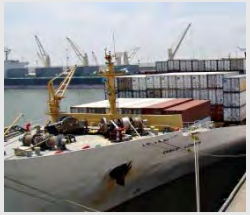
TEXAS DEPARTMENT OF TRANSPORTATION





STATEWIDE TRUCK PARKING STUDY

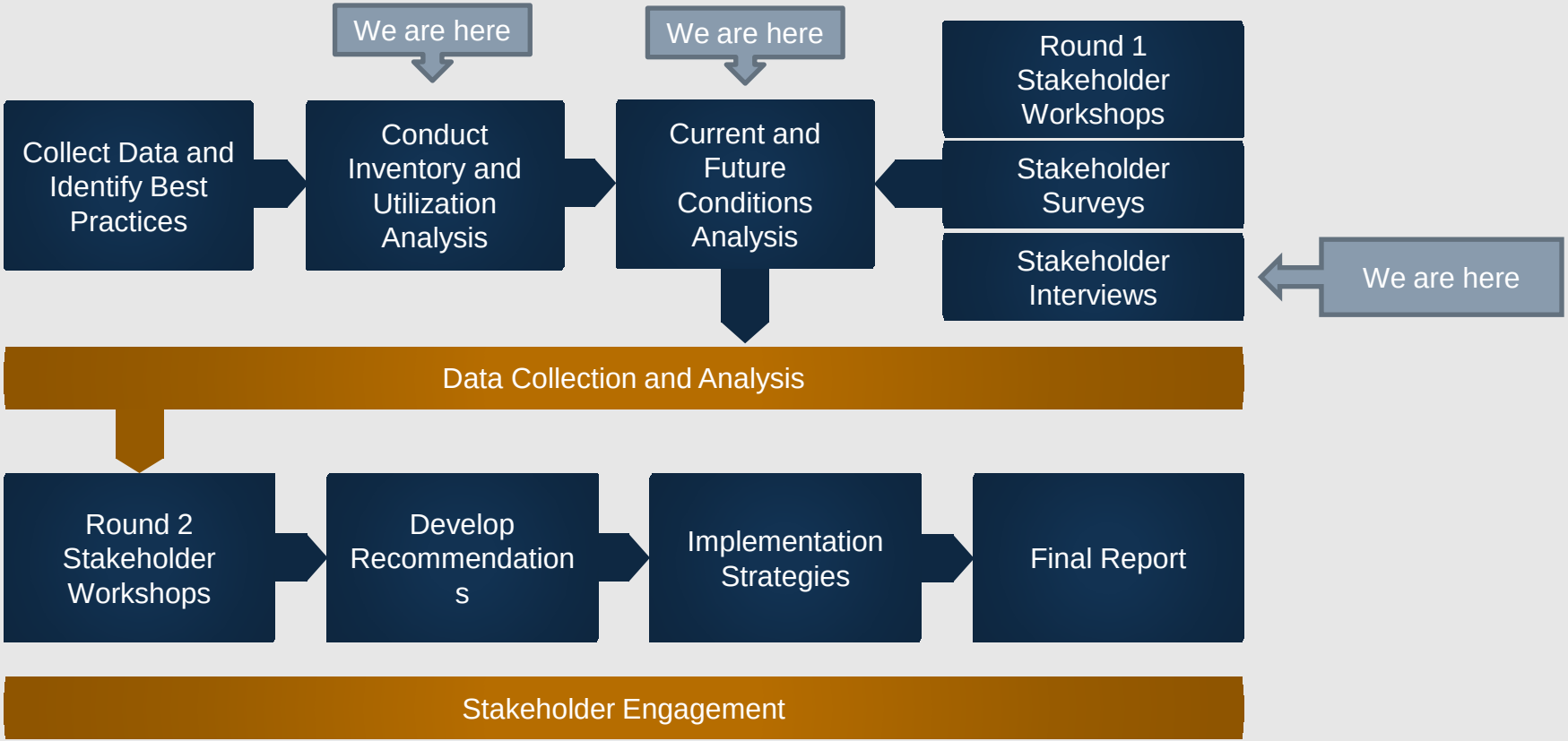
Texas Freight Advisory Committee

July 11, 2019

Agenda

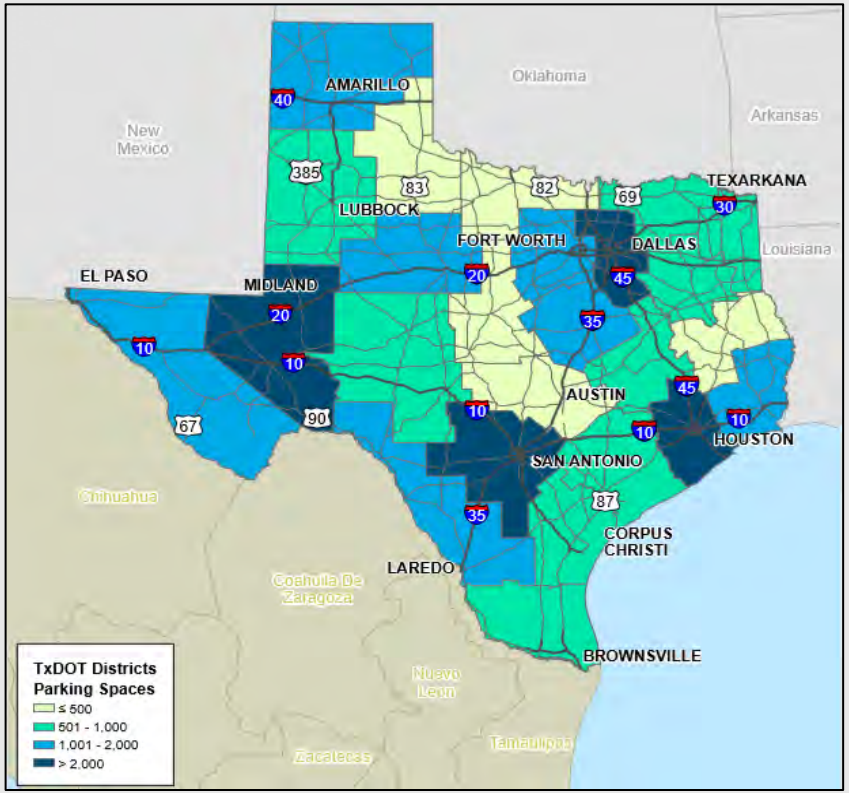
- Project Approach
- Overview of Truck Parking in Texas
- Potential Strategies
- Schedule and Next Steps

Project Approach



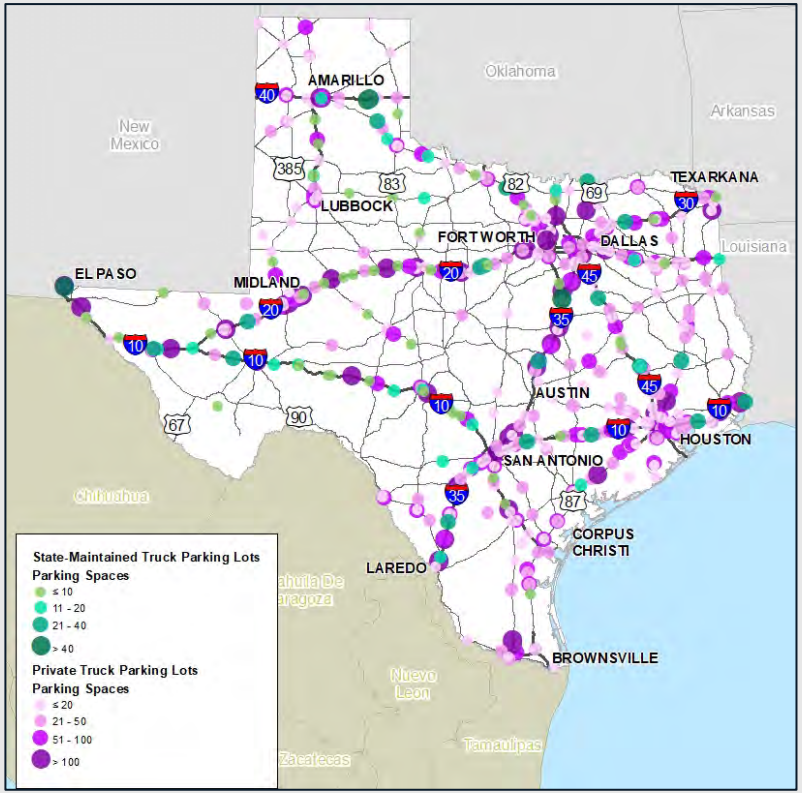
Demand and Supply - Statewide

Parking Capacity by District



Source: TxDOT and various private data sources, compiled by Cambridge Systematics 2019

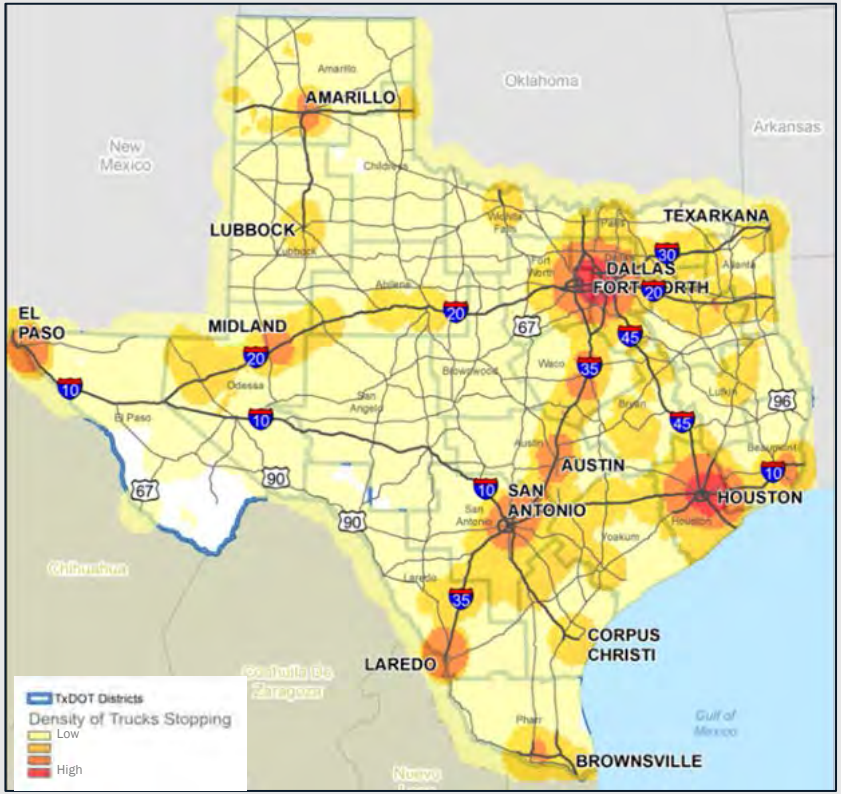
Parking Locations by Number of Spaces



Source: ATRI 2018 Data, Processed by Cambridge Systematics 2019

Demand and Supply - Districts

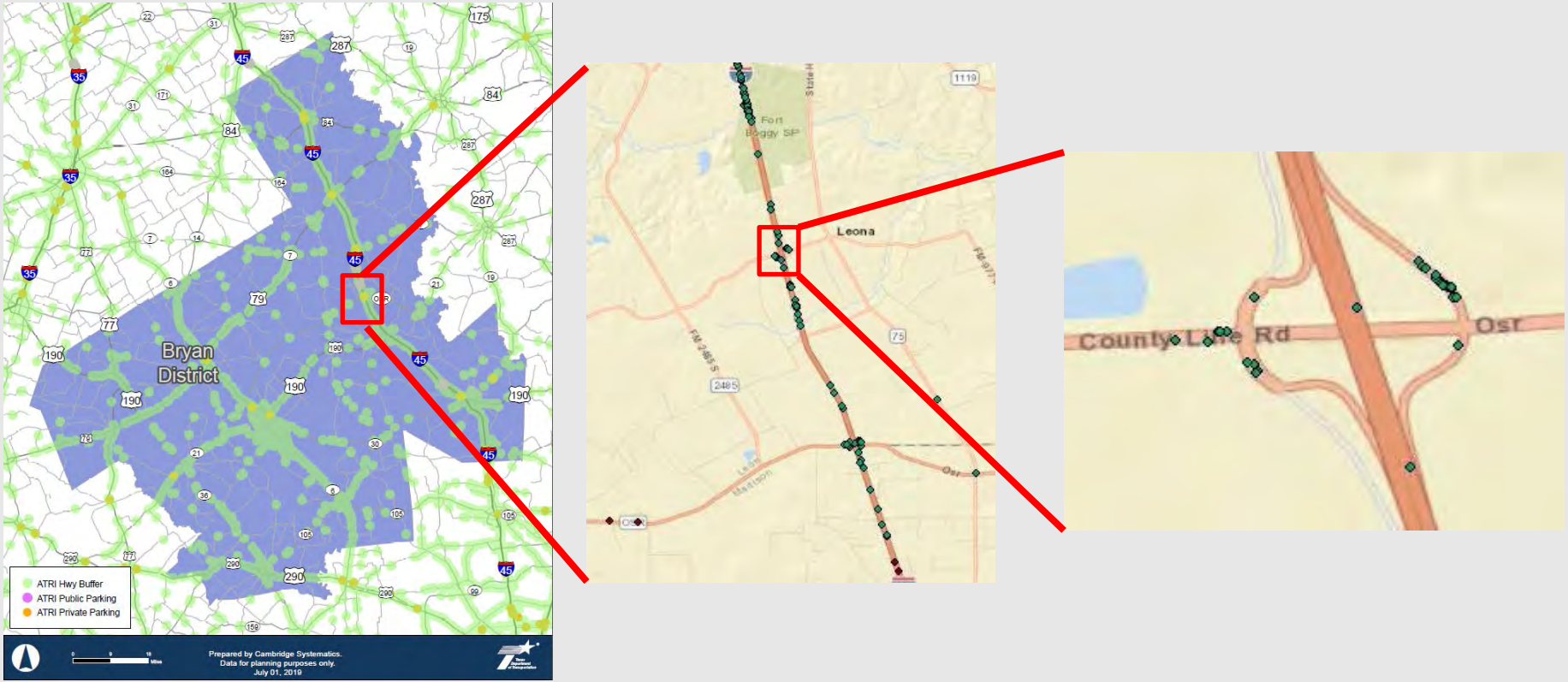
Heat Map of Parked Trucks



Source: ATRI 2018 Data, Processed by Cambridge Systematics 2019

[Online Heat Map of Parked Trucks: https://arcg.is/WGDOy]

Unauthorized Parking – Next Steps



Source: ATRI 2018 Data, Processed by Cambridge Systematics 2019

STAKEHOLDER INPUT

July 11, 2019

Stakeholder Engagement – Round 1

19 workshops conducted from November 2018 – February 2019

Stakeholder Engagement – Round 1 Themes

Common Challenges

- Lack of capacity in general
- High demand near freight generators
- Providing amenities
- Ensuring safety
- Policies and regulations, including local zoning
- Signage and information about truck parking

Common Solutions

- Use underutilized land for truck parking
- Develop public or private truck parking near freight activity
- Improve availability of information about truck parking locations
- Encourage development of truck parking through tax incentives

Top 3 Challenges

1. Lack of overnight parking
2. No authorized parking at shippers/receivers
3. Hours-of-service limitations

50% of drivers

park in an unauthorized location due to hours-of-service demands
(23% cite lack of overnight facilities)

63% of drivers

park in an unauthorized location at least once a week
(includes 10% who do daily)

Top 3 Amenities

1. Safety features such as lighting
2. Food availability
3. Shower facilities

Most Common Driver Comments

- More capacity is needed
- Public land is an opportunity
- Lighting, safety, and cleanliness are important
- More frequent parking locations would be ideal (50-60 miles)
- Access and facility should be designed for trucks
- Real-time availability is needed

Stakeholder Engagement – Round 2

Interviews Currently Underway	Round 2 of Workshops
Follow-up with previous participants	Confirm findings from data analysis and Round 1 outreach
Identify and contact new stakeholders	Vet potential strategies with stakeholders
Understand how operations are impacted in various industries and regions	Identify priorities and partners for implementation plan

POTENTIAL TRUCK PARKING STRATEGIES

Category of Strategies

- Increase Overnight Parking Capacity
- Increase Short-Term Urban Staging Capacity
- Truck Parking Information Management System

Strategy 1: Increase Overnight Parking Capacity

Private Investment

- New or expanded truck stops

Public Investment (TxDOT)

- Expand truck parking to existing rest areas
- Truck-only parking areas
- Add parking to weigh/inspection sites
- Convert closed weigh/inspection sites

Expand Truck Parking to Existing Rest Areas
(Proposed on I-80 east of Reno, NV)


Parking at Weigh Station
(I-71, Walton Kentucky)

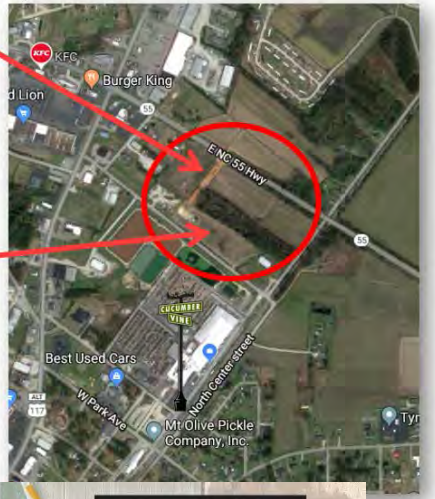

Convert Closed Inspection Site
(Proposed on I-80 east of Reno, NV)

Strategy 2: Increase Short-Term Urban Staging Capacity

Truck Staging Project

1. NCDOT connecting road from NC 55 to Talton Avenue, pulling trucks off Mount Olive streets

2. Planned Mt. Olive Staging area for most incoming truck traffic
   - Check-in
   - Queue-up
   - Scales
   - Break area



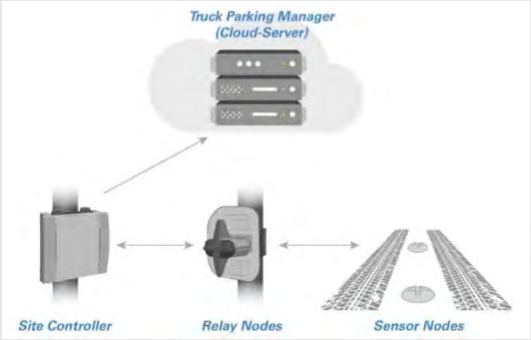
Private Investment

- Shippers/Receivers provide on-site parking & amenities (Hershey's, Hershey, PA)
- Specialized staging parking providers (Mt. Olive, NC)

Public Investment (Local Municipalities)

- Zoning Change requiring on-site parking (Township of Upper Macungie, PA)
- Develop common staging lot (Port of Vancouver; Elmira, NY)

Strategy 3: Statewide Truck Parking Information Management System



TXFAC INPUT

Prioritizing Strategies

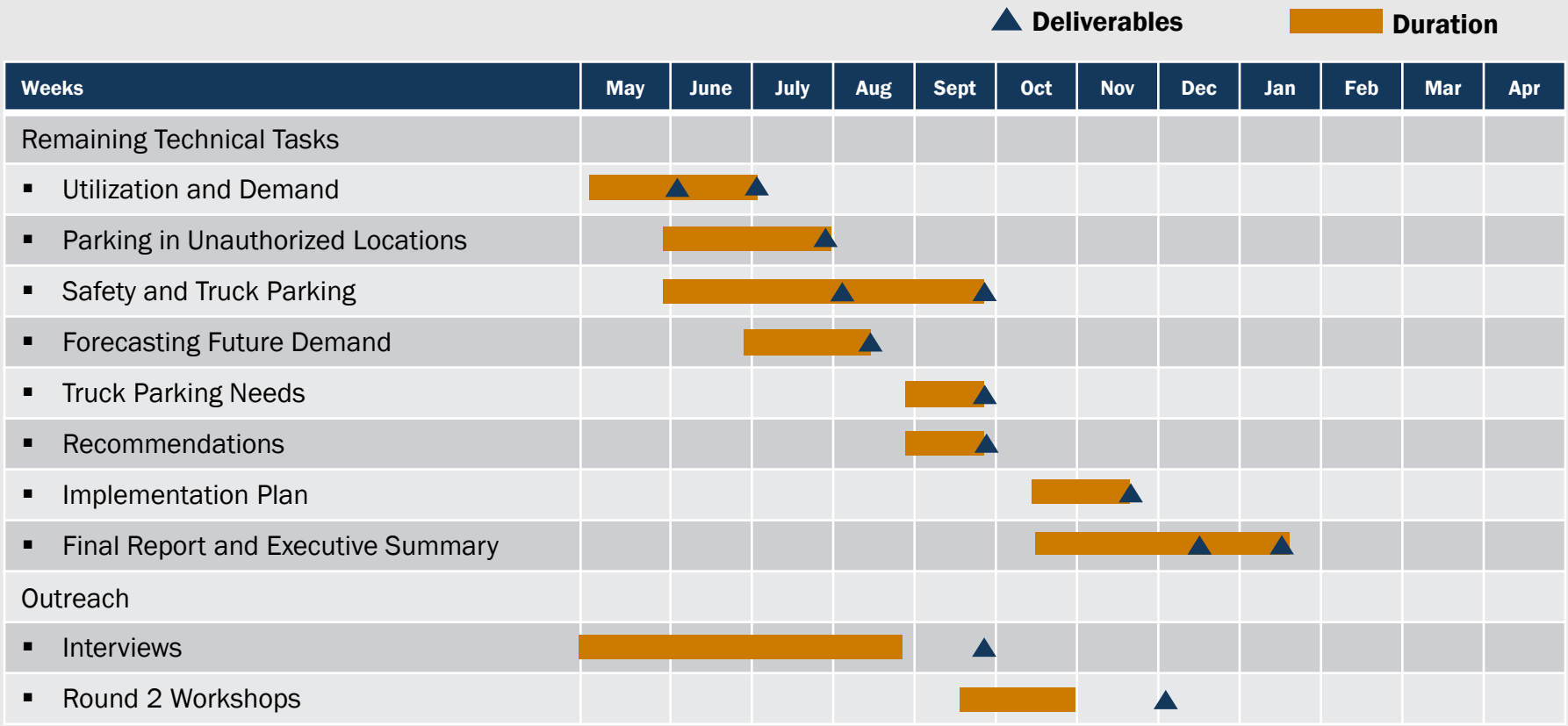
What Strategies Would Be Most Effective?

Interactive Input via **www.menti.com**

You have 100 points to distribute across the following strategies…

- Direct public investment in parking capacity
- P3 investment in overnight and/or staging capacity
- Encouragement and support of private investment (incentives, public awareness, etc.)
- Zoning and land use requirements
- Truck Parking Information Systems
- Other

Project Schedule (2019)



Additional Outreach and Next Steps

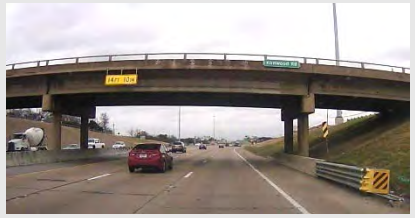
Stakeholder Engagement

- Summer - Interviews and field visits
- Fall - Workshops

Next Steps

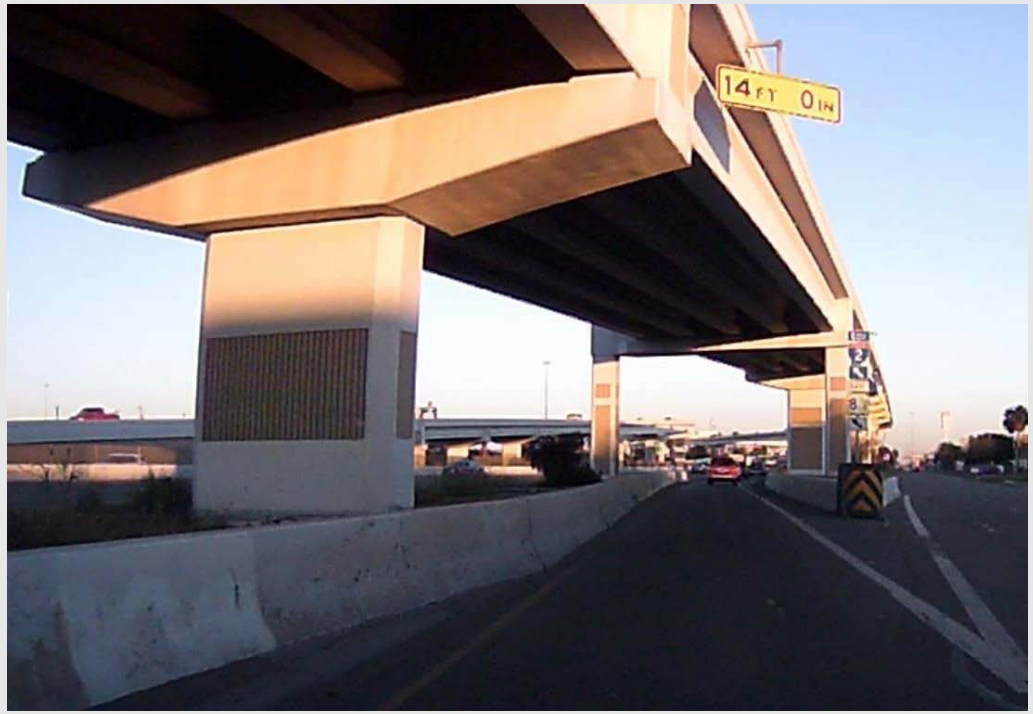
- Data-driven analysis of where, why, and how much additional parking is needed
- Draft recommendations
- Align strategies with demand






FREIGHT INFRASTRUCTURE DESIGN CONSIDERATIONS

Texas Freight Advisory Committee



July 11, 2019

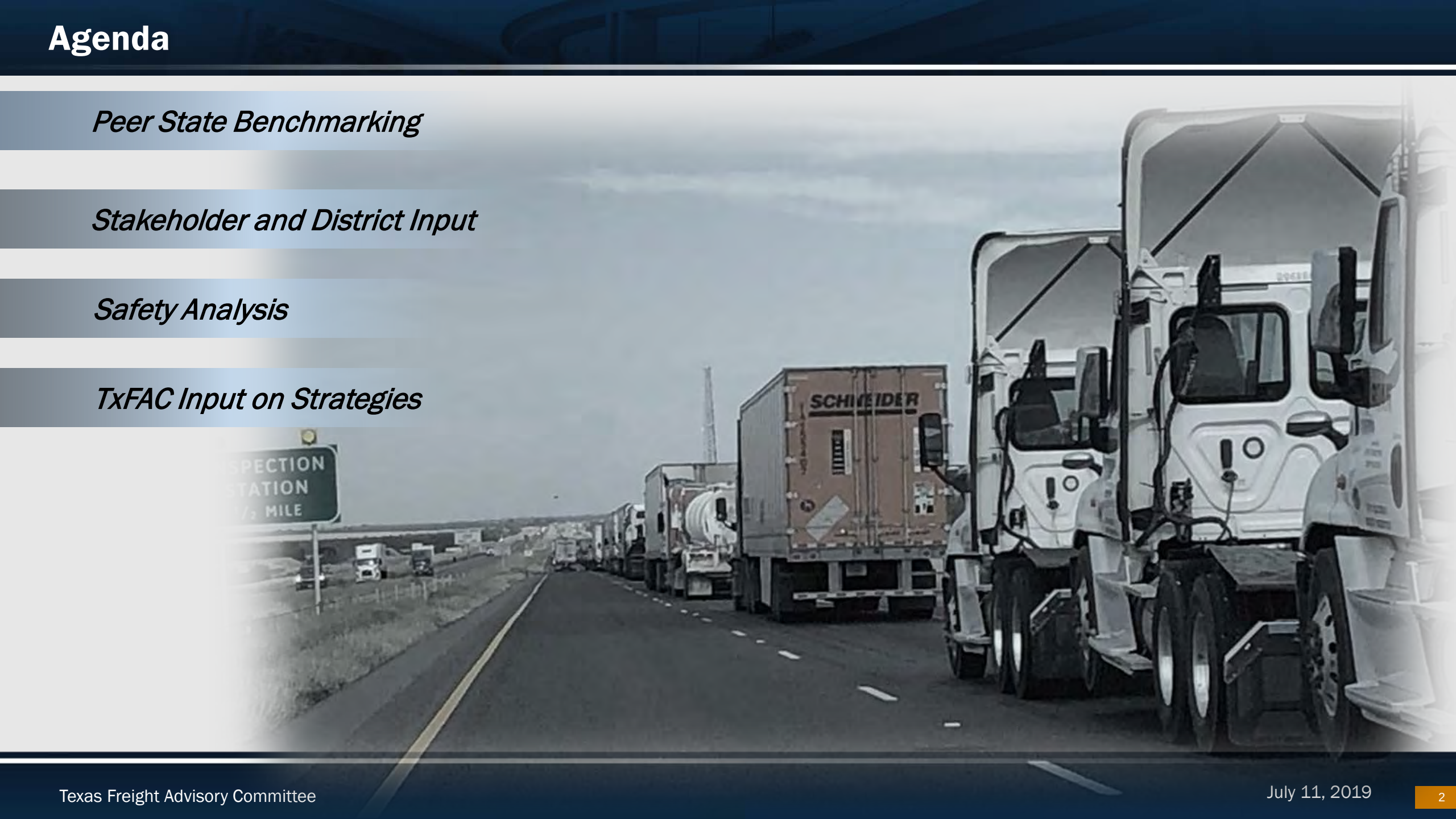
Agenda

Peer State Benchmarking

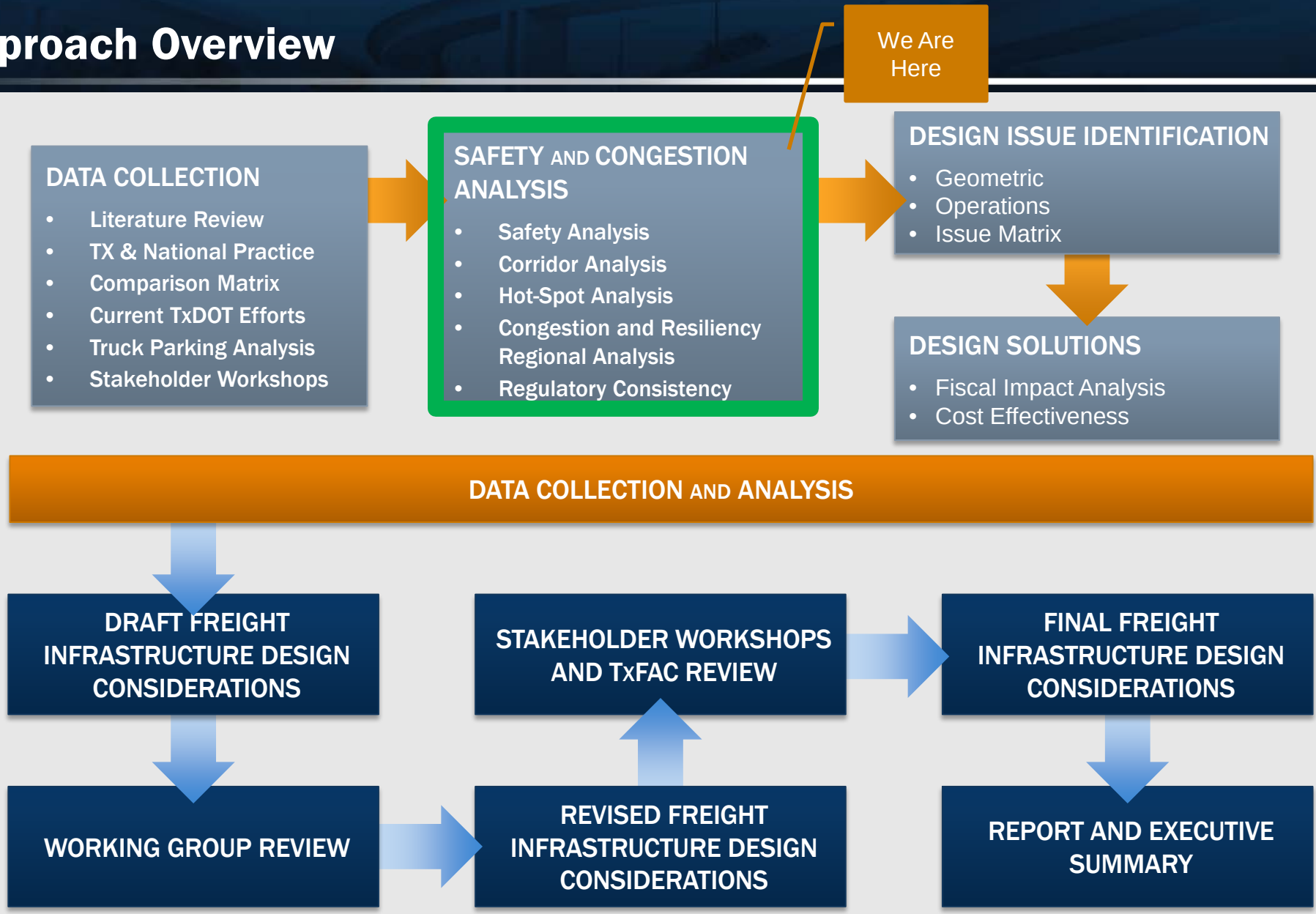
Stakeholder and District Input

Safety Analysis

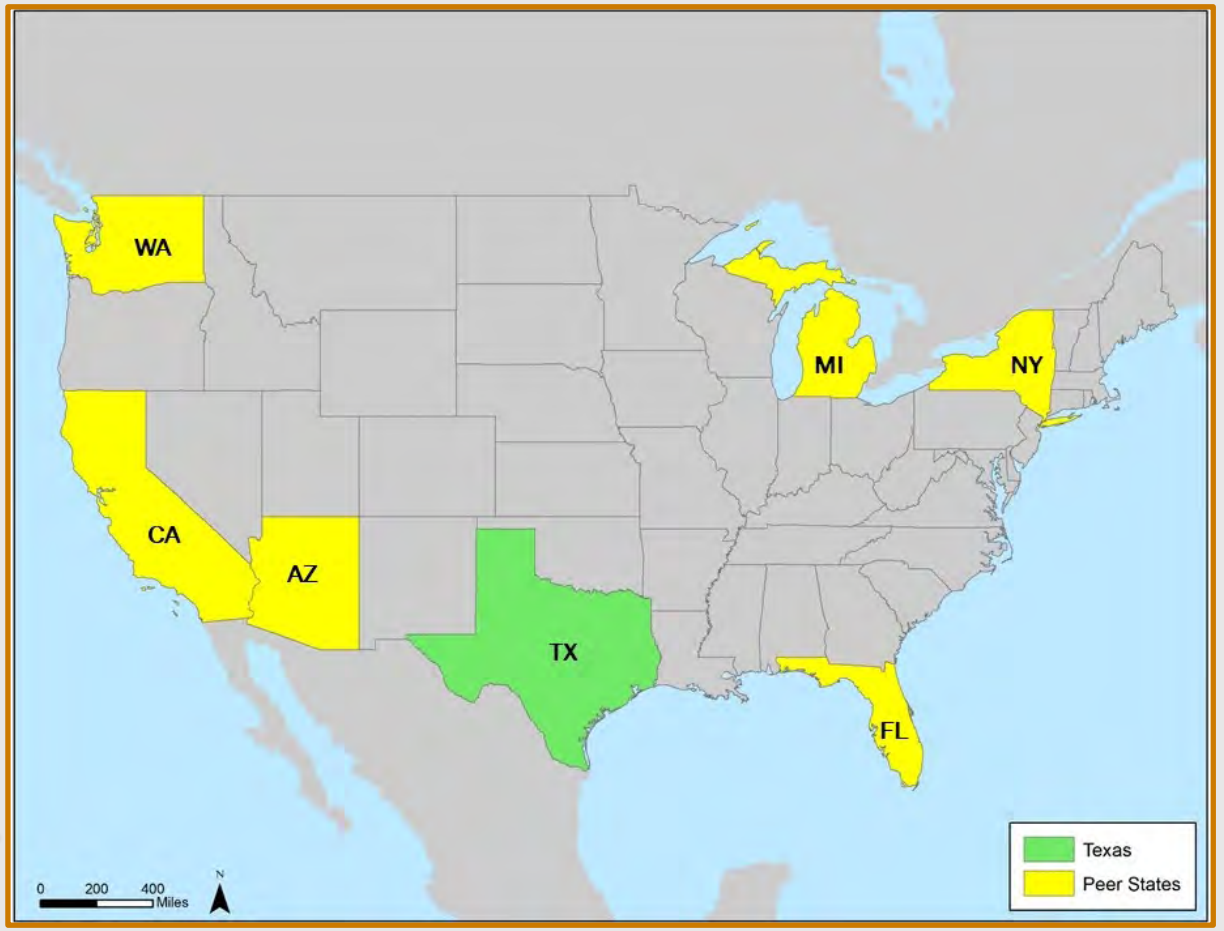
TxFAC Input on Strategies



Project Approach Overview



BENCHMARKING DESIGN GUIDELINES FOR TEXAS AND PEER STATES



Topics Covered in Benchmarking

- **Topics:**
  - Geometrics
  - Pavement
  - Bridges and Structures
  - Truck Size and Weight
  - Work Zones
  - Traffic Operations
  - Multimodal Accessibility
- **Comparison Matrix**

Geometric Comparisons

Overview

- TxDOT design criteria overall not substantially different from peer states

TX Leading

- Minimum vertical clearance requirements are highest among peer states
- Mainlane lane widths required to be 13’ rather than 12’ in peer states

TX Lagging

- No firm guidelines for design vehicle, while some states use WB-67 (53’Semi)
- Allows for greater grade changes without vertical curve than most peer states

Bridges & Structures, Truck Size & Weight

Overview

- TX and peer states follow federal bridge formula for truck weight impact

TX Leading

- TX broke new ground with 18’6” standard overhead clearance on THFN
  - Other states typically around 16’6”
  - 1,300+ THFN bridges <16’6”, and 20% of those <15’

TX Lagging

- TX Gross Vehicle Weight limits match federal 80,000 lbs.
  - Some others allow higher weight on state highways or parts of the Interstate system; Florida and New York allow higher weights per axle
  - Michigan allows 164,000 lbs., but with more axles and lower axle loads

Work Zones

Overview

- TX and peer states follow federal guidance: Manual on Uniform Traffic Control Devices Part 6
  - Most states do not specifically reference trucks or freight volumes in work zone manuals
  - Focus frequently is on construction and service trucks

TX Leading

- TxDOT is a leader in work zone technology applications
  - I-35 Connected Work Zone pilot communicates conditions to truck drivers and fleets
  - Smart Work Zone Guidelines don't consider truck volumes but do ease truck passage

TX Lagging

- Washington Work Zone Manual references importance of maintaining freight movement in work zones and coordinating with divisions
- Certain peer state best practices include designating a truck lane through work zones and/or offsetting lane widths for larger vehicles

STAKEHOLDER WORKSHOP & TXDOT DISTRICT VIEWPOINTS

Workshop Locations	
Amarillo	Lubbock
Beaumont	Lufkin
Brownsville	McAllen/Pharr
Corpus Christi	Mesquite
El Paso	Midland
Ft. Worth	San Antonio
Grapevine	S. Dallas
Houston	Texarkana
Killeen/Temple	Tyler
Laredo	

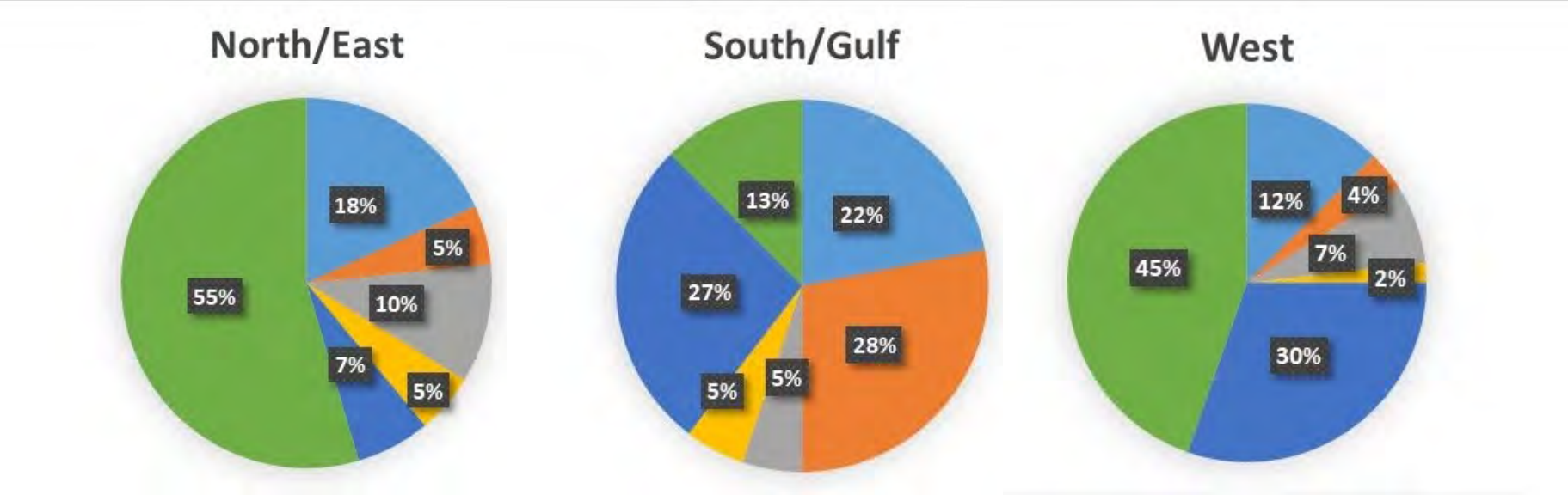
Key:	North/ East	South/ Gulf	West

Observations from Workshops

- Funding has a major influence on design decisions
  - County revenue sources don't match road responsibilities
  - Pavement selection a common example of trade-offs
- Growth outstripping design all across the state
  - Road plans and city plans trend toward obsolete
  - FM roads are hot spots
  - Rural areas may lack the resources to attract growth
- Semi-truck with 53' trailer works as design vehicle in most of the state
  - Permian Basin is main exception
  - Design plus control vehicle is useful approach

Stakeholder Workshop Polling Questions (11/18 - 2/19)

1. Which multimodal facilities are the most difficult to access due to infrastructure design?*



KEY:

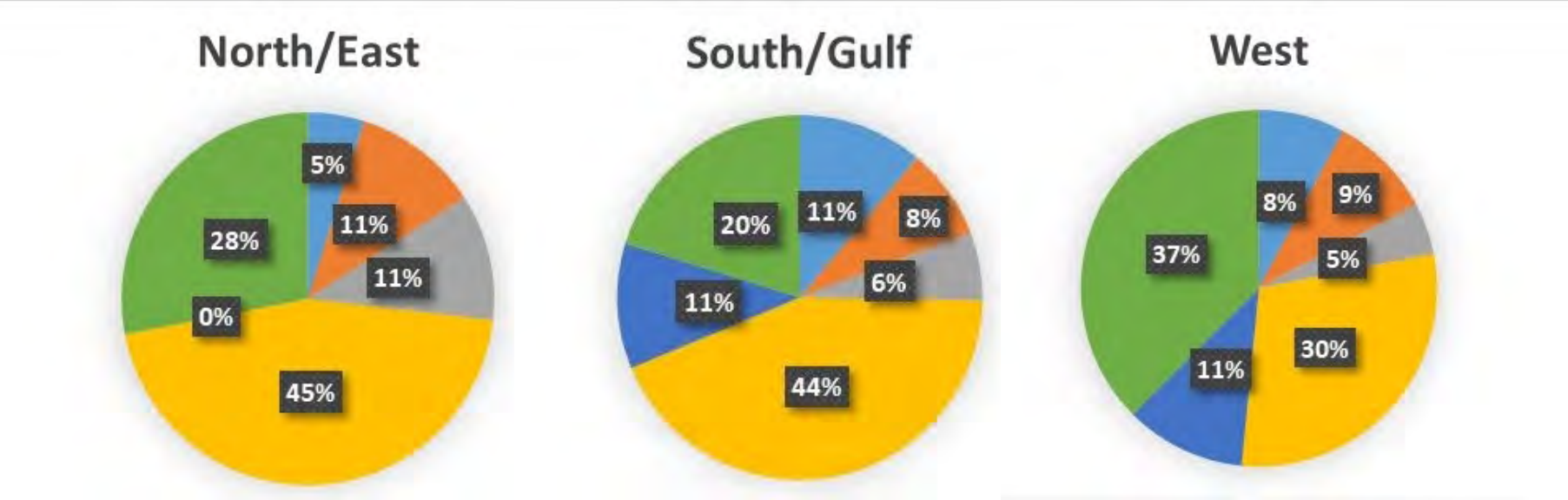
- Rail Terminals
- Port Terminals
- Airports
- Pipeline Terminals
- Border Crossings
- Warehousing

Sample: 229 Responses

* 18 locations, Beaumont absent

Stakeholder Workshop Polling Questions

2. Where are the biggest challenges in moving freight on the roadway network?*



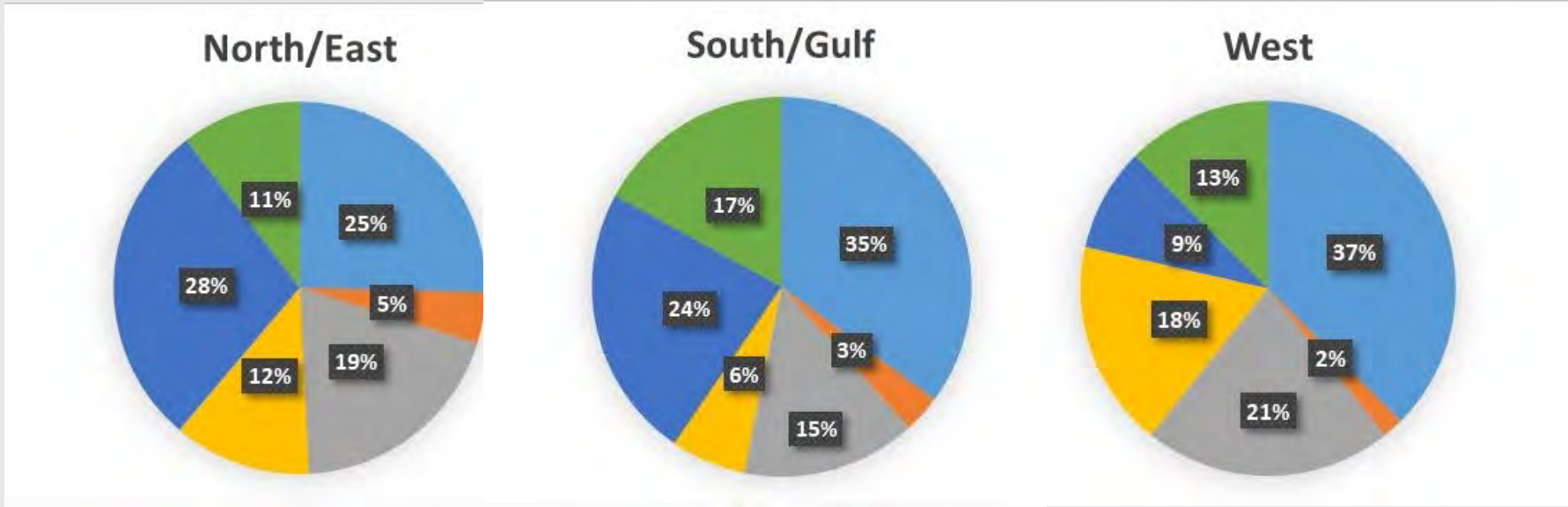
KEY:

- Limited access highways
- Highway access ramps
- Frontage roads
- Other local roads
- Border crossings
- Construction work zones

Sample:
245 Responses

Stakeholder Workshop Polling Questions

4. What are the key challenges in transporting oversize/overweight freight? *



KEY:

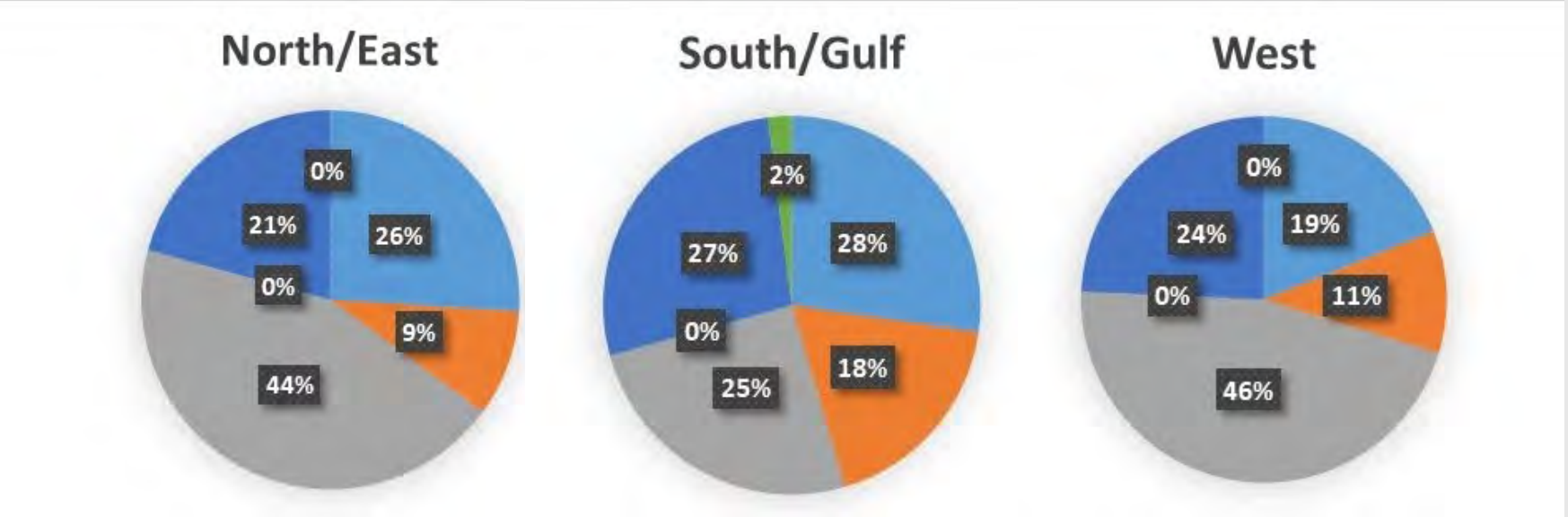
- Lane and shoulder widths
- Access ramps
- Intersections
- Construction work zones
- Overhead clearance
- Bridge weight restrictions

Sample: 217 Responses

* 17 locations, Beaumont and Corpus Christi absent

Stakeholder Workshop Polling Questions

5. What is the most critical impact on freight operations due to design limitations?*



KEY:

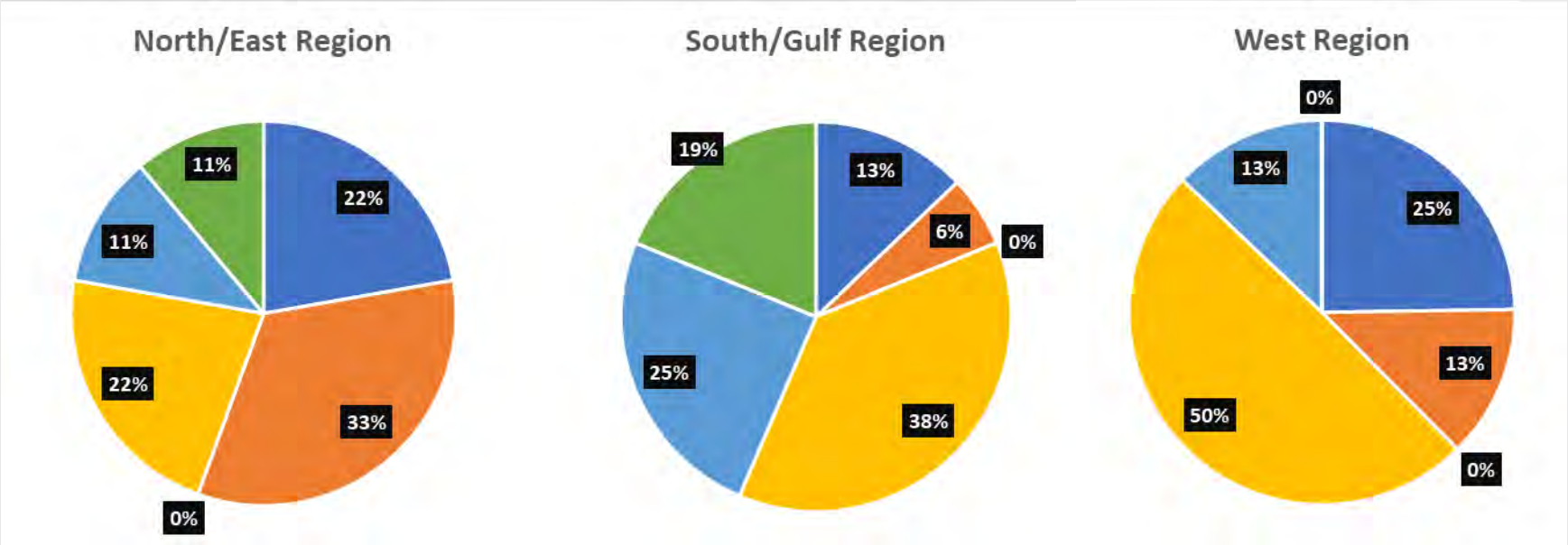
- Requires more time in schedule
- Reduces utilization of assets
- Reduces safety
- Reduces fuel efficiency
- Raises cost/reduces reliability generally
- Slows down response to severe weather events

Sample:
213 Responses

* 17 locations, Beaumont and Corpus Christi absent

TxDOT District Webinar Polling Questions (5/19)

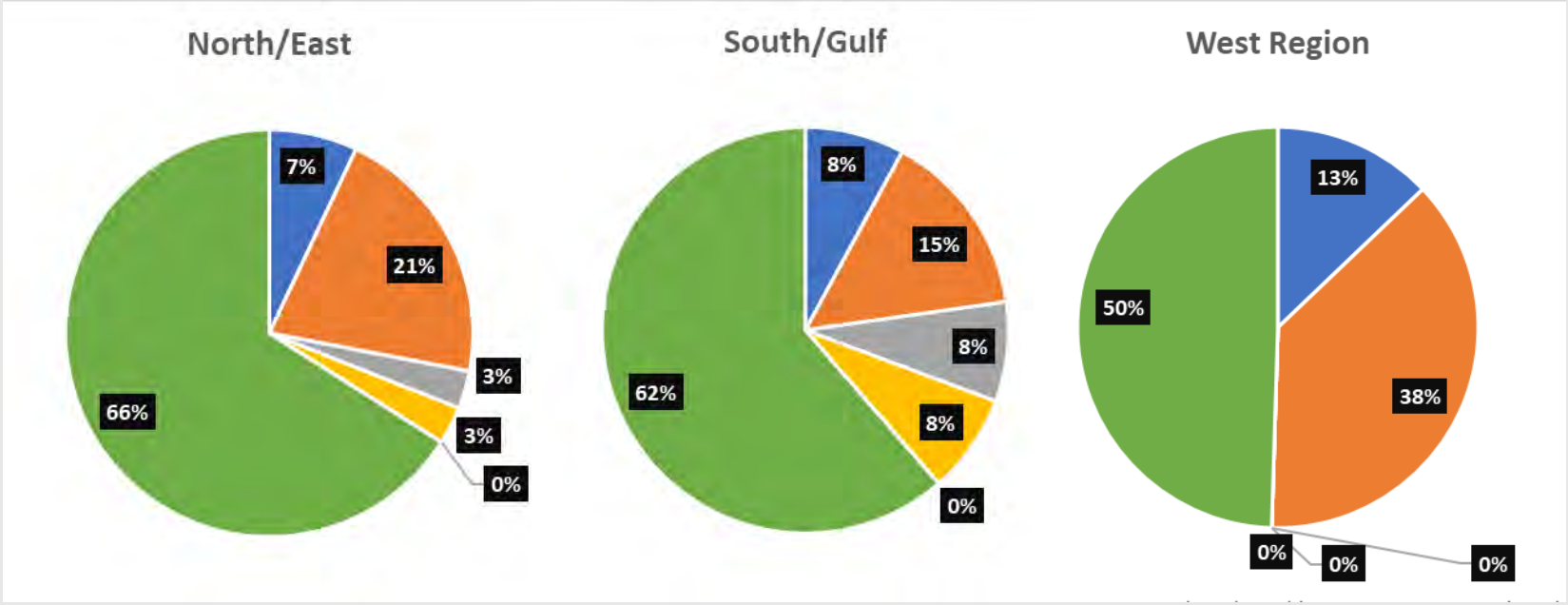
1. Which aspect of roadway infrastructure is most likely to contribute to freight safety issues in your district?



Sample:
33 Responses

TxDOT District Webinar Polling Questions

2. What kind of infrastructure has issues that are most likely to make moving freight less productive in your district?



KEY:

- Port/rail access routes
- Local roads to shippers
- Local roads for border logistics
- Urban streets for home delivery
- Rail grade Xings
- Rural routes thru towns

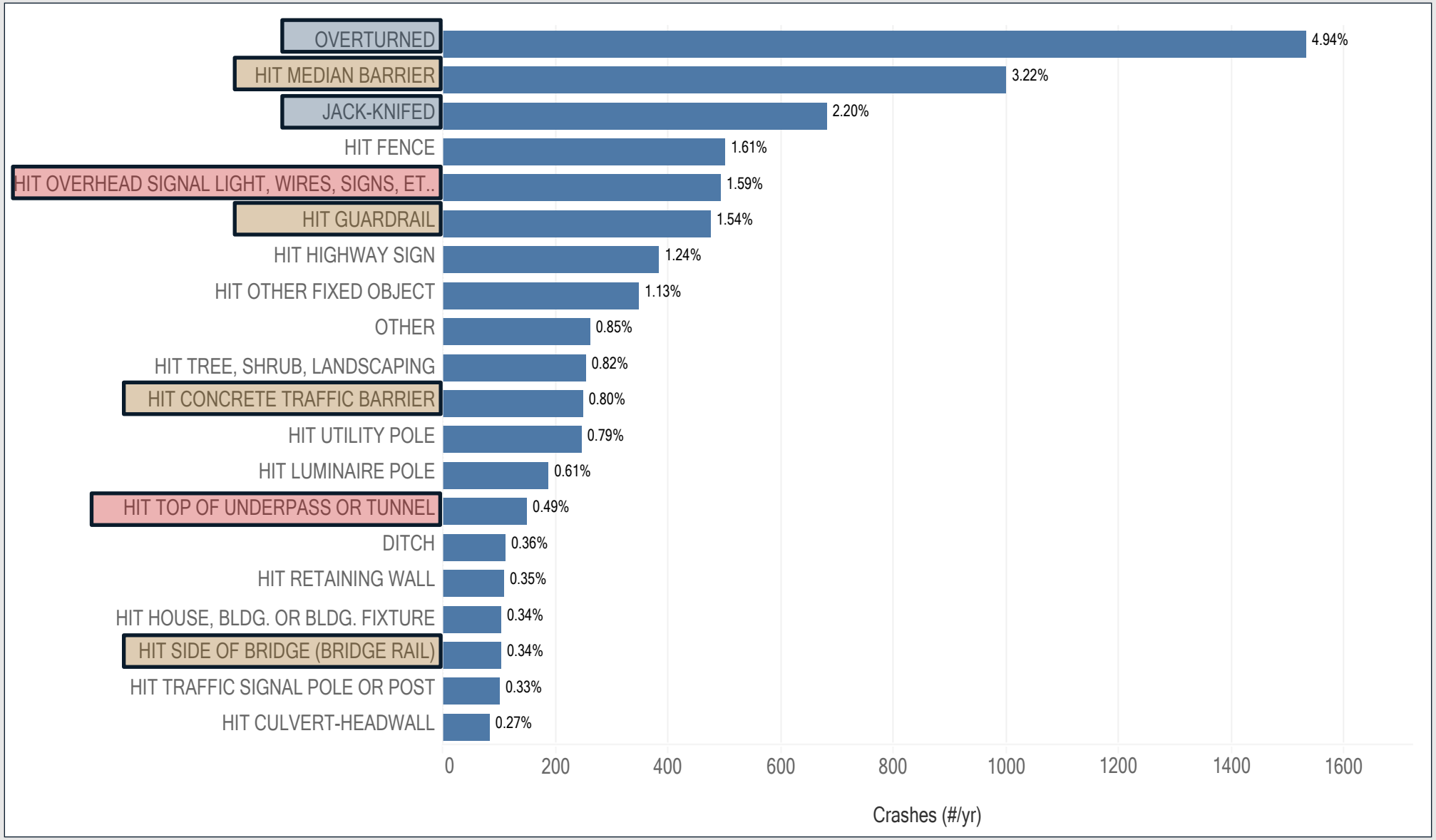
Sample:
29 Responses

SAFETY ANALYSIS

Factors Impacting Truck Crashes

- Truck crash rates and rates of death and serious injury rise as the degree of access control decreases
- Crash rates are higher for roads with greater congestion (Levels of Service E and F), but the rate of deaths and serious injuries is lower than on highways with no congestion
- The highest crash rates occur when the truck percentages are lowest, and decline steadily as percentages climb
  - Severity tends to decline as well
- Crash rate increases progressively with higher International Roughness Index (IRI), indicating worse pavement condition
  - However, it does not appear that IRI affects the rate of severe crashes
- Wider right shoulders diminish the severity of crashes
  - Shoulders narrower than 10 feet may be associated with much higher crash rates as well
- While rare, crashes involving a parked truck are disproportionately more severe, contributing to a greater share of deaths and serious injuries

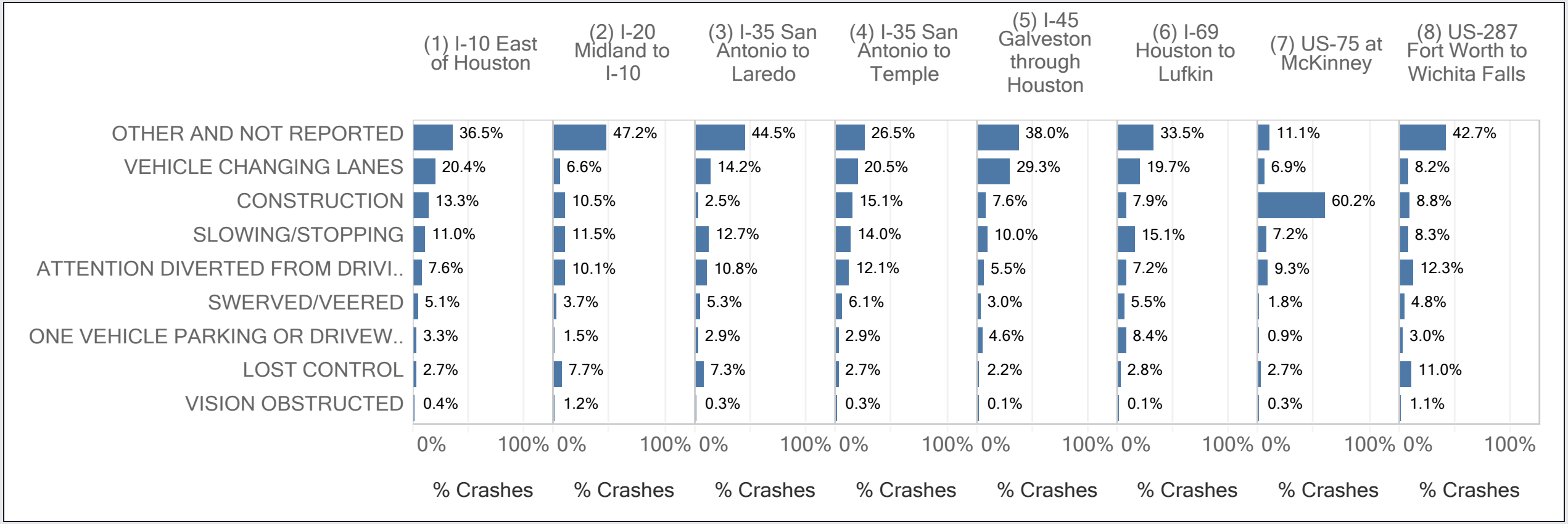
Truck Crashes by Object Struck Statewide



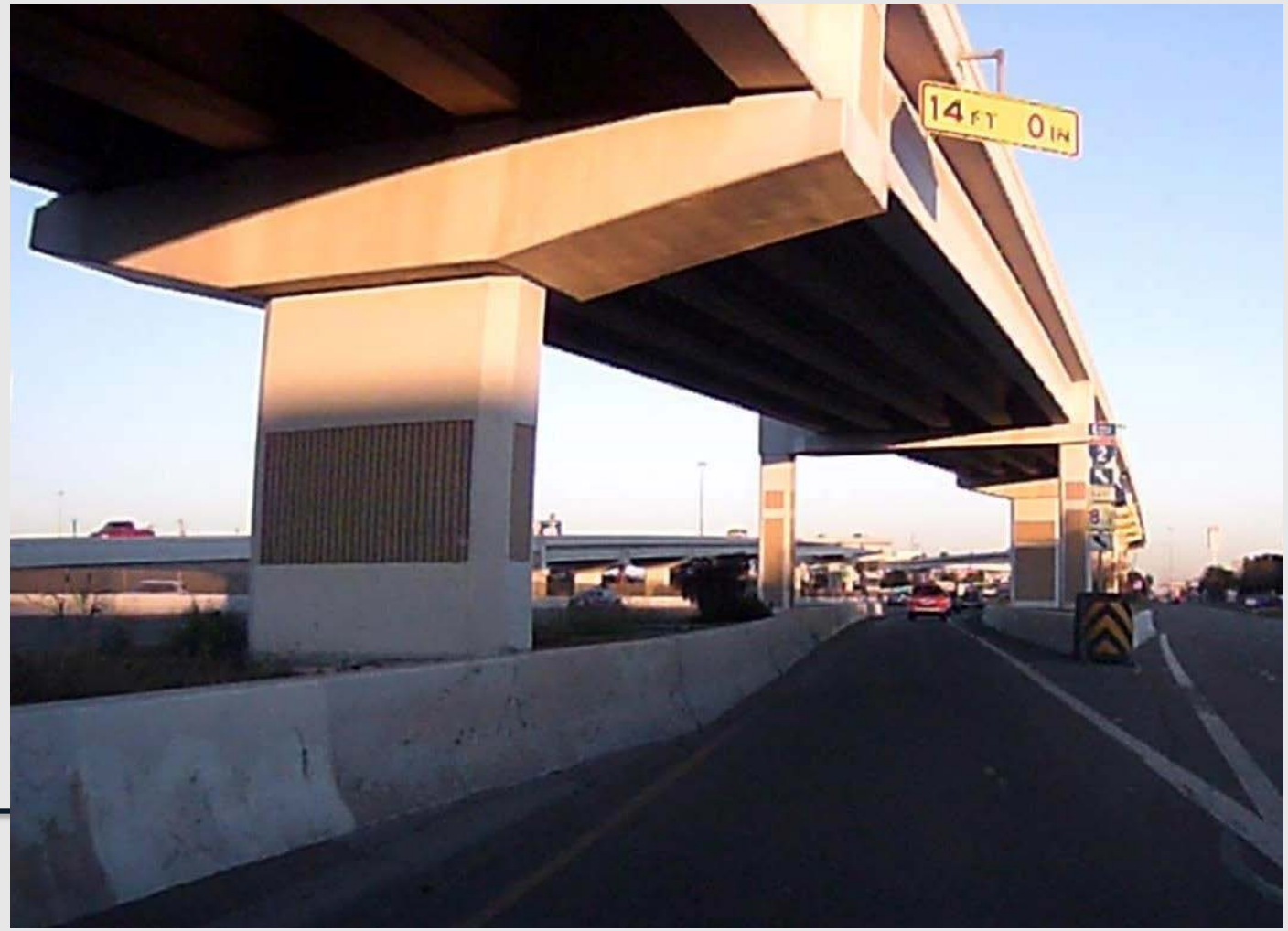
- Overturns and jack-knifes are 2 of top 3 contributors: 7.1% of crashes
- Width limits (barriers, rails) account for 5.9% of crashes
- Overhead clearances figure in 2.1% of crashes

Factors Contributing to Truck Crashes on 8 Analysis Corridors

- Significant variability between corridors
- Changing lanes larger factor on I-45 and I-10 near Houston, and I-35 north of San Antonio
- Construction accounts for 60% of crashes on US-75 north of Dallas



TxFAC INPUT ON STRATEGIES



TxFAC Input

www.menti.com

Focus for Physical Design

1. Balancing needs and practicalities, where should Texas focus investment in the physical design of freight infrastructure? (100 points to assign)

a) Upgrading local and rural roads to shippers/receivers

b) Improved intersections and interchanges on the Texas Highway Freight Network (THFN)

c) Assurance of adequate lane and shoulder widths throughout the THFN

d) Expansion of access control on the THFN

e) Other: _____

Policy Issues in Freight Infrastructure Design

2. What policy issues should be put forward as important for effective freight infrastructure design? (100 points to assign)

a) Adequacy of funding and sources for facilities under non-TxDOT jurisdiction

b) Adequacy of funding for best design choices on THFN facilities

c) Sufficiency of land use and freight network plans for growing cities and towns

d) Adequacy of freight system investment in regions without growth

e) Other: _____

Next Steps

- ☑ Complete Safety and Congestion Analyses (July)
- ☑ Finalize Peer State Benchmarking Report (July)
- ☑ Regulatory Consistency Analysis (July)
- ☑ Design issue identification and draft solutions (July-August)
- ☑ 2nd round stakeholder workshops (Fall 2019)





TEXAS FREIGHT NETWORK TECHNOLOGY AND OPERATIONS PLAN

Texas Freight Advisory Committee

July 11, 2016

Why Freight Network Technology and Ops Plan?

- Technology innovations are redefining traditional planning and investment decisions
- Need to find cost effective operational and technology solutions for Texas Freight Network to:
  - Improve mobility, safety and efficiency
  - Improve system management and operation
  - Address congestion
  - Enhance Economic Development
- Technology innovations will influence future freight and operations
- Better understand the needs, challenges, gaps, and opportunities and how to best plan for the future
- Proactively develop a Blueprint for facilitating deployment of emerging technologies on Texas Freight Network
- Support TxDOT goals – leader in technology innovation and TSMO practices on Texas Freight Network

Plan Purpose, Goals and Objectives

PURPOSE

Develop a comprehensive Freight Network Technology and Operations Blueprint that positions Texas as leader in addressing current and emerging freight movement issues

GOAL

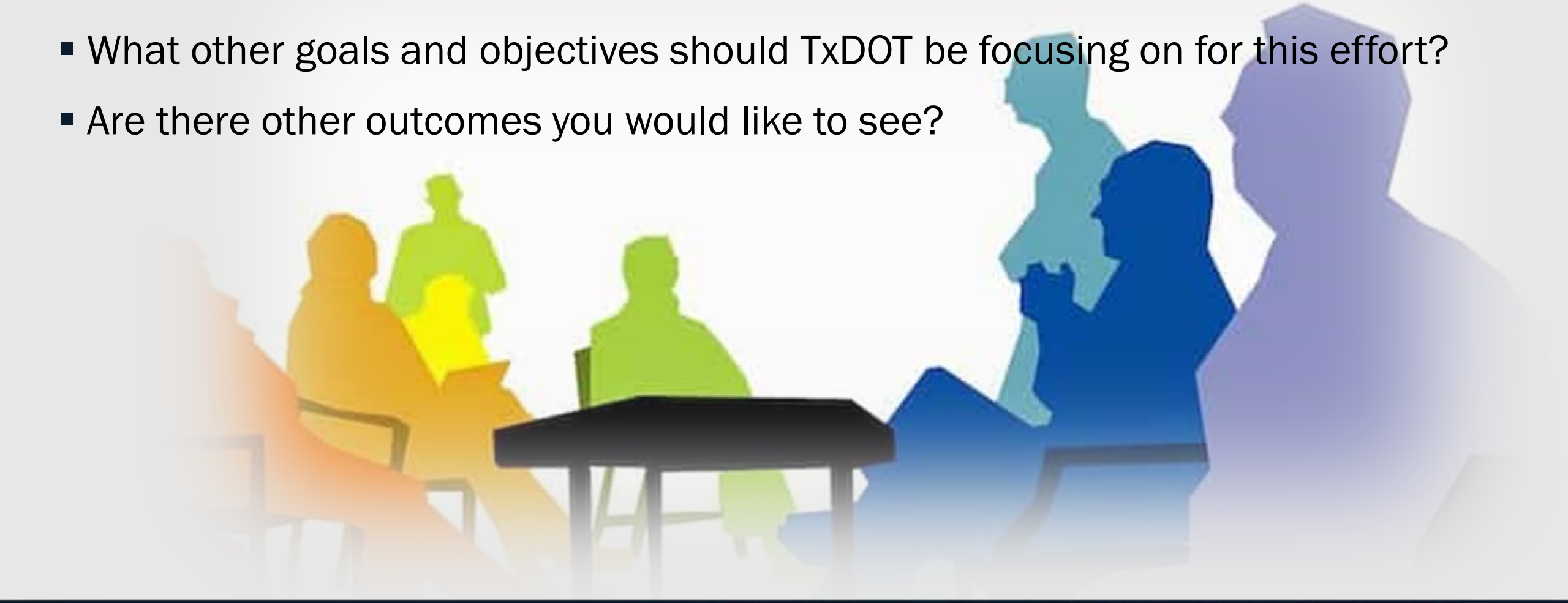
Develop a plan based on detailed assessment of current and future conditions, needs, challenges, gaps, and opportunities and outlines strategies and implementation plan

OBJECTIVES

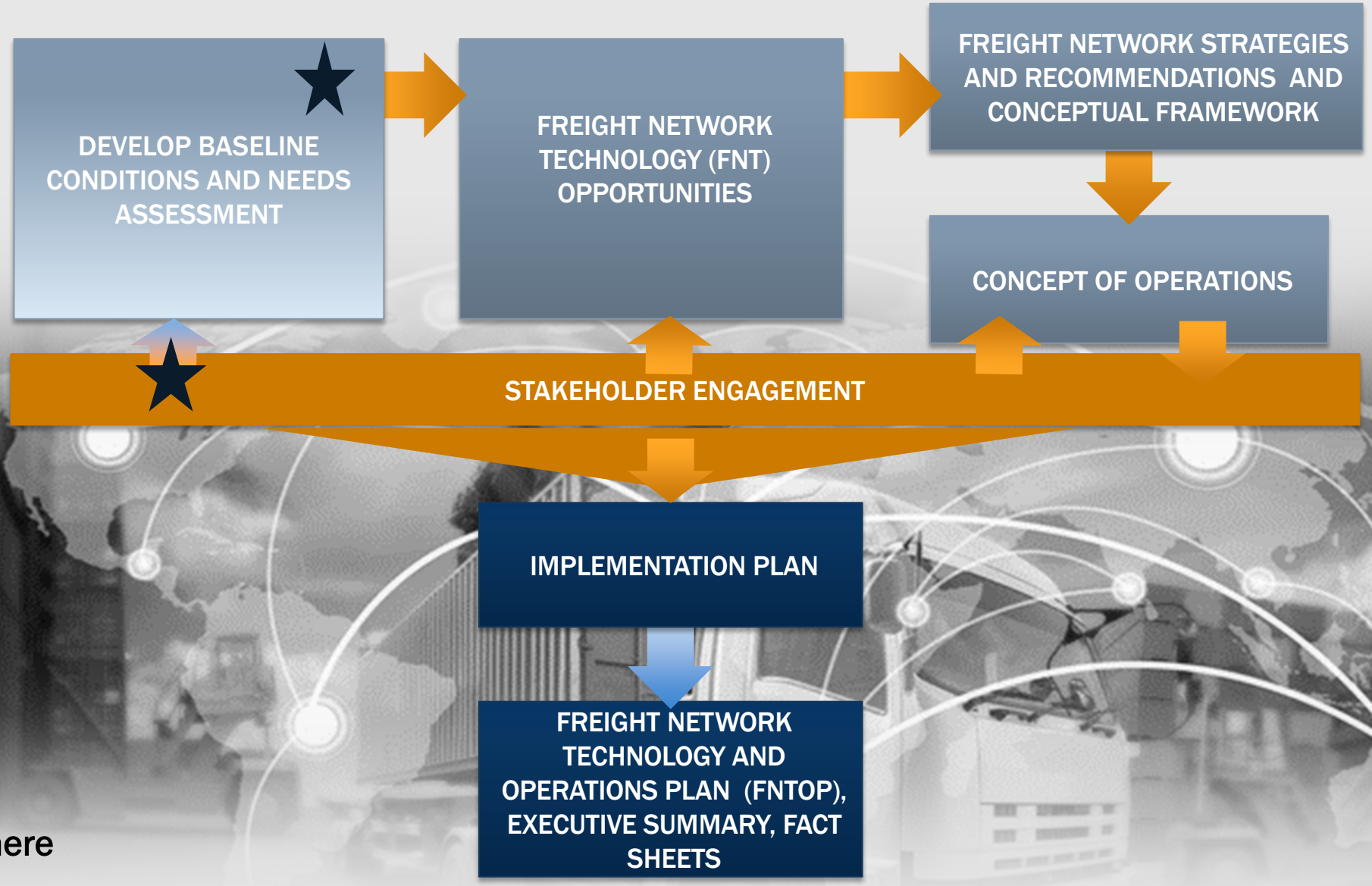
- Assess current and planned technological and operational strategies improve safety and mobility on the TX Freight Network
- Assess technological and operational needs, challenges, and opportunities on the Freight Network
- Assess Freight Network technology and operational readiness
- Develop strategies, policies, programs, and projects to address needs, challenges, gaps, and opportunities.
- Develop an Implementation Plan and Concept of Operations

www.menti.com

- What other goals and objectives should TxDOT be focusing on for this effort?
- Are there other outcomes you would like to see?

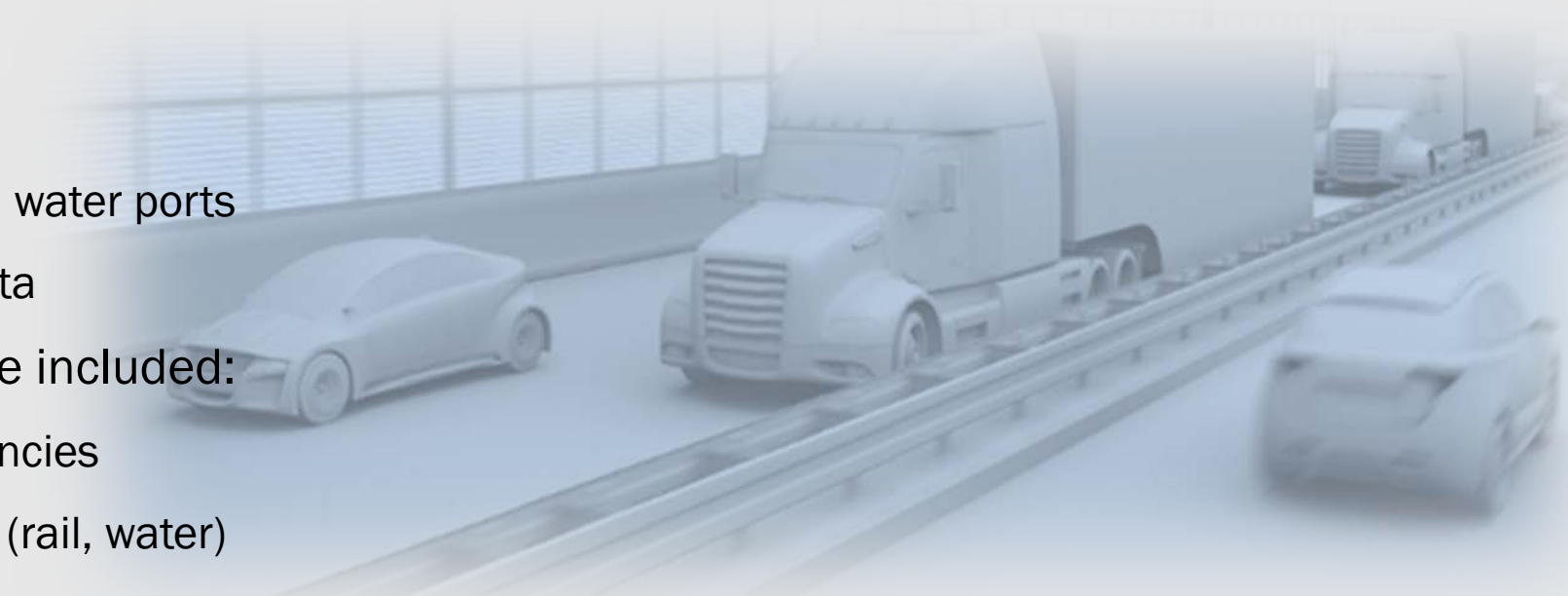


Overview of Project Approach



Kick Off Meeting – May 6, 2019 TxDOT Austin

- Attended by TXDOT technology, operations, maintenance and administrative professionals
- Project team vetted project focus:
  - Emphasize a multi-modal approach
  - Examine cross-border and the air and water ports
  - Focus on pre-existing network and data
- Identified key stakeholder types to be included:
  - Public agencies including federal agencies
  - Freight stakeholders other than truck (rail, water)
  - Technology alliances such as Technology Innovation Alliance, TxDOT Technology Task Force
  - Private sector technology providers
- Identified ongoing technology/operational programs for study
  - Obtain a variety of different inputs from state level agencies (DMV, DPS, key State staff covering freight, ITS, and operations, etc.)



Stakeholder Engagement

- Three stakeholder engagement methods:
  - Stakeholder Interviews (60 - 70)
  - Texas Public-Agency-Specific Meetings (Aug 2019, Nov 2019, Mar 2020, Jul 2020)
  - Freight Network Technology Working Group Meetings (3) and Webinars (5)

- Stakeholders to be included:
  - All freight modes to be covered
  - Existing ITS stakeholders to be included
  - Applicable Texas public agencies
  - Applicable freight and technology private sector involvement
  - Applicable other states' agency representatives

Freight Network Technology Working Group

- The FNTWG is a public agency and private industry group of stakeholders that will provide feedback on freight network technology findings and help prioritize strategies and recommendations and guide development of FNTOP

- In-person meetings of 12 to 15 persons each will be held in 6 locations around the State
  - Oct 2019 (*Freight Network and user needs*)
  - Mar 2020 (*strategies and recommendations*)
  - Nov 2020 (*Plan briefing*)

- Webinars
  - July 2019 (Introduction)
  - Oct 2019 (*Freight Network and user needs)*
  - Mar 2020 (*Strategies and recommendations*)
  - July 2020 (*In-progress review*)
  - Nov 2020 (*Plan briefing*)

Potential Meeting Locations

We are seeking members of the TxFAC to join the Freight Network Technology Working Group

Coordination with other TxDOT Efforts

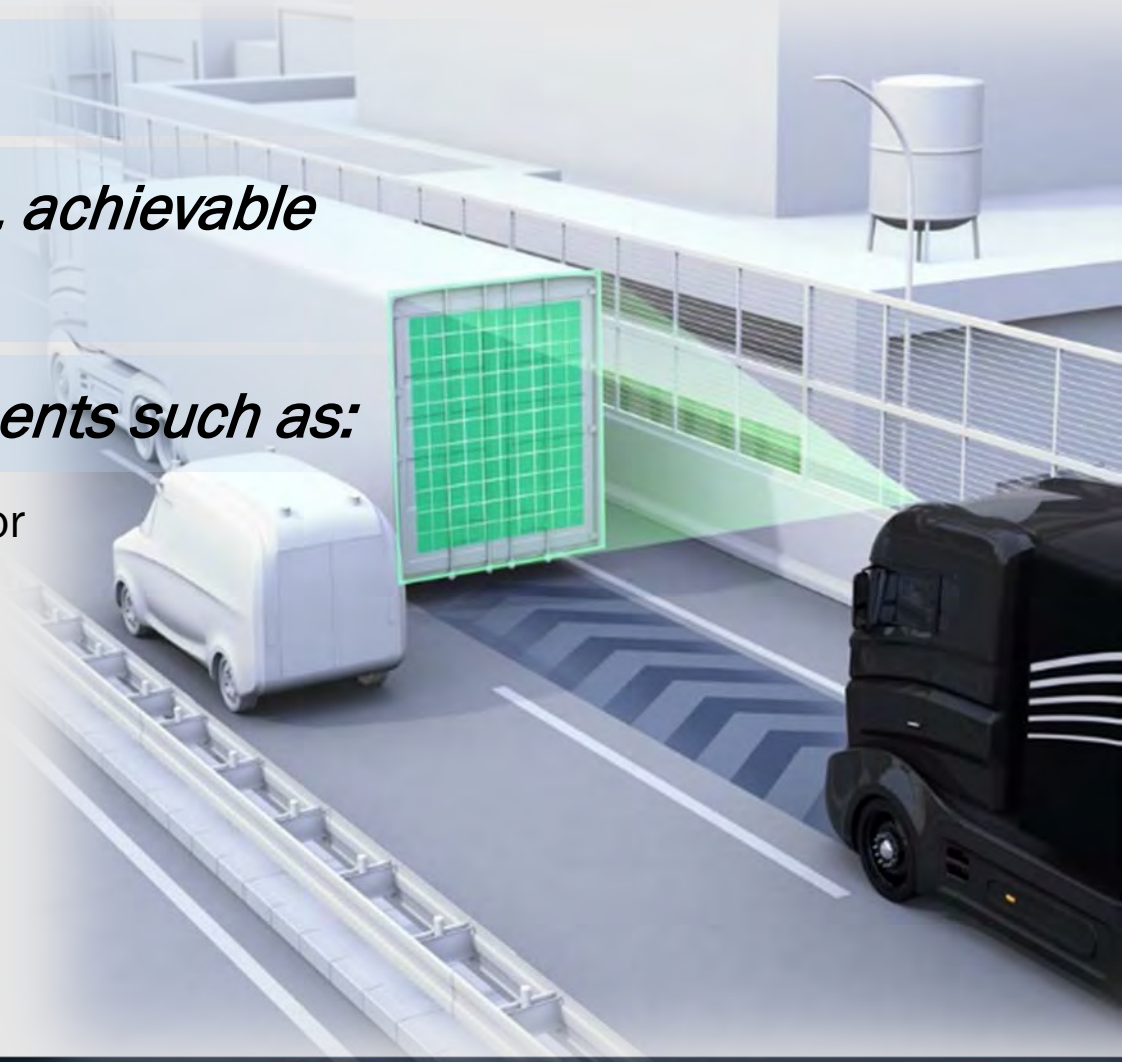
Actionable policies, programs, projects and initiatives

Roles and responsibilities for implementation

Desired outcomes with emphasis on near-term, achievable opportunities

Projects and initiatives across a variety of elements such as:

- Texas FRATIS I-35 Work Zone Prototype Information System for Trucking Fleets
- Texas Truck Platooning Demonstration Program
- CA-AZ-NM-TX I-10 Connected Trade Corridor ConOps
- I-10 Corridor Coalition Truck Parking Availability System
- Texas Connected Freight Corridors Project
- State of the art TMC installations
- Port systems
- Technology Innovation Alliance



Recently Completed and Next Steps

Task	Time
Task 1 Project Management: • Kick Off Meeting • Complete Project Management Plan with updated schedule • Complete initial Final Report Outline	 May 2019 Jun 2019 Jun 2019
Task 2 Feasibility and Planning Studies: • Visioning and benchmarking • Develop goals and objectives • State of the practice review	 Jun-Sept 2019 Jun 2019 Aug 2019-Jan 2020
Task 4 Stakeholder Involvement: • Complete Stakeholder Outreach Plan • Form Working Group (TxDOT) • Working Group Webinar (first) • Working Group Meeting (first) • TX Public Agency meeting (first) • Prepare for first set of stakeholder interviews • Conduct stakeholder interviews • Develop project fact sheets	 Jun 2019 Jun-Jul 2019 Jul 2019 Oct 2019 Aug 2019 Jul 2019 Jul 2019-Nov 2020 First one: Jun 2019

Project Team Contacts

- TxDOT
  - Caroline Mays – Project Manager;
    Director of Freight, International Trade, and Connectivity
    Caroline.Mays@txdot
  - Casey Wells – Deputy Project Manager; Freight Planner
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  - Sherry Pifer – Freight Planning Branch Manager
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- Consultant Team – Cambridge Systematics
  - Mark Jensen – Freight Tech/Ops Plan Project Manager
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TEXAS PERMIAN BASIN REGIONAL FREIGHT AND ENERGY SECTOR TRANSPORTATION PLAN

Texas Freight Advisory Committee

July 11, 2019

STUDY OVERVIEW

2018 Texas Freight Mobility Plan Identified the Need to…

A *Better capture local and regional energy sector freight data*

B *Identify regional roadways critical to serving the energy sector*

C *Communicate the economic importance of freight activity in the Permian Basin*

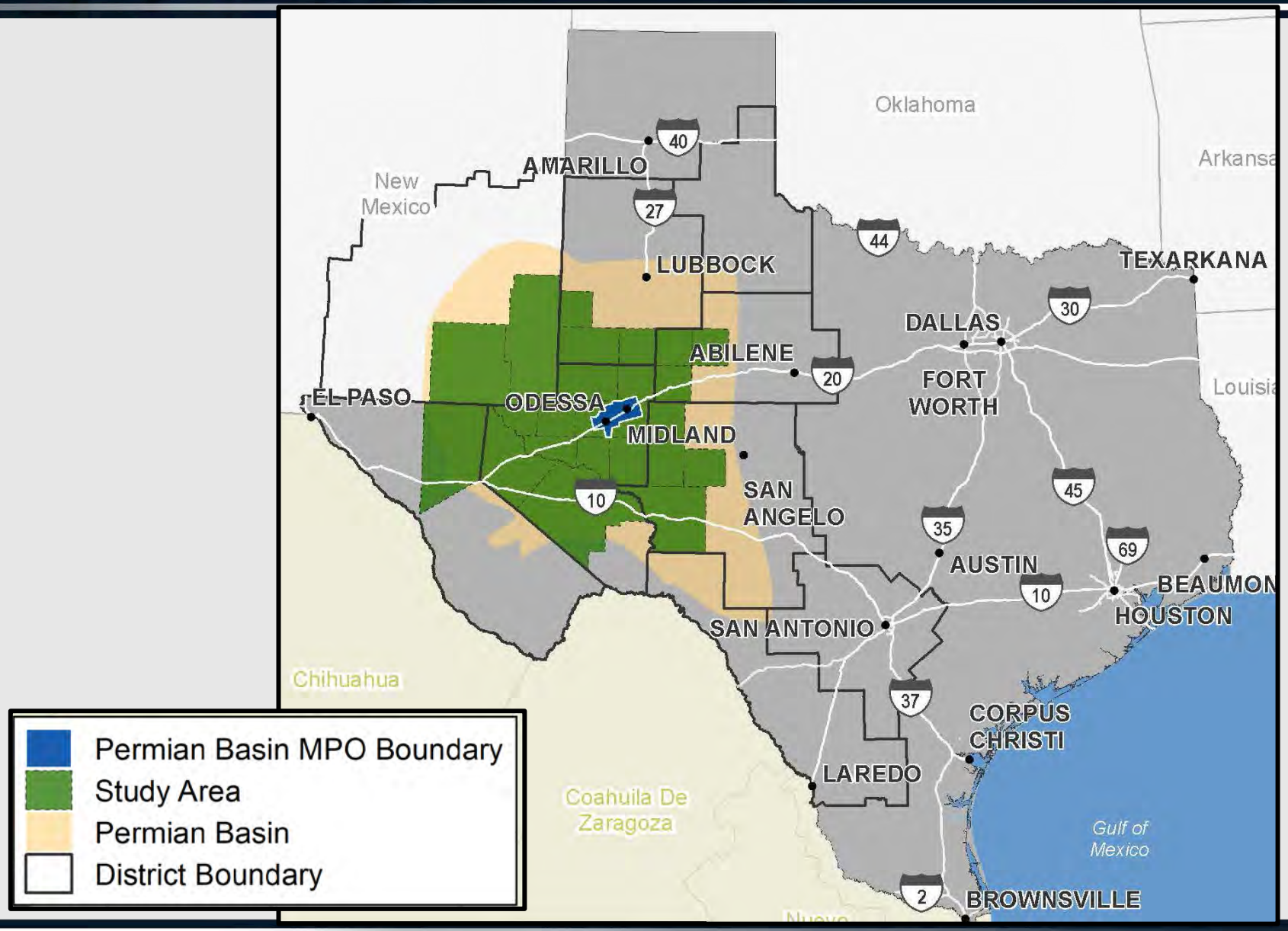
D *Develop local and regional projects, policies, and programs to improve freight movement in the Permian Basin*

Permian Basin Regional Energy Sector and Freight Transportation Plan Study Area

22 Texas Counties

2 New Mexico Counties

Permian Basin Sphere of Influence



Why a Texas Permian Basin Regional Freight Plan?

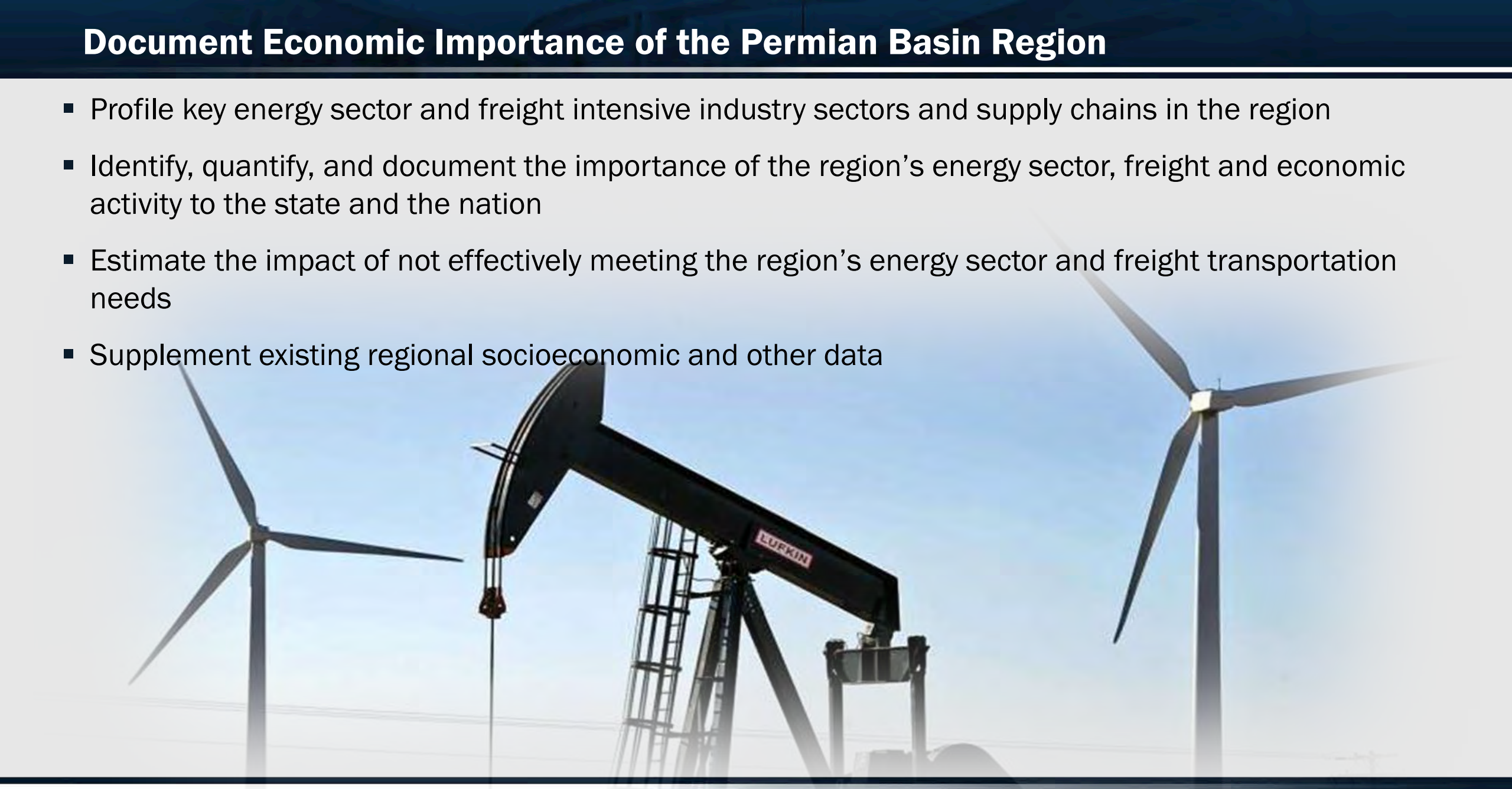
PURPOSE

Develop a multimodal regional freight plan to improve safety and mobility throughout the Permian Basin region by addressing local and regional freight challenges, opportunities, and strategies

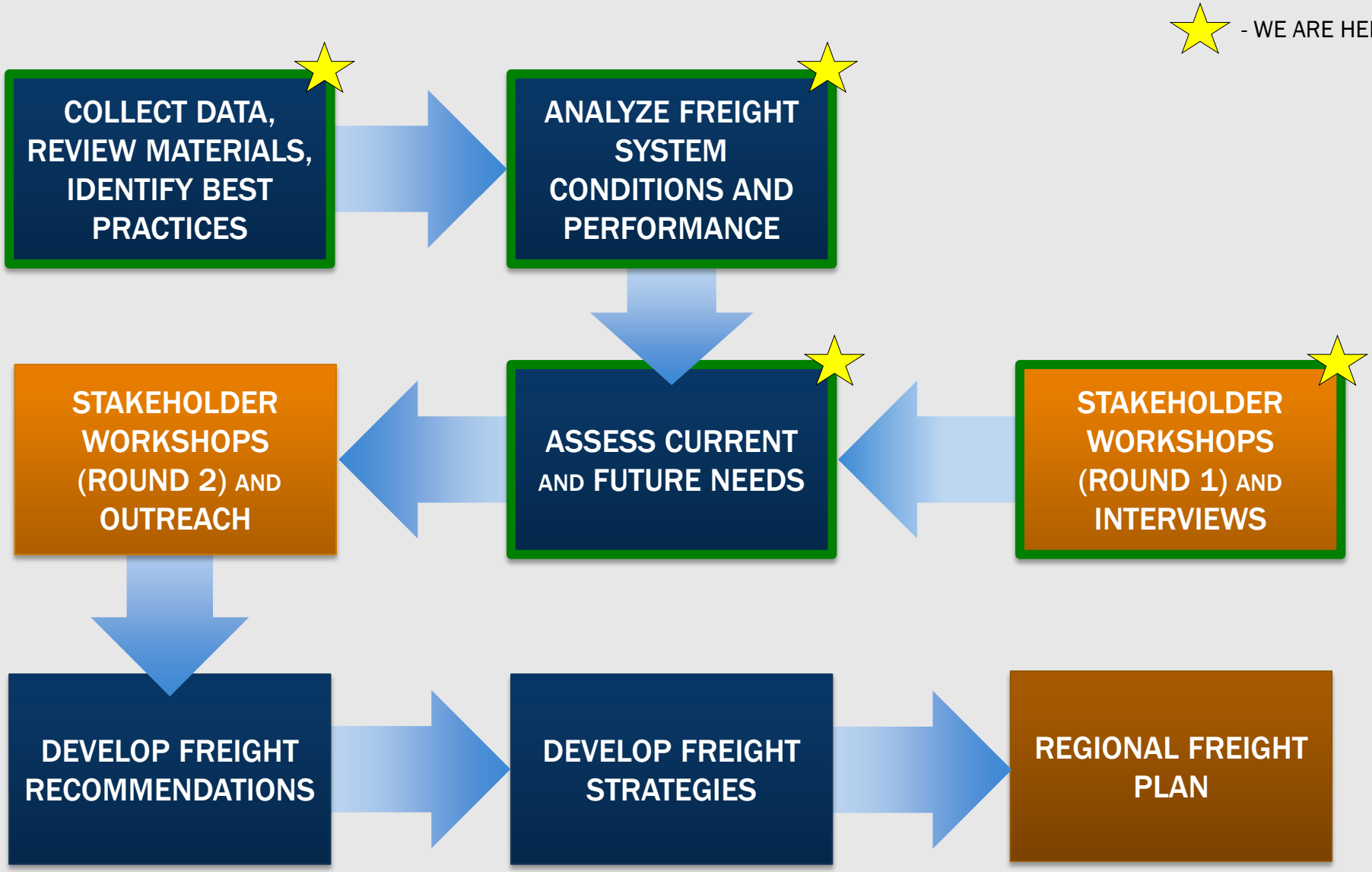
- Freight activity in Permian Basin region has significant local, state and national implications
- Region produces an average of 4.0 million barrels of oil a day (May, 2019)
- Rapid economic growth and increasing energy sector freight volumes outpacing investment
- 2,000 or more truck trips per new well are generated in the region
- Between 2010 to 2018, there was a 47% increase in the number of roadway crashes and a 64% increase in roadway fatalities
- Region generated over $4.9 billion in State revenues in 2017, accounting for nearly 10% of all state-generated general revenue

Document Economic Importance of the Permian Basin Region

- Profile key energy sector and freight intensive industry sectors and supply chains in the region
- Identify, quantify, and document the importance of the region's energy sector, freight and economic activity to the state and the nation
- Estimate the impact of not effectively meeting the region's energy sector and freight transportation needs
- Supplement existing regional socioeconomic and other data



Plan Development Approach



Draft Plan Goals Based on State Goals and Initial Stakeholder Input

Safety	Improve the safety, efficiency, and performance of the Permian Basin region's multimodal freight system
Economic Competitiveness	Improve the contribution of the energy sector transportation system for economic competitiveness, productivity, and development in the Permian Basin region and beyond
Mobility and Reliability	Reduce congestion and improve system efficiency and performance on the Permian Basin region's transportation system
Connectivity	Improve urban and rural system connectivity between all freight modes within the Permian Basin region and all industry sectors to regional, statewide, national, and international markets
Sustainable Funding	Identify and sustain funding sources for the energy sector's and Permian Basin region's freight transportation system
Stewardship	Manage environmental and agency resources responsibly and foster accountability and transparency in decision-making
Customer Service	Engage public and private sector stakeholders in transparent dialogue to determine consistent and comprehensive regional transportation planning strategies and recommendations
Asset Preservation	Maintain and preserve the Permian Basin's transportation infrastructure that supports multimodal movement of energy sector freight, goods and people

Draft Plan Objectives Based on Initial Stakeholder Input

1. Supplement state freight data with local and regional freight and traffic data collection specific to energy sector activity
2. Identify and assess the critical regional transportation network serving energy sector needs currently and in the future
3. Enhance regional freight forecast and travel demand model by accounting for future energy sector traffic, trends, and activity
4. Support identification of policies, programs and projects to address energy sector freight activity for inclusion in the Plan
5. Document the impact of Permian Basin freight movement to local, state, and national economies
6. Improve connectivity and mobility between urban and rural areas and from the Permian Basin to the rest of the state and nation
7. Develop short and long term strategies for enhancing regional freight mobility, connectivity, and safety on the local and regional transportation system

STAKEHOLDER OUTREACH

Stakeholder Engagement

KEY ACTIVITIES

- Stakeholder kickoff meeting held May 31
- Engage and coordinate with Permian Basin Regional Freight Plan Advisory Committee
- Conduct stakeholder interviews (40)
- Administer and analyze stakeholder surveys
- Coordinate with MPO committees and New Mexico Department of Transportation
- Conduct stakeholder listening sessions (2 rounds)

Stakeholder Interviews

Public

- TX Department of Transportation
- NM Department of Transportation
- Metropolitan Planning Organization
- Regional Planning Commission
- Cities
- Counties
- Economic Development
- Federal Agencies
- State Agencies
- Maritime Ports
- Border Trade Advisory Committee

Private

- Industry Groups / Associations
- Oil / Gas Companies
- Sand / Water / Supplies
- Carriers (rail and truck)
- Freight facility operators
- Shippers and receivers of freight, including non-ES
- Warehouse and distribution centers
- Logistics service providers
- Public resources / services
- Developers
- Chamber of Commerce

Interviews conducted to date

Challenges Identified by Stakeholders to Date

Energy sector activity is projected to have sustained growth in the region for decades

Plan needs to serve as the singular strategic transportation vision for the region, be locally driven and championed, and informed by stakeholder outreach and current, accurate data

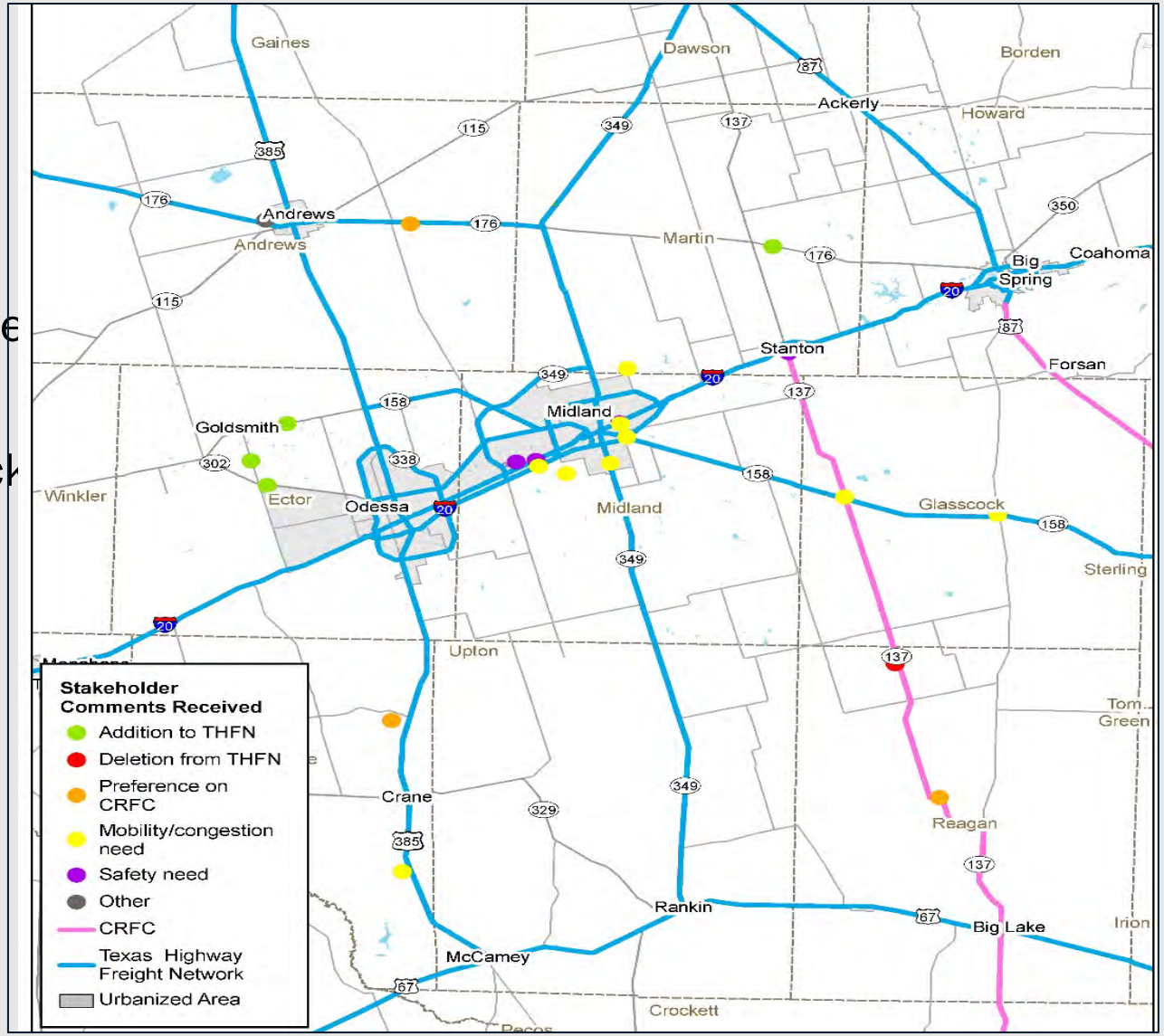
Safety and access/connectivity for community resources (emergency, education, etc.) are the major transportation concerns, mostly due to driver behavior, aging infrastructure, and inadequate capacity and design

Private sector eager to come to the table to help with data collection and identification of strategies

Key infrastructure issues include lack of capacity, lack of shoulders and pull offs, 2-way frontage roads, lack of or inadequate acceleration / deceleration lanes, narrow lanes, lack of truck parking, incident clearance and at-grade rail crossings –302 and Loop 285 most mentioned routes

Challenges Identified by Stakeholders to Date

- Oil and gas movements are increasing significantly and infrastructure is not keeping pace
- Connectivity to freight generators needs to be improved
  - Many existing roads not designed to carry the size and volume of trucks
  - Newer areas of freight intensive development lack connectivity, leading to circuitous routes
- Lack of north/south connectivity
- Access to I-20 is impeded by lack of connections and/or design of connectors
- High incident of truck involved crashes



TxFAC Input

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- What are the key issues, challenges, and opportunities facing the Permian region?
- How does energy sector activity in the Permian Basin impact your region? The State?
- What could TxDOT learn in the Permian Basin that could be transferable to other parts of the state?

Key Deliverables

Task	Deliverables	Schedule
Technical Analysis and Reports	Stakeholder Outreach and Interviews	April – July 2019 and January – March 2020
	Energy Sector / Freight Data Collection	July 2019
	Multimodal Energy Sector / Freight Transportation Network	July 2019
	Economic and Commodity Flow Profile and Forecast	November 2019
	Land Use and Needs Assessment	December 2019
	Energy Sector / Freight Strategies and Recommendations	January 2020
	Freight Analysis Tool	March 2020
	Investment Plan and Implementation Program	April 2020
	Economic Importance and Impact of Energy Sector Memo	May 2020
	Final Plan and Executive Summary	June 2020

Next 90 Days

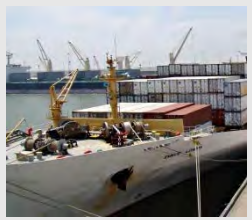
Technical Analysis

- Collect data from public and private sources
- Regional freight network and needs assessment
- Develop economic and commodity flow profile

Stakeholder Outreach

- Round 1 stakeholder outreach events (week of July 29, 2019)
  - Listening sessions and Industry forums
- Online survey (August 2019)
- Plan Advisory Committee (September 2019)
- Complete stakeholder interviews






TEXAS FREIGHT MOBILITY PLAN IMPLEMENTATION- REGIONAL FREIGHT PLANNING, ECONOMIC IMPORTANCE OF FREIGHT AND FREIGHT PLANNING TOOLS AND TRAINING

Texas Freight Advisory Committee

July 11, 2019

RIO GRANDE VALLEY REGIONAL FREIGHT AND TRADE TRANSPORTATION PLAN

2018 Texas Freight Mobility Plan Identified the Need to…

A *Better identify local and regional bi-national freight movement and needs in the Rio Grande Valley (RGV) region*

B *Identify regional transportation network critical to serving bi-national trade in the RGV region*

C *Communicate the economic importance of cross border freight movements in the RGV region*

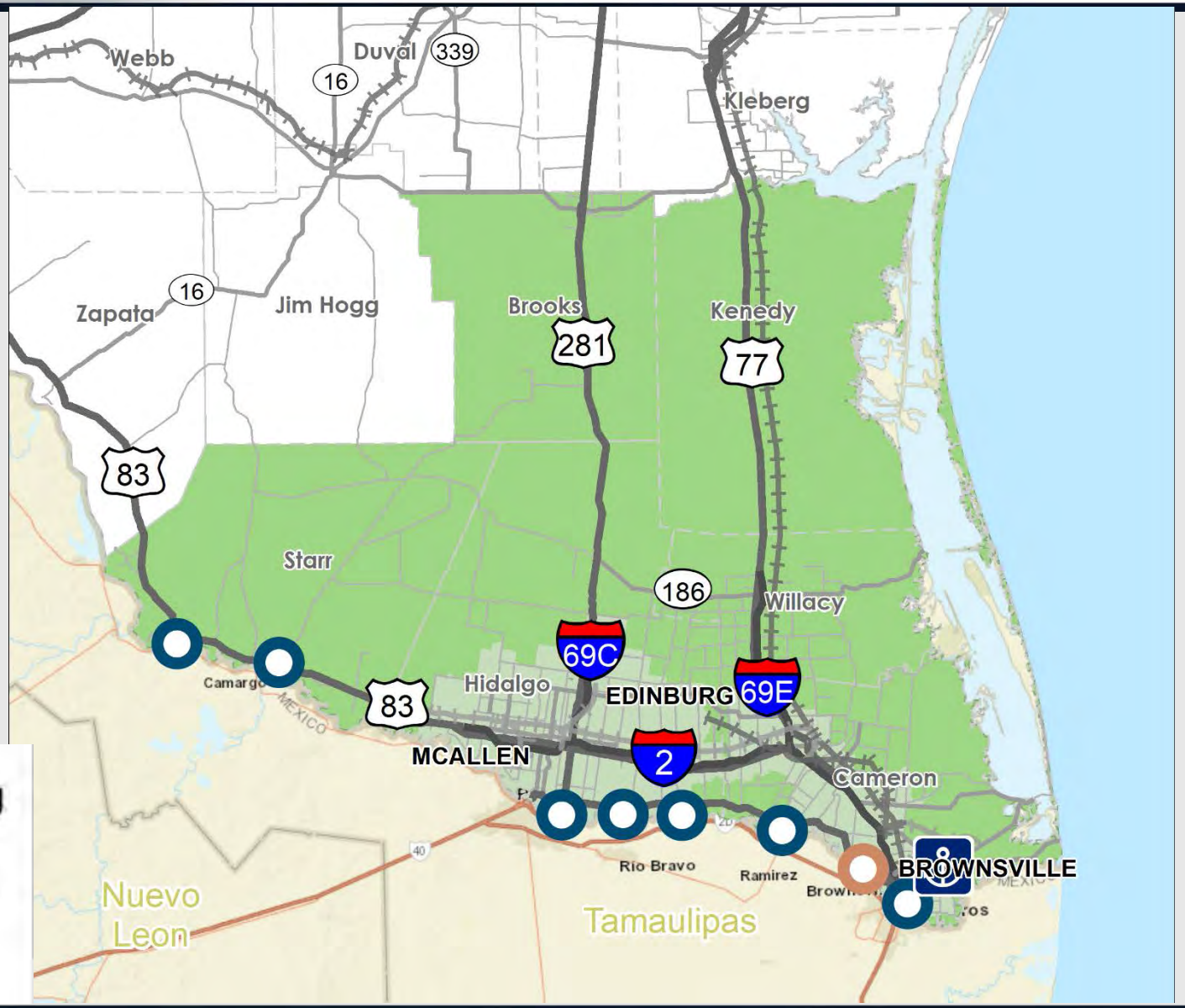
D *Develop local and regional projects, policies, and programs to improve regional freight movement*

Rio Grande Valley (RGV) Freight and Trade Transportation Plan Study Area

6 Texas Counties

Hidalgo, Willacy, Cameron, Starr, Brooks, and Kenedy

Rio Grande Valley Sphere of Influence



Why a RGV Regional Freight and Trade Transportation Plan?

PURPOSE

Develop a multimodal regional freight and trade transportation plan to improve safety and mobility throughout the Rio Grande Valley region.

The Rio Grande Valley became Texas' fifth largest metropolitan region in 2015

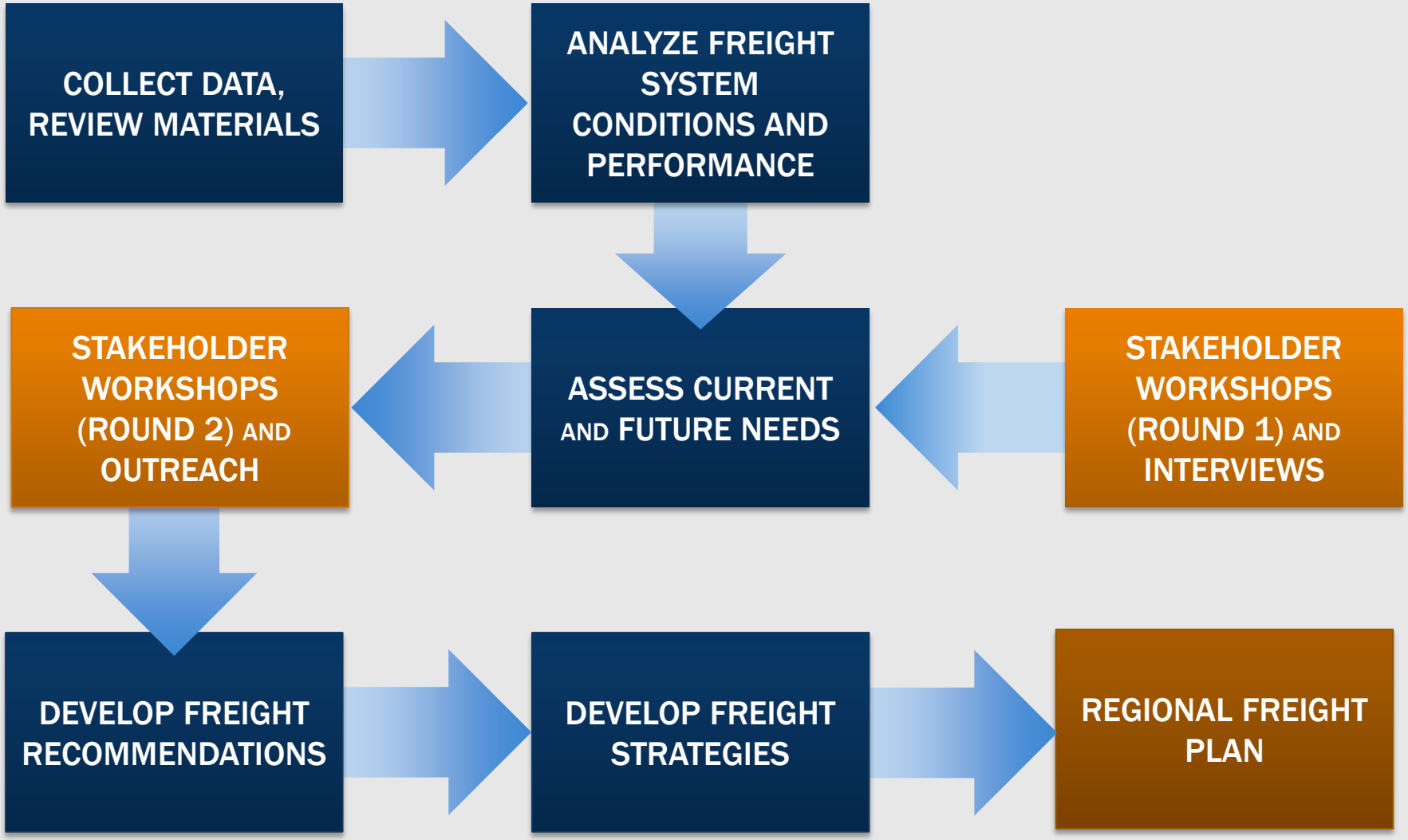
Texas ranks first among U.S. states trading with Mexico, and the RGV has two of the top ten trading ports accounting for over $17.6 billion in 2018

Through April 2019, trade across Pharr International Bridge rose 4.48 percent to $11.8 billion

In 2018, 999,326 trucks and 937 trains crossed into the U.S. via an RGV crossing. That's a 10-year increase of 28% (trucks) and 7% (trains)

RGV Plan Development Approach

Kickoff: September 2019



TxFAC Input

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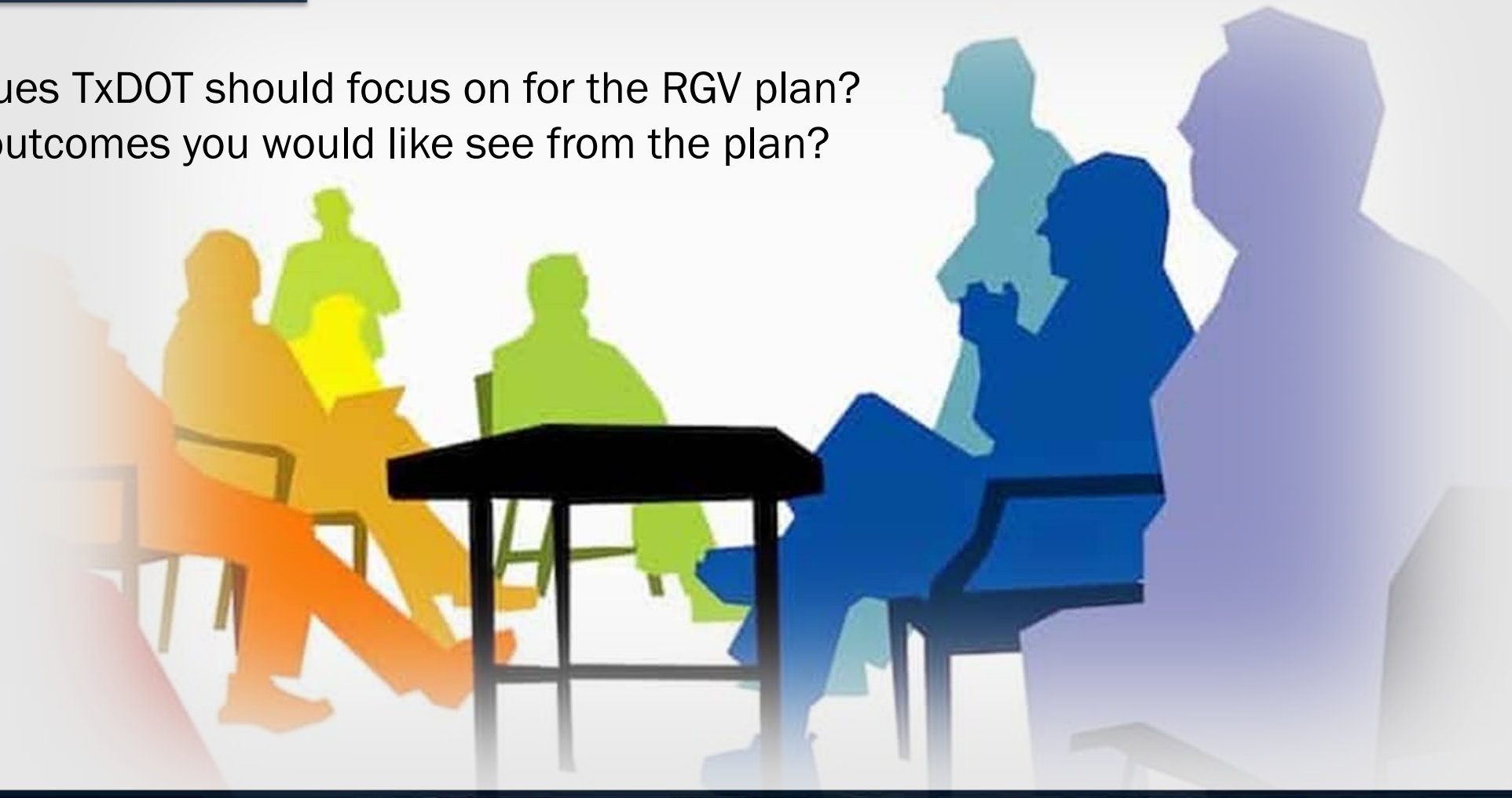
- What are the key issues TxDOT should focus on for the RGV plan?
- What are some key outcomes you would like see from the plan?



Stakeholder Engagement

KEY ACTIVITIES

- Develop and engage an RGV Freight Plan Advisory Committee
- Conduct stakeholder interviews (30)
- Administer and analyze stakeholder surveys
- Coordinate with MPO committees
- Conduct stakeholder listening sessions (2 rounds)

Key Deliverables

Task	Deliverables	Schedule
Technical Analysis and Reports	Kick-off Meeting	September 12, 2019
	Freight Data Collection	January 2020
	Stakeholder Outreach and Interviews	October 2019 to February 2020
	Regional Multimodal Freight Network	March 2020
	Regional Economic and Commodity Flow Profile and Forecast	May 2020
	Regional Land Use and Needs Assessment	May 2020
	Regional Freight Strategies and Recommendations Memo	October 2020
	Regional Freight Analysis Tool	October 2020
	Regional Freight Investment Plan and Implementation Program	November 2020
	Economic Importance and Impact Memo	November 2020
	Regional Freight Plan and Executive Summary	December 2020

ECONOMIC IMPORTANCE OF FREIGHT IN TEXAS

2018 Texas Freight Mobility Plan Identified the Need to…

A *Better capture local, regional, state, national, and bi-national multimodal freight and economic data*

B *Invest in transportation infrastructure critical to moving freight and supporting the state's economy*

C *Communicate the economic importance of multimodal freight mobility to the Texas economy to increase public awareness*

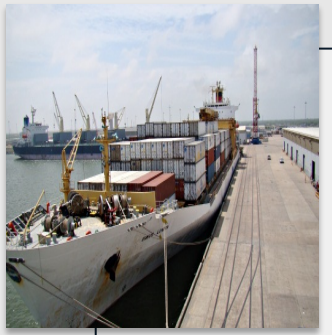
D *Incorporate economic assessment into the freight investment prioritization process*

Economic Importance of Freight in Texas

1. *Statewide perspective*
2. *TxDOT District perspectives*
3. *Texas Triangle perspective – San Antonio, Austin, Dallas-Fort Worth, & Houston*
4. *Corridor perspectives*
5. *Cross-border trade perspective*
6. *Modal perspectives*

Modal and Industry Perspectives

Railroads

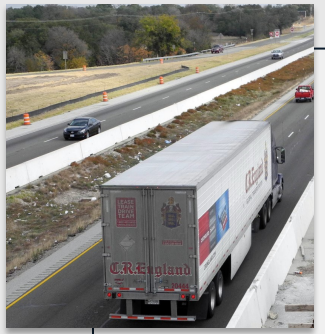


Ports and Waterways

Air Cargo

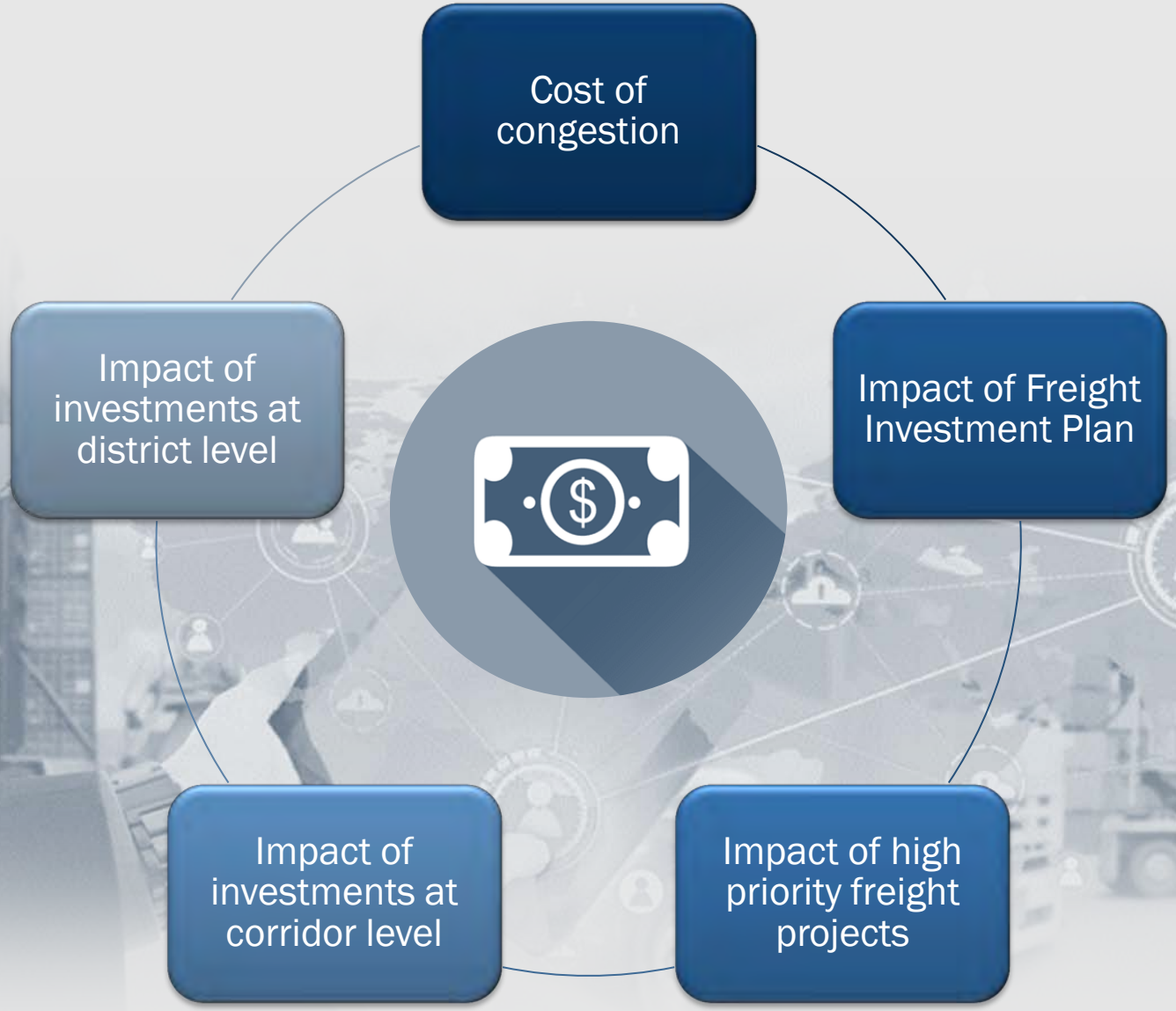
Pipelines

Warehousing/ Distribution



Trucking

Economic Implications of Freight Investments



Economic Impact of E-Commerce in Texas Triangle

- Sales
- Trends
- Commodities
- Transportation Impact

- Application developers
- Fulfillment centers
- On-line retailer support
- Brick and mortar

- Transportation demand
- Transportation costs
- Retail sales and prices
- Gross State Product
- Employment & income
- Tax revenue

TxFAC Input

www.menti.com

- What would you like to see as an outcome for this effort?
- Is there anything you would NOT want to see this effort address?

Stakeholder Engagement

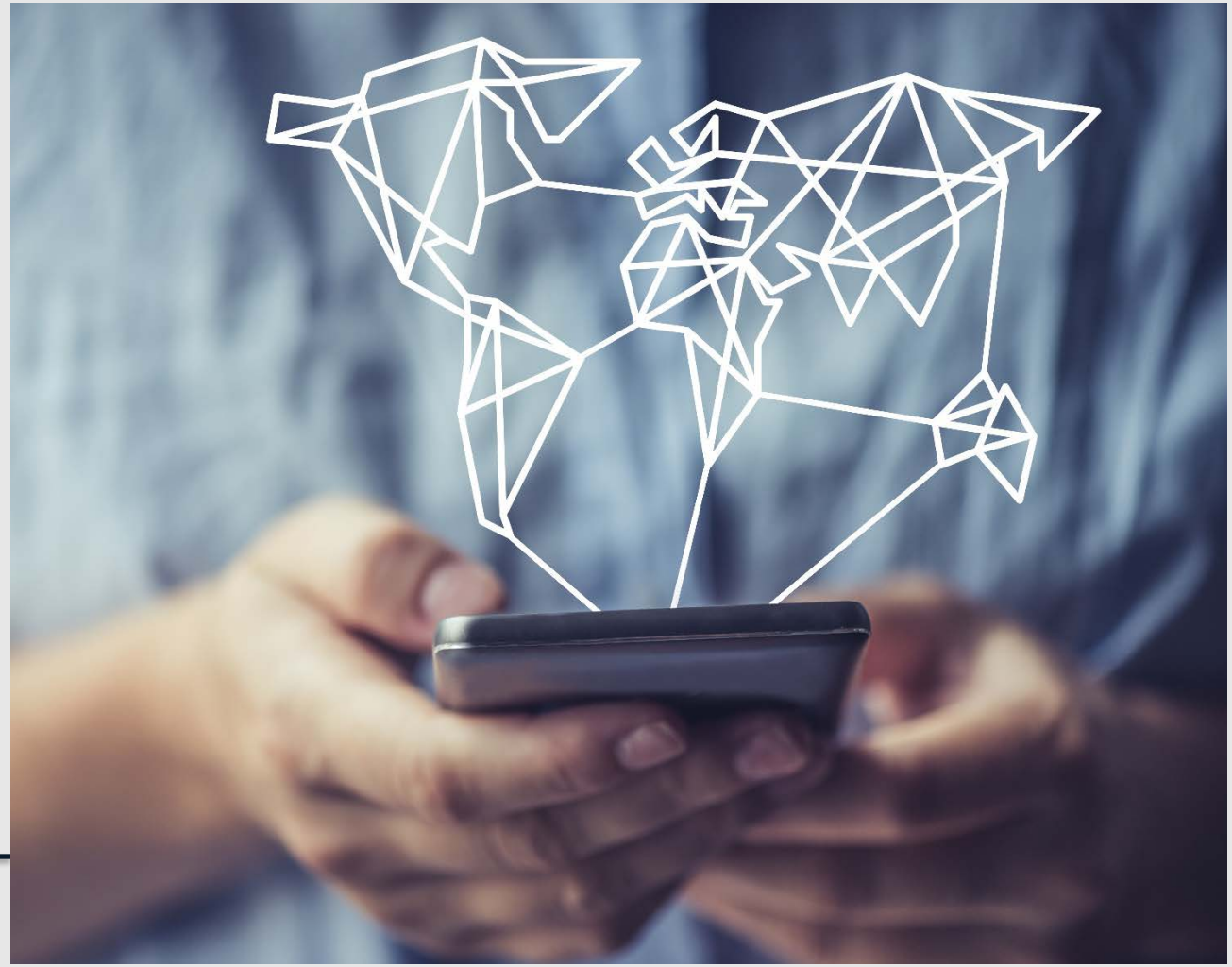
KEY ACTIVITIES

- Convene Freight and Economics Working Group
- Engage and coordinate with modal stakeholders
- Conduct Texas public agency meetings
- Develop series of fact sheets

Key Deliverables

Task	Deliverables	Schedule
Technical Analysis and Reports	Kick-off Meeting	August 21, 2019
	Modal Stakeholder Outreach and Interviews	September – October 2019
	Methodology and Data Collection	December 2019
	Economic Role of Freight on State, Districts, Corridors and Texas Triangle	April 2020
	Economic Impact by Mode	June 2020
	Economic Impact of Cross Border Trade	August 2020
	Economic Cost of Congestion	November 2020
	Economic Impact of Freight Investments	November 2020
	Economic Impact of E-commerce	November 2020
	Final Report	January 2021

FREIGHT PROGRAM IMPLEMENTATION: FREIGHT PLANNING FRAMEWORK AND TRAINING



Key Policy and Program Recommendations for 2018 TFMP

- Develop and administer comprehensive multimodal freight planning program to improve freight transportation network in Texas
  - Strategies
  - Policies
  - Methodologies
  - Planning framework
  - Data
  - Training
- Integrate freight into TxDOT investment decision making process
- Educate and build awareness on importance of freight to Texas

Overview of Implementation Framework and Training

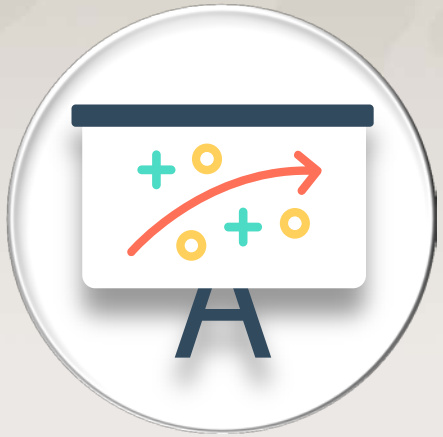
PURPOSE

To develop a customized computer-based freight investment optimization (FIO) tool for implementing the Texas Freight Mobility Plan (TFMP) and to develop freight training for State staff and planning partners

- Stakeholder engagement planning and execution module
- Freight network identification and assessment (FNIA) module
- Freight flow forecasting and scenario planning (FFSP) module
- Freight investment assessment and prioritization (FIAP) module
- Up to four freight training courses

Stakeholder Engagement Module

Who?
(Address Book)



How?
(The Plan)

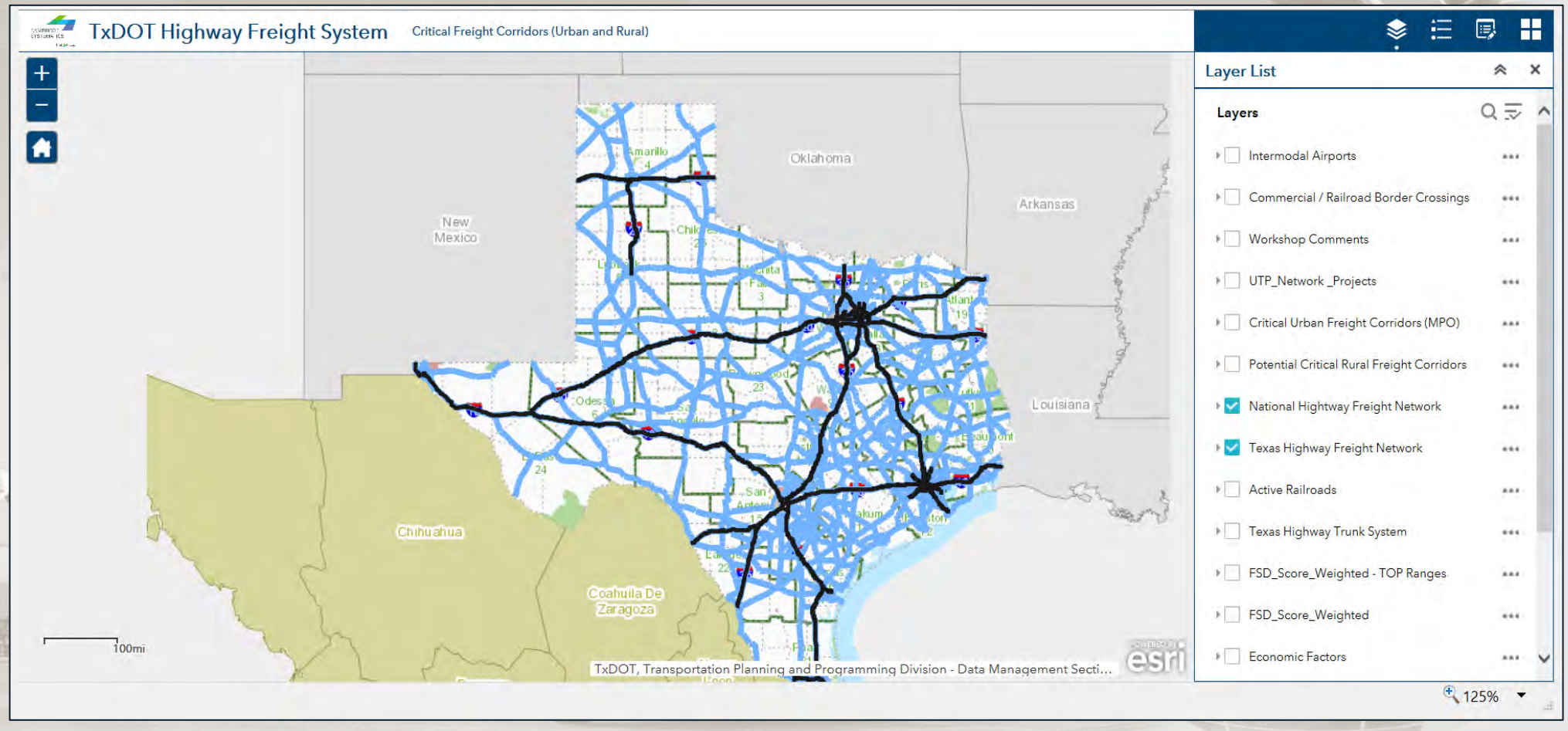
When?
(Scheduler)

What?
(Materials)

Why?
(Stakeholder Input)

Freight Network Identification and Assessment Module

- Update and enhance system developed as part of the 2018 TFMP
  - Expanded designation criteria
  - Latest data



Freight Flow Forecasting and Scenario Planning Module

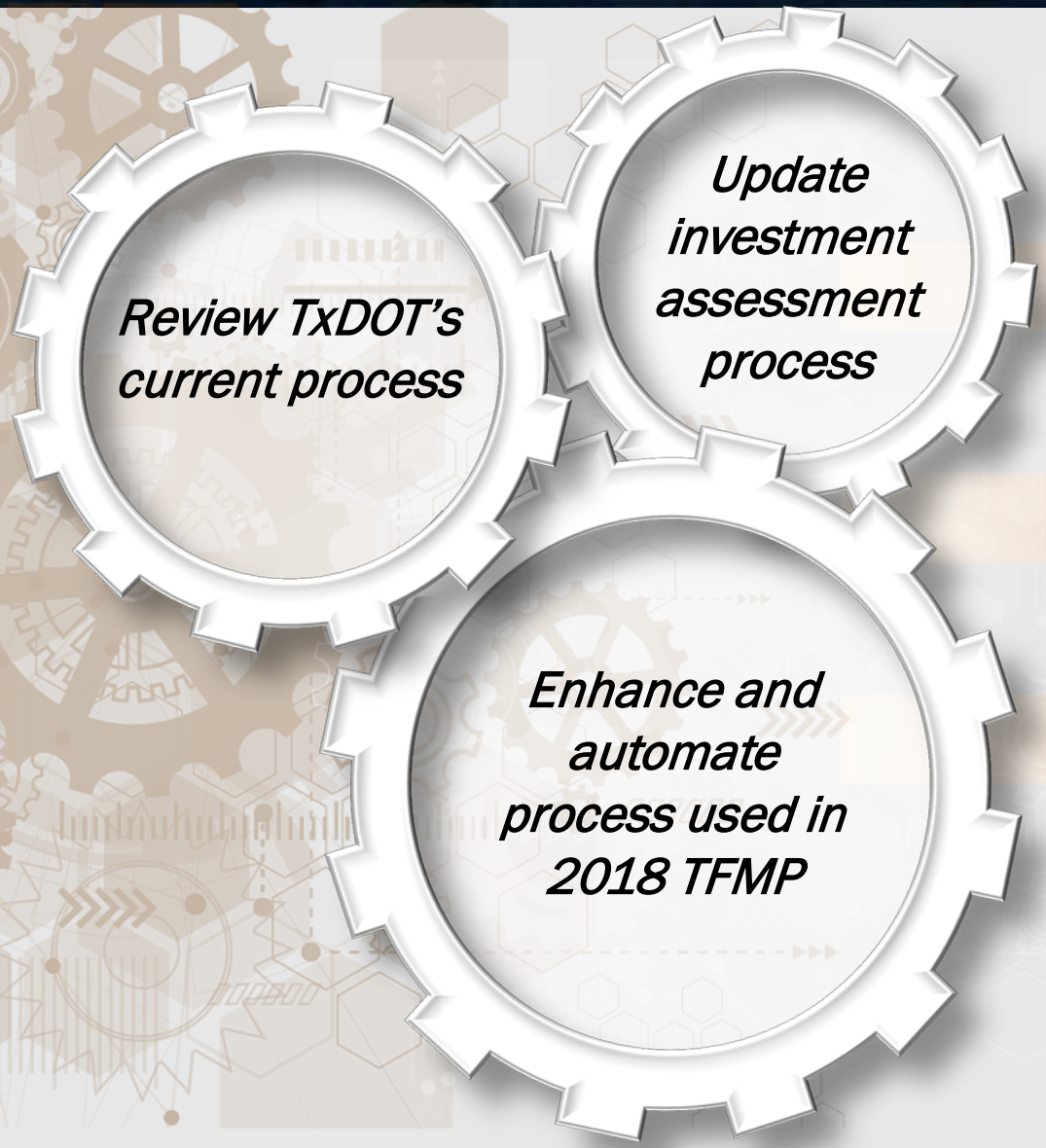
Trade Flow Data

Network Capacity Analysis

Modal Economics

Alternative Futures

Freight Investment Assessment and Prioritization Module



Tie prioritization back to 2018 TFMP goals

Data-driven, stakeholder informed

Transparent and replicable process

TxFAC Input

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- What would you like to see as an outcome for this effort?
- How should TxDOT include non-highway modes in the assessments, evaluations and prioritizations?

Freight Training

Four courses with potential topics to include:

- Integrating Freight into Planning in Texas
- Engaging the Private Sector in Freight Planning
- Understanding and Using Freight Data
- Advanced Freight Planning in Texas

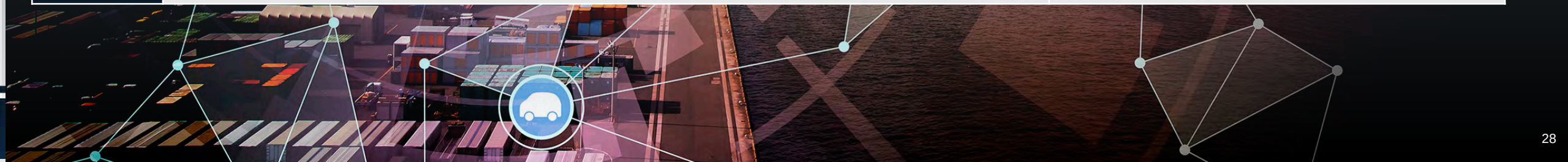
Target Audience

- TxDOT staff
- Local, regional and MPO planners
- Economic developers, Chambers of Commerce
- Private sector freight stakeholders

Other topics? Other audiences?

Key Deliverables

Task	Deliverables	Schedule
Technical Analysis and Reports	Kick-off Meeting	August 21, 2019
	FREIGHT PLANNING FRAMEWORK	
	Stakeholder Engagement Module	June 2020
	Freight Network Identification and Assessment Module	June 2020
	Freight Flow Forecasting and Scenario Planning Module	October 2020
	Freight Investment Assessment and Prioritization Module	November 2020
	Freight Investment Optimization Tool	February 2021
	TRAINING	
	Freight Training Pilot Courses	May to September 2020
	Final Freight Training Course Materials and Delivery	December 2020 to April 2021




Discussion