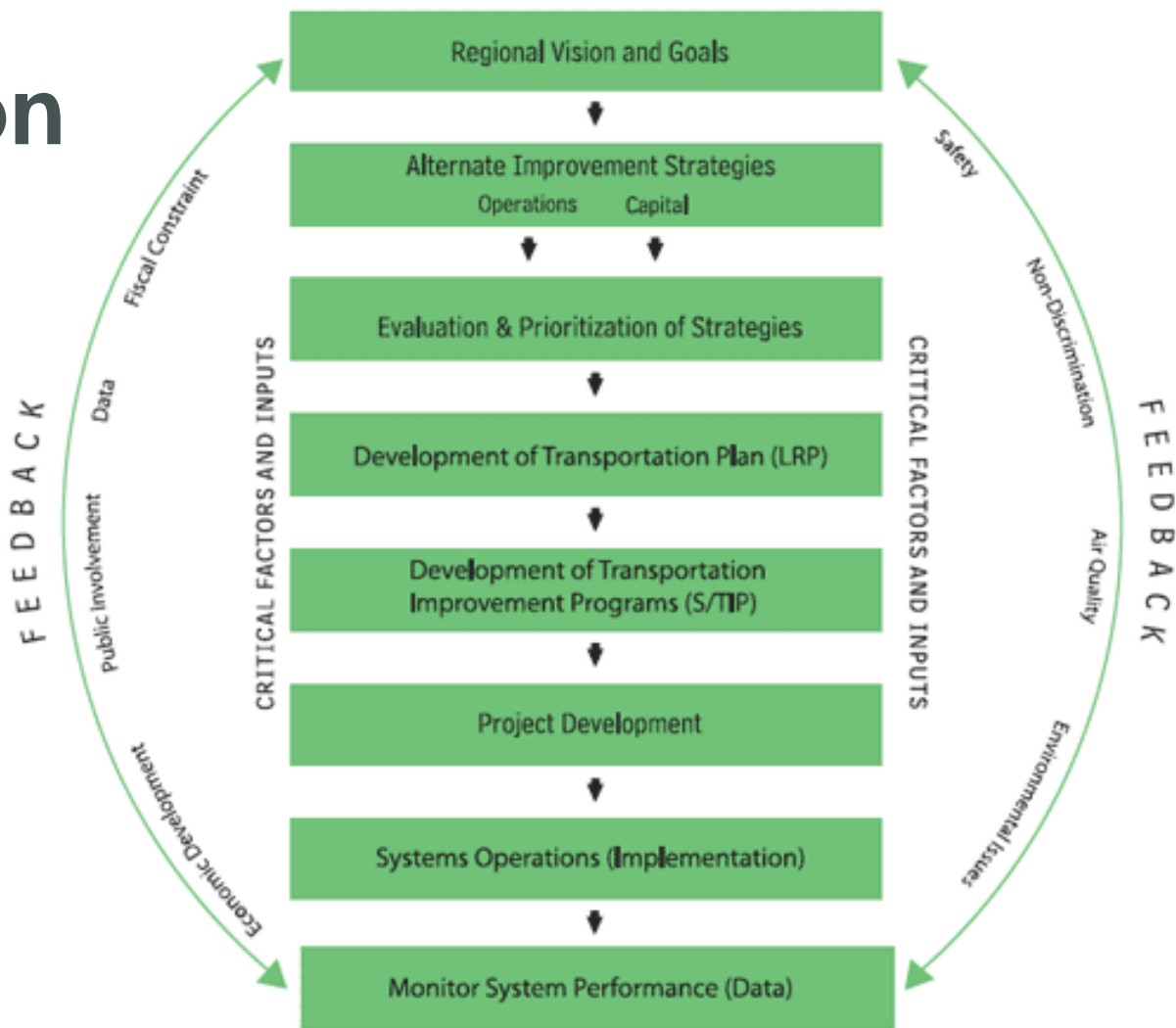
# Integrating Safety

- Multidisciplinary
- Multimodal
- System-wide
- Collaborative
- Proactive





# Traditional Transportation Planning Process





# Performance-Based Transportation Planning Process





# Integrating Safety into the Process



Engage Safety Stakeholders in the initial planning process

Identify safety as a major organizational goal

Identify existing safety concerns in the system, set targets to correct safety issues



# Integrating Safety into the Process



- Collect and analyze safety data
- Use data to identify locations for safety treatments

Use safety policies from other planning documents as a guide for inclusion in the LRTP

Include safety-related scoring and ranking in the LRTP to establish safety as a factor in project selection



# Integrating Safety into the Process



**Programming**  
*What will it take?*

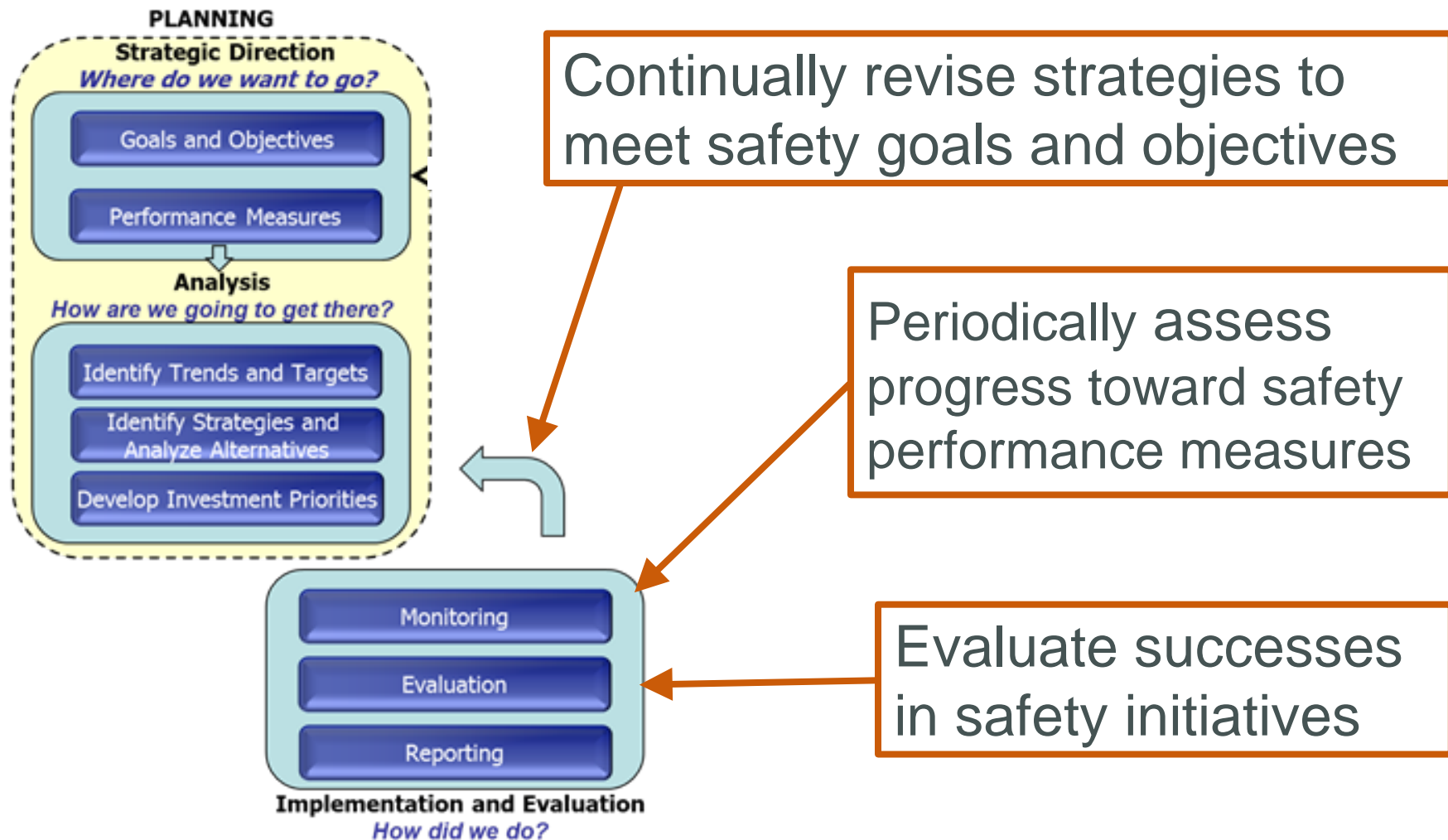
Design standalone safety projects

Integrate safety elements into other TIP projects





# Integrating Safety into the Process





## Strategic Direction

Engage the community and develop a vision for the future during early planning *stages*.

- **Develop** materials to illustrate existing safety problems across modes.
- **Identify** potential benefits of a comprehensive safety strategy.
- **Integrate** safety into vision statements and visioning exercises.



## Goals and Objectives

Develop key outcomes for the planning process.

- **Generate** strategic, measurable, agreed-upon, realistic, time-bound objectives related to safety.
- **Ensure** measurable goals and objectives that reflect important safety-related issues.
- **Set** goals identifying desired safety improvement outcomes.



## Performance Measures

Develop metrics as a basis for comparing improvement strategies.

- **Identify** potential safety performance measures.
- **Prepare** performance measures reflecting safety goals and objectives in the jurisdiction.
- **Refine** performance measures based on data collection feasibility.



# Analysis

Determine strategies based on an objective process such as criteria comparison, weighted scores, or cost/benefit analysis.

- **Utilize** performance measures to analyze and prioritize various strategies.
- **Perform** scenario analysis to assess various strategies and consider funding levels.





# Programming

Make safety a priority in LRTP and integrate safety into the S/TIP

- **Design** standalone safety projects.
- **Integrate** safety elements into S/TIP projects.
- **Utilize** project Selection Criteria that emphasize safety.



## Implementation & Evaluation

Implement strategies, evaluate program and policy effectiveness.

- **Monitor** actual conditions and improvement.
- **Communicate** safety measure effectiveness; obtain feedback from stakeholders.
- **Analyze** safety information from system performance to identify improvements.

# Objective 3

## Resources



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# Resources

## **FHWA Office of Safety**

<http://safety.fhwa.dot.gov/tsp/>

## **FHWA Office of Planning, Environment, & Realty Planning**

[http://www.fhwa.dot.gov/planning/transportation\\_safety\\_planning](http://www.fhwa.dot.gov/planning/transportation_safety_planning)



## Final Thoughts

- Work collaboratively to identify safety integration opportunities.
- Leverage the planning process to impact safety.
- Engage transportation planners & committees.
- Build consistency between LRP/MTP and safety plans.
- Use data and analysis to benchmark and measure safety concerns.



# Audience Specific Modules

Select modules appropriate for audience.

- Federal Level (i.e. FHWA)
- State Level (i.e. DOTs)
- MPOs
- RPOs
- Local Elected & Appointed Officials



# Applying TSP to Federal Level Planning

- How does transportation safety planning impact your work?
- Ways to better integrate safety
- Tools and resources



# How does Transportation Safety Planning Impact your Work?

- Lead implementation of the MAP-21 provisions including incorporating safety into transportation planning.
- Guide development of performance-based planning through education and training.
- Monitor state and metropolitan transportation planning process.





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# Ways to Integrate Safety into the Planning Process

Proactively **promote, educate** and **communicate** ways for State DOTs and planning organizations to integrate safety in transportation planning.



# Tools and Resources

- ***Transportation Planner's Safety Desk Reference – Companion to NCHRP Report 500***  
[http://tsp.trb.org/assets/FR1\\_SafetyDeskReference\\_FINAL.pdf](http://tsp.trb.org/assets/FR1_SafetyDeskReference_FINAL.pdf)
- ***Making the Case for Transportation Safety – Ideas for Decision Makers*** <http://tsp.trb.org/assets/Briefing%20Book%20hi-res.pdf>
- **A Primer on Safety Performance Measures for the Transportation Planning Process**  
<http://safety.fhwa.dot.gov/tsp/fhwahep09043/fhwahep09043.pdf>
- **FHWA Websites**
  - **Office of Safety** <http://safety.fhwa.dot.gov/>
  - **Office of Planning, Environment & Realty**  
<https://www.fhwa.dot.gov/planning/>



# TSP

TRANSPORTATION SAFETY PLANNING

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## Applying TSP to State Level Planning

- How does transportation safety planning impact your work?
- Ways to better integrate safety
- Tools and resources



# How does Transportation Safety Planning Impact your Work?

- Safety is a National Goal and MAP-21 priority.
- Planning process should integrate safety goals, objectives, and strategies.
- Performance-based planning requires greater coordination across agencies and between functional areas (i.e., safety, congestion, asset condition, etc.).



## **Ways to Integrate Safety into the Planning Process**

- Use crash and GIS data to identify safety concerns and facilitate development of engineering safety strategies.
- Work with enforcement at the corridor-level.
- Engage a safety planning “champion” to support safety initiatives.
- Integrate safety goals, objectives, and strategies in transportation planning process.



# Tools and Resources

- ***Incorporating Safety Into Long-Range Transportation Planning***  
[http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_rpt\\_534.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_534.pdf)
- ***Making the Case for Transportation Safety – Ideas for Decision Makers*** <http://tsp.trb.org/assets/Briefing%20Book%20hi-res.pdf>
- ***Transportation Planner’s Safety Desk Reference***  
[http://tsp.trb.org/assets/FR\\_Safety%20Planner\\_1\\_17\\_07FINAL.pdf](http://tsp.trb.org/assets/FR_Safety%20Planner_1_17_07FINAL.pdf)
- ***Performance Based Planning and Programming Guidebook***  
[https://www.fhwa.dot.gov/planning/performance\\_based\\_planning/pbpp\\_guidebook/pbppguidebook.pdf](https://www.fhwa.dot.gov/planning/performance_based_planning/pbpp_guidebook/pbppguidebook.pdf)
- ***A Primer on Safety Performance Measures for the Transportation Planning Process***  
<http://safety.fhwa.dot.gov/tsp/fhwahep09043/fhwahep09043.pdf>



# Applying TSP to MPO Planning

- How does transportation safety planning impact your work?
- Ways to better integrate safety
- Tools and resources



# How does Transportation Safety Planning Impact your Work?

- Under MAP-21 there will be more projects competing for limited flexible funding.
- It is essential that MPO planners understand MAP-21 funding categories and requirements to identify monies and work with the State and the regional MPO(s).





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# Ways to Integrate Safety into the Planning Process

- Educate local elected officials and public.
- Demonstrate the economic impact of improving transportation safety.
- Allocate funding for low cost safety projects.
- Work with private/public entities.
- Pursue a 4E approach to safety.



## Tools and Resources

- ***Incorporating Safety Into Long-Range Transportation Planning***  
[http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_rpt\\_534.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_534.pdf)
- ***Performance Based Planning and Programming Guidebook***  
[https://www.fhwa.dot.gov/planning/performance\\_based\\_planning/pbpp\\_guidebook/pbppguidebook.pdf](https://www.fhwa.dot.gov/planning/performance_based_planning/pbpp_guidebook/pbppguidebook.pdf)
- ***A Primer on Safety Performance Measures for the Transportation Planning Process***  
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- ***Making the Case for Transportation Safety – Ideas for Decision Makers***  
<http://tsp.trb.org/assets/Briefing%20Book%20hi-res.pdf>



# Applying TSP to Regional Transportation Planning

- How does transportation safety planning impact your work?
- Ways to better integrate safety
- Tools and resources



# How does Transportation Safety Planning Impact your Work?

- MAP-21 recognizes regional transportation planning organizations apart from other planning entities.
- Participate with MPOs; integrate rural safety concerns into the planning process.
- Align with State Plans to capture state funding for safety.



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# Ways to Integrate Safety into the Planning Process

- Educate local elected officials and the public.
- Demonstrate the economic impact.
- Leverage local funds.
- Identify low-cost safety improvements.
- Consider impact fees around new developments.
- Improve local agency safety data collection.



# Tools and Resources

- *Growing Smart Legislative Guidebook*,  
Chapter 6, Regional Planning  
<http://www.planning.org/growingsmart/guidebook/six01.htm>
- *Incorporating Safety Into Long-Range Transportation Planning*  
[http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_rpt\\_534.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_534.pdf)
- *Performance Based Planning and Programming Guidebook*  
[https://www.fhwa.dot.gov/planning/performance\\_based\\_planning/pbpp\\_guidebook/pbppguidebook.pdf](https://www.fhwa.dot.gov/planning/performance_based_planning/pbpp_guidebook/pbppguidebook.pdf)
- A Primer on Safety Performance Measures for the Transportation Planning Process  
<http://safety.fhwa.dot.gov/tsp/fhwahep09043/fhwahep09043.pdf>



# Applying TSP to the work of Elected & Appointed Officials

- How does transportation safety planning impact your work?
- Ways to better integrate safety
- Tools and resources



# How does Transportation Safety Planning Impact your Work?

- Laws passed by legislatures impact transportation safety (i.e., helmet laws).
- Judicial decisions in traffic safety cases.
- Elected/appointed officials influence initiatives that achieve safety goals through behavior modification.





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# Ways to Integrate Safety into the Planning Process

- Encourage local planners to prioritize for safety.
- Set-aside funding to advance safety projects and initiatives.
- Promote the importance of safety.



## Tools and Resources

- *Incorporating Safety Into Long-Range Transportation Planning*  
[http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_rpt\\_534.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_534.pdf)
- ICMA publications like *Working Together: A Guide for Elected and Appointed Officials Training Workbook*
- The Transportation Planning Process: Key Issues A Briefing Book for Transportation Decisionmakers, Officials, and Staff  
<http://www.planning.dot.gov/documents/briefingbook/bbook.htm>