Agenda

- Introductions
  - (Enter name and agency into chat box)
- Existing and Emerging Trends
- System Analysis
- Vision and Goals
- Schedule & Next Steps

OKLAHOMA Transportation

Help Shape Oklahoma's Transportation Future!

ODOT is developing the 2025-2050 Long Range Transportation Plan to guide the future of highways, bridges, public transit, waterways, rail, airport access and pedestrian/bike paths.

Your input matters!

Scan the QR Code to share your transportation priorities.

oklongrangeplan.org

Attendees

1. Dawn Sullivan, ODOT Deputy Director
2. Sarah McElroy, ODOT Multi-Modal & Planning
3. Alex Calvillo, ODOT Maintenance
4. Alex Couch, ODOT GIS
5. Andrew Underkoffler, TSET
6. Brandon Dungeon, ODOT Project Management
7. Brock Spencer, and Payton Herron, NODA/NORTPO
8. Chelley Hilmes, ODOT CFO
9. Clorisa Brown, COEDD/CORTPO
10. Cody Hamblin, ODOT Traffic
11. Colin Osborne, ODOT Bridge
12. Colton Snelling, ODOT GIS
13. Daniel Grisham, Tulsa Ports
14. David Yarbrough, Tulsa Ports
15. DeAngela Gaymon, Oklahoma Highway Safety Office
16. Devon Westbrook, ODOT Multi-Modal & Planning
17. Taylor Massey, Chisholm Trail MPO
18. Eric Rose, ODOT Multi-Modal & Planning
19. Ethan Nall, Devon Energy
20. Gwen Johnson, ODOT GIS
21. Janelle Ivey, ODOT GIS
22. Jared Schwennesen, ODOT Multi-Modal & Planning
23. Jason Ferbrache, Regional Transportation Authority
24. Jason Giebler, ODOT Bridge
25. Jennifer Sebesta, ACOG
26. Jesse Rush, EMBARK
27. Joe Brutsche, ODOT Environmental
28. John Sharp, ACOG
29. Jon Chiappe, OK Commerce
30. Jonathan Stone, Lawton MPO
31. Julie Sanders, Director of Transportation SORTPO
32. Katelynn Burns, ODOT Director of Government & Community Affairs
33. Kendal Nicholas, ODOT Traffic
34. Kyle Henry, SCRTPO
35. Matt Larseingue, BNSF Railway
36. Laura Chaney, ODOT Multi-Modal & Planning
37. Lauren Wood, ACOG
38. Lori Peterson, OK Railroad Association
39. Lynda Ozan, OKSHPO
40. Matt Ingham, ODOT CMV Operations
41. Oliver Skimbo, City of McAlester
42. Owen Mills, OK Water Resources Board
43. Rich Brierre, INCOG
44. Rebecca Walner, Tulsa Transit
45. Rob Endicott, Cherokee Nation
46. Roland Sison, ODOT Bridge
47. Sam Coldiron, ODOT GIS
48. Scott Marr, Metro Link Tulsa
49. Shelby Deere, Muscogee Nation
50. Stephanie Gonterman, Isaacs & Associates
51. Tamara Shepherd, FMCSA
52. Thomas Dow, INCOG
53. Tricia Martinez, Isaacs & Associates
54. Tiecy Cotton, Union Pacific Railroad
55. Tom Robins, Facilitator of Oklahoma AV Working Group and Founder of Work Zone Safe, ODOT Work Zone and Move Over Safe training for all teen drivers in Oklahoma
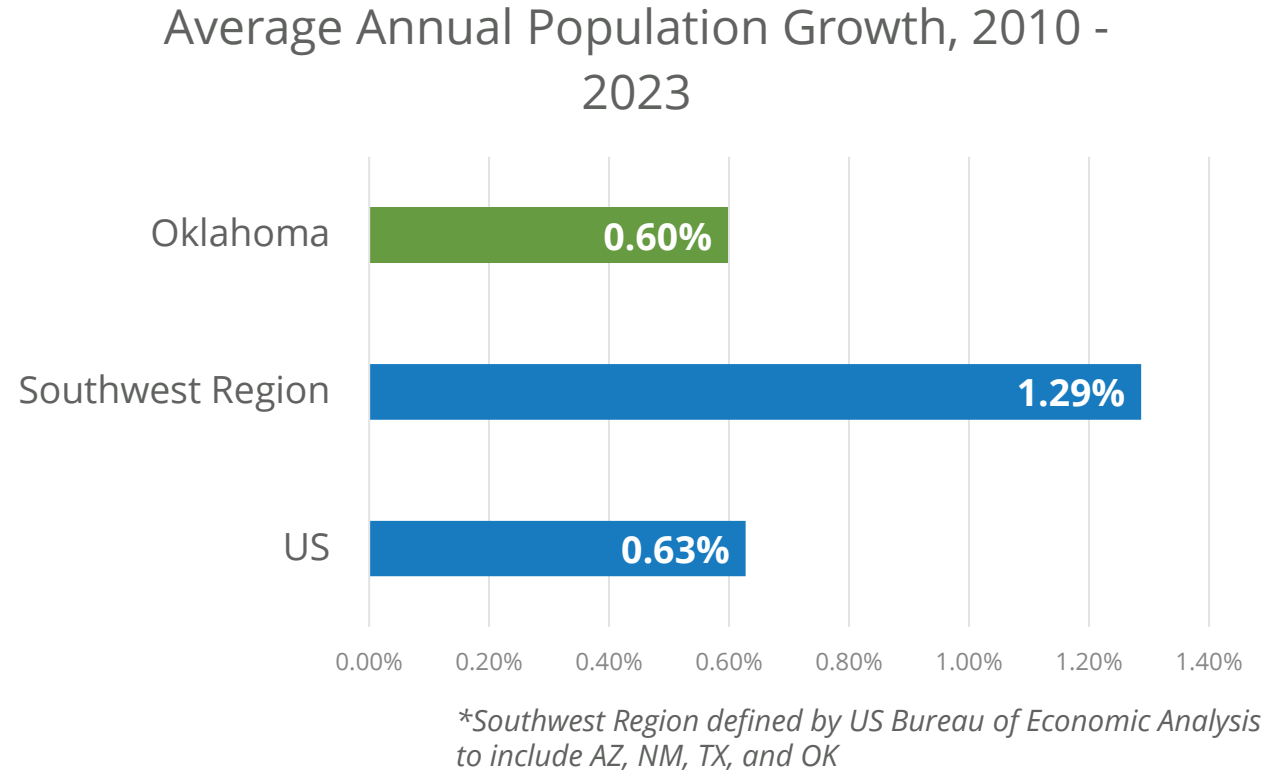
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Consultant Team

1. Jeff Carroll, High Street
2. Erin Dean, High Street
3. Rebecca Van Dyke, High Street
4. Ryan Caro, High Street
5. Matt Hawkins, High Street
6. David Moss, High Street
7. Robyn Arthur, HNTB
8. Kip Strauss, HNTB
9. Laura Davis, HNTB
10. Nahinli Billy, Poe & Associates
11. Carolyn Taylor, Jones PR

1. Existing & Emerging Trends

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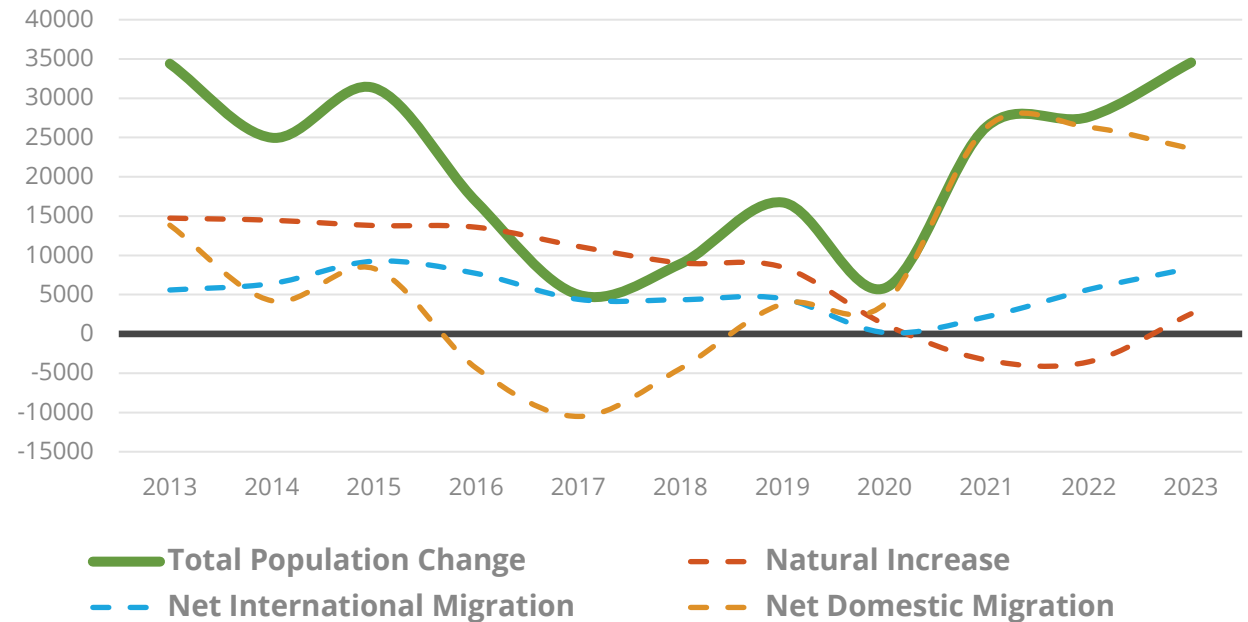Transportation

Population - Historic

- **2023 population: 4.05 million**

- State population growth has been **comparable to national rate**

- Nearby states are growing much faster, especially Texas

Average Annual Population Growth, 2010 - 2023

Oklahoma	0.60%
Southwest Region	1.29%
US	0.63%

0.00% 0.20% 0.40% 0.60% 0.80% 1.00% 1.20% 1.40%

Southwest Region defined by US Bureau of Economic Analysis to include AZ, NM, TX, and OK

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Population - Historic

- **2023 population: 4.05 million**

- State population growth has been **comparable to national rate**

- Nearby states are growing much faster, especially Texas

- **Net domestic migration** has been the primary driver of fluctuation in total population change in the last 10 years

Components of Oklahoma Population Change, 2013-2023

Legend:
— Total Population Change
- - Natural Increase
- - Net International Migration
- - Net Domestic Migration

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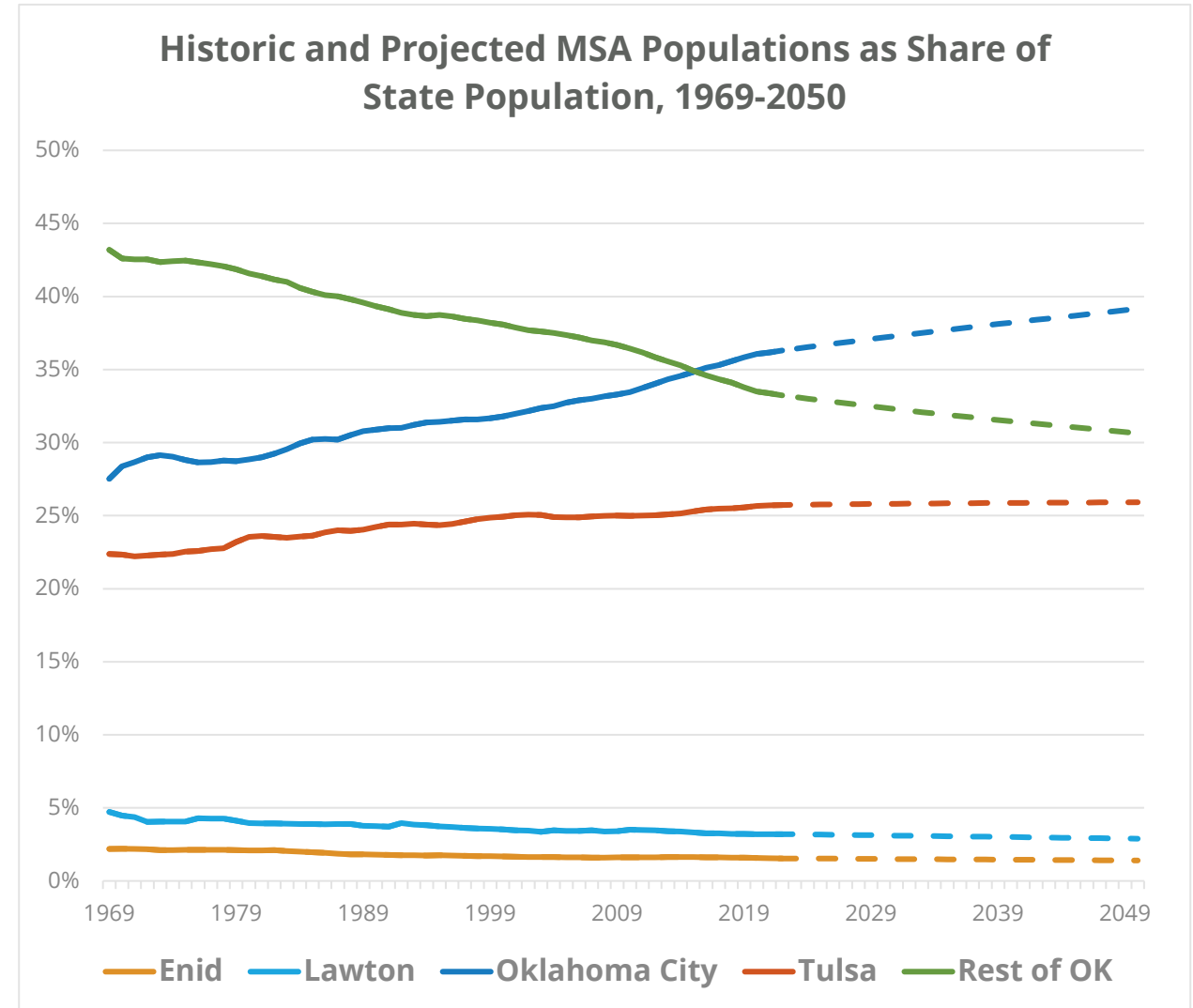
Population - Projected

- **Projected 2050 Population: 4.6 million**

- Lower rate of growth than national

- **Growth is centered in urban areas**, while rural areas are steady or declining

Projected Average Annual Population Growth, 2023-2050

Region	Growth
Oklahoma	0.47%
Southwest Region	1.06%
US	0.59%

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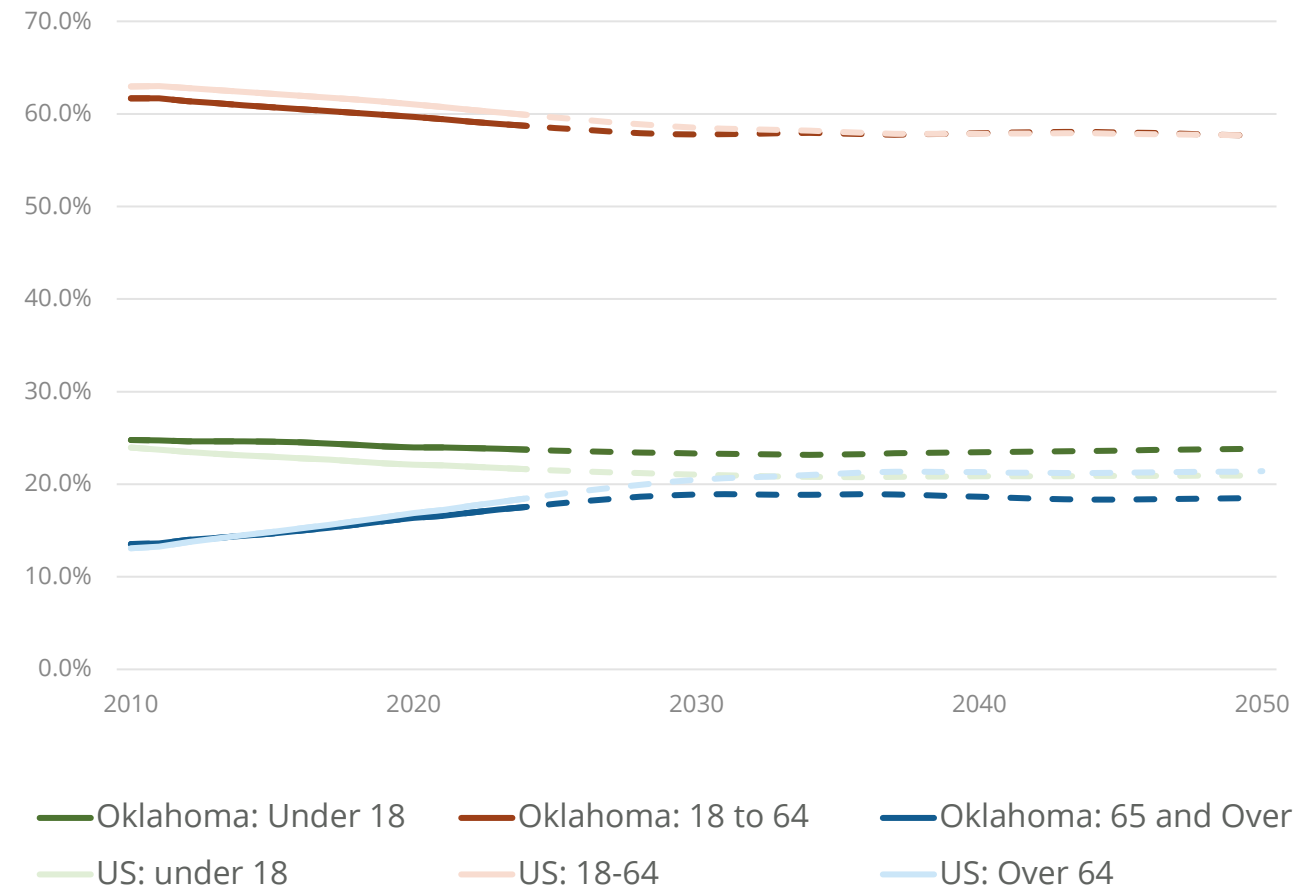Transportation
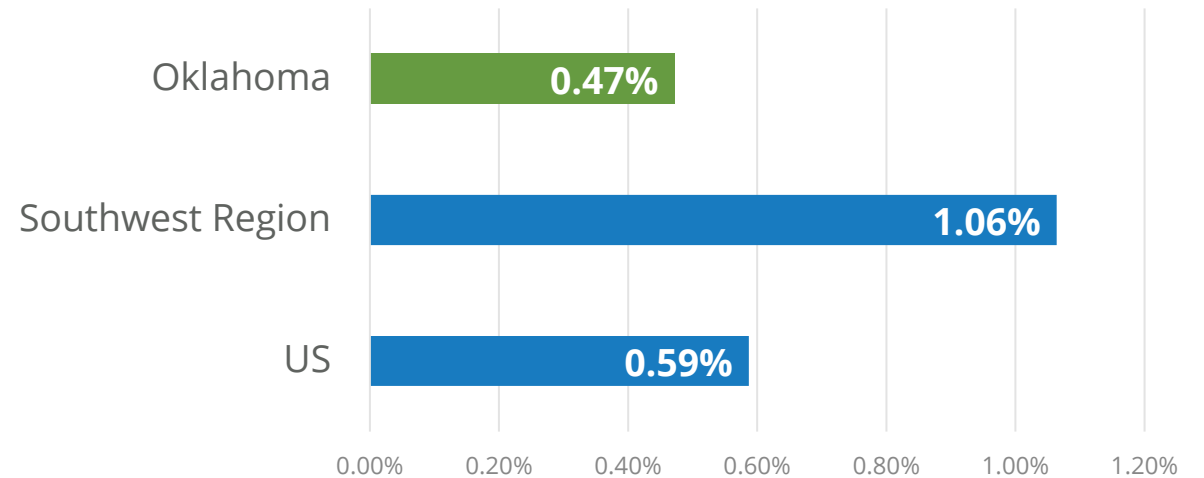
Urban/Rural Trends

- Population growth will continue to be concentrated in the **Oklahoma City and Tulsa metro areas**

- Meanwhile, **rural areas are shrinking**, while smaller cities remain steady

Historic and Projected MSA Populations as Share of State Population, 1969-2050

Legend: Enid, Lawton, Oklahoma City, Tulsa, Rest of OK

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Age Trends

- **Senior population has been rising**, but is set to level off

- Most seniors live in **rural areas**

- Older individuals are sometimes less confident drivers, and **modal alternatives can help them age in place**

Historic and Projected Share of Population by Age Group, 2010-2050

Legend:
- Oklahoma: Under 18
- Oklahoma: 18 to 64
- Oklahoma: 65 and Over
- US: under 18
- US: 18-64
- US: Over 64

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Broadband Access

- Increasingly important for accessing **healthcare, education, and employment opportunities**

- As of 2023, **9.7% of households don't have an internet subscription**
  - Higher than national rate of 7.8%
  - Down from 2018 rate of nearly 18%

- Only 61.1% of residents have the option to purchase affordable wired service

- **Rural and low-income areas are especially difficult to reach**
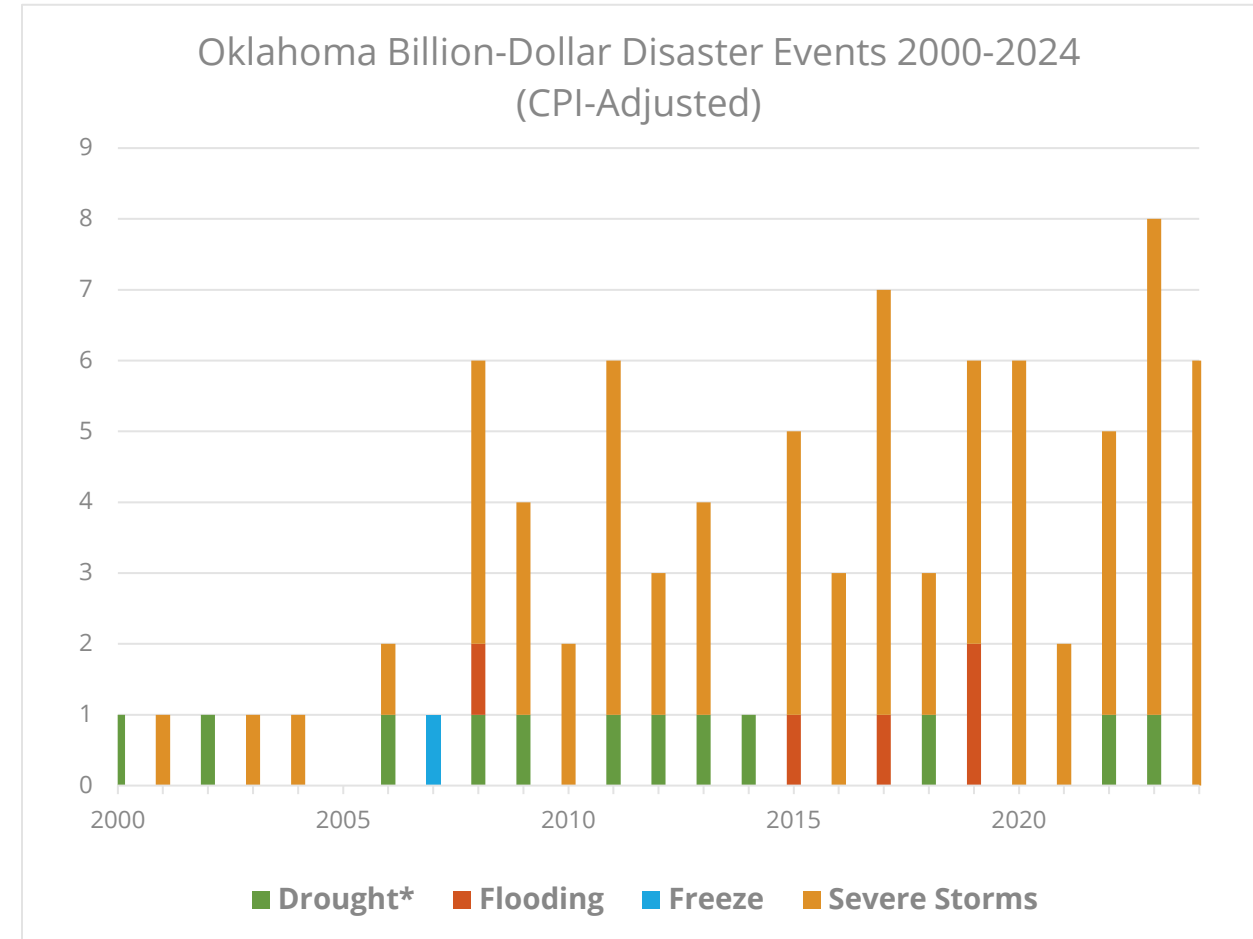
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E-Commerce

- Sales have nearly returned to all-time highs caused by Covid-19 pandemic

- Increases demand for last-mile delivery services

- Alters land use patterns as companies build out distribution centers

US E-Commerce Sales as Share of total Retail Sales
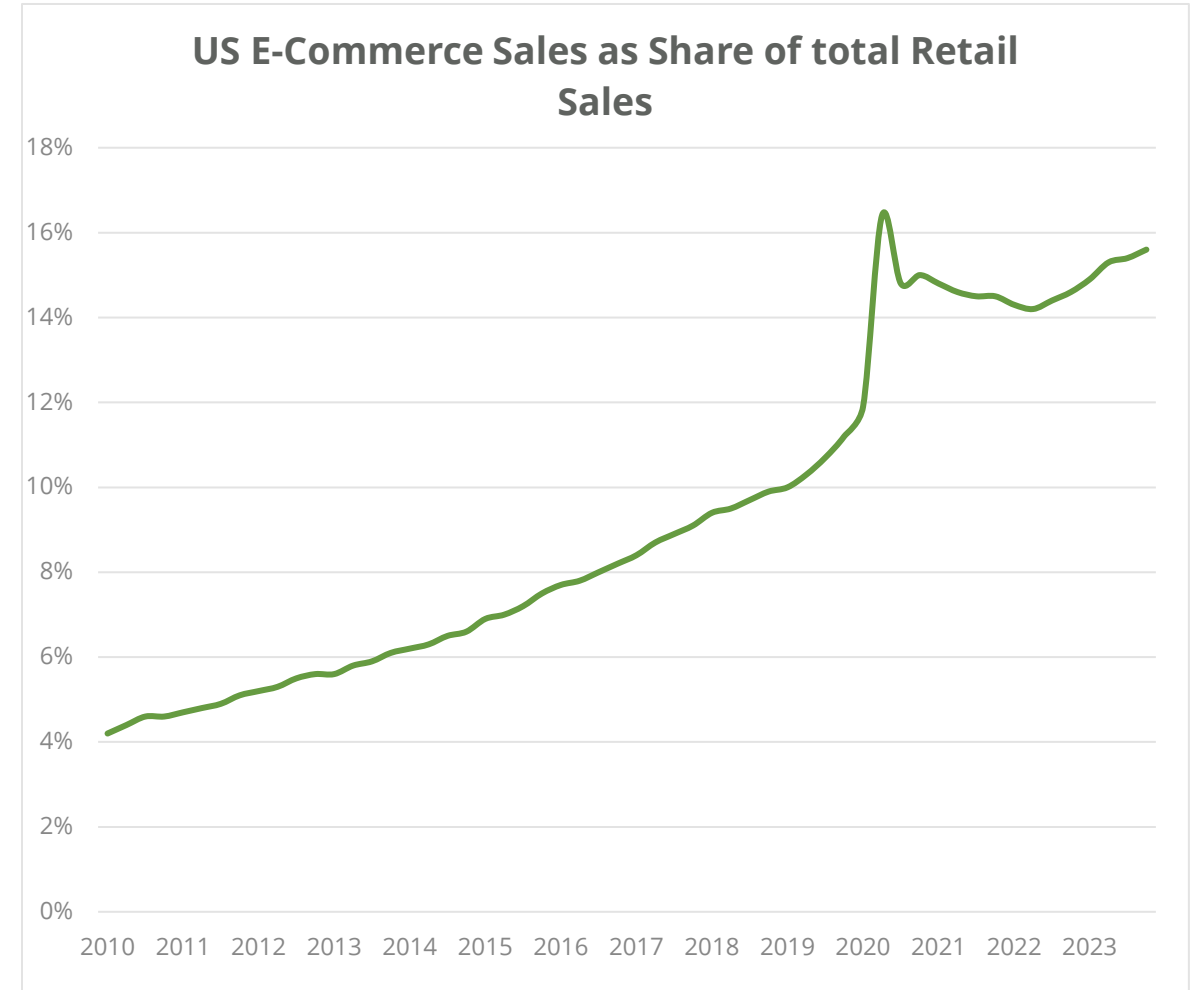
Extreme Weather

- **All forms** of **extreme weather increased** from **2000-2024**
  - Between **1980-2024** average extreme weather events **– 2.5 per year**
  - Between **2019-2023** average extreme weather events **– 5.8 per year**
  - Affects **ALL** of ODOT's assets
- Since 2014, ODOT has used **ShakeCast** to **support bridge inspections post earthquake**

Oklahoma Billion-Dollar Disaster Events 2000-2024 (CPI-Adjusted)

Legend: Drought* · Flooding · Freeze · Severe Storms

Source: National Oceanic and Atmospheric Administration (NOAA)
*Deaths associated with drought are the result of heat waves, but not all droughts are accompanied by extreme heat waves. Data was not available for the 2005.

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Emerging Trends

Advanced Mobility

Advanced mobility refers to innovation in transportation that utilizes technology to enhance safety, efficiency, and sustainability. Advanced mobility encompasses ground and air transportation systems:

- **Advanced Air Mobility (AAM):** A system of safe, affordable, and ultimately **automated low-altitude air transportation** for passengers and cargo in rural and urban areas.
- **Advanced Ground Mobility (AGM):** The development of technologies, such as AVs, machine learning, and artificial intelligence to **improve safety, reduce congestion**, and **improve** the **movement** of **people and goods.**

Oklahoma Advanced Mobility Strategy: Adopted in 2024, outlines Oklahoma's path forward through 2045 to align assets and resources for transportation innovation, economic development and workforce development. Provides a framework for policy development and implementation.

BENEFITS OF ADVANCED MOBILITY

EFFICIENCY: Optimizes transportation planning by reducing congestion, improving first-mile/last-mile services, and reducing overall transportation costs.

SAFETY: Reduces crashes and fatalities by utilizing autonomous air and ground vehicles. Additionally, AAM can be utilized to access hard to reach and hazardous areas during emergencies.

RESILENCE: Increases system resiliency and sustainability.

ACCESS: Expands transportation affordability, convenience, and reliability for all users.

ECONOMY: Improves transportation systems and efficiencies for key Oklahoma industries, attracts and diversifies industry investment and creates high-quality jobs.

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Emerging Trends

Road User Charge (RUC):

- **Motor Fuel Tax Decline**: Oklahoma's motor fuel tax is becoming **less effective** due to factors like improved **vehicle efficiency** and the rise of **electric vehicles**, leading to a projected $7.86 billion revenue shortfall by 2050.

- **Fair Miles Oklahoma Pilot**: To address revenue decreases, the RUC Task Force was created to explore per-mile fees as an alternative. The program enrolled **445 volunteers** and tested various mileage reporting methods, collecting over **1.1 million miles driven**.
  - Key takeaways include the importance of **education**, **privacy concerns**, and challenges with **out-of-state fee collection**.

- **RUC Task Force Recommendations**:
  - A **public education campaign**,
  - Transition **away** from general revenue funding,
  - Develop a **voluntary pay-per-mile program**, and
  - Pursue **federal support** for RUC implementation.

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Emerging Trends

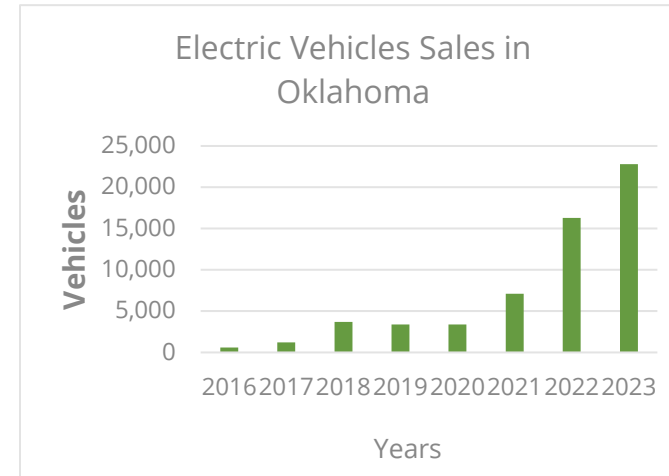## Connected and Autonomous Vehicles (CAVs)

- **CAVs**: AVs combine Vehicle 2 Vehicle (V2V) communication and autonomous driving, with adoption driven by workforce, policy, and public perception in Oklahoma.

- **Truck Platooning**: V2V technology enables trucks to travel closely, **boosting fuel efficiency** and **road capacity**.

- **CAV Infrastructure & Cybersecurity**: CAVs require substantial infrastructure investments, such as **fiber-optic cables**, **sensors**, and **communication protocols**. Meanwhile, **cybersecurity** remains a **critical concern** as more vehicles and roadside devices connect to digital networks.
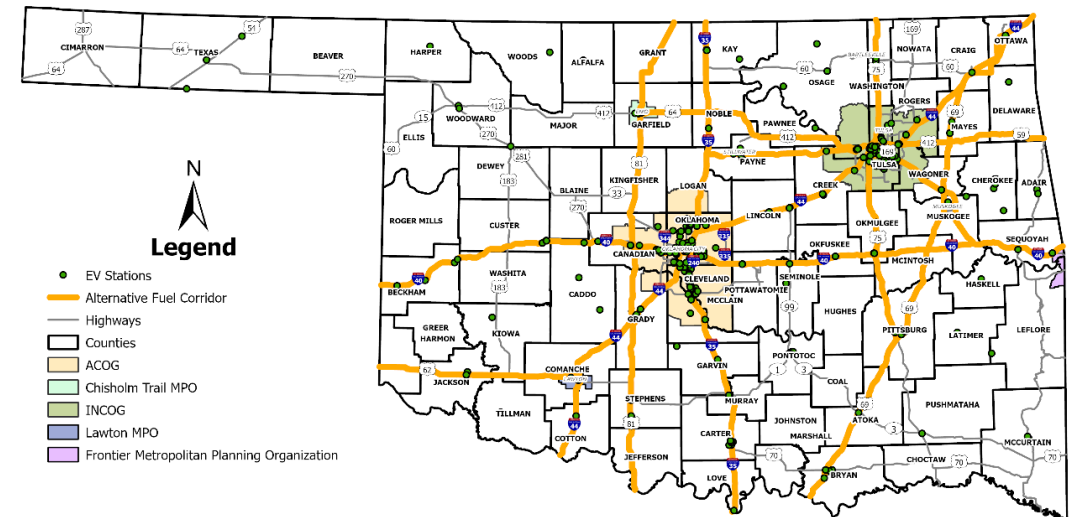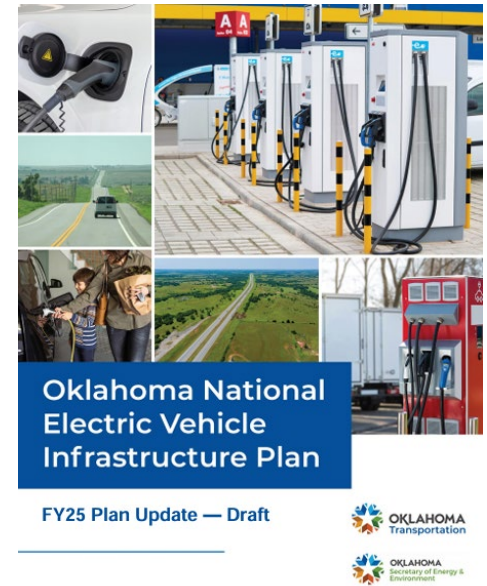
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Emerging Trends

Electric Vehicles (EVs)

- **EV Growth**: U.S. EV manufacturing has seen **$188 billion** in **investments since 2015**

- **EV Infrastructure in Oklahoma**: Through the NEVI program, OK aims to create a reliable and accessible EV charging network statewide. OK will receive **$66.3M** in NEVI **funding** between **2022-2027**

- **Implementation**: Oklahoma's 5-year NEVI plan will build chargers along highways, ensuring chargers every 50 miles on Alternative Fuel Corridor (AFC) routes.

Electric Vehicles Sales in Oklahoma

Source: *https://afdc.energy.gov/vehicle-registration*

Oklahoma National Electric Vehicle Infrastructure Plan
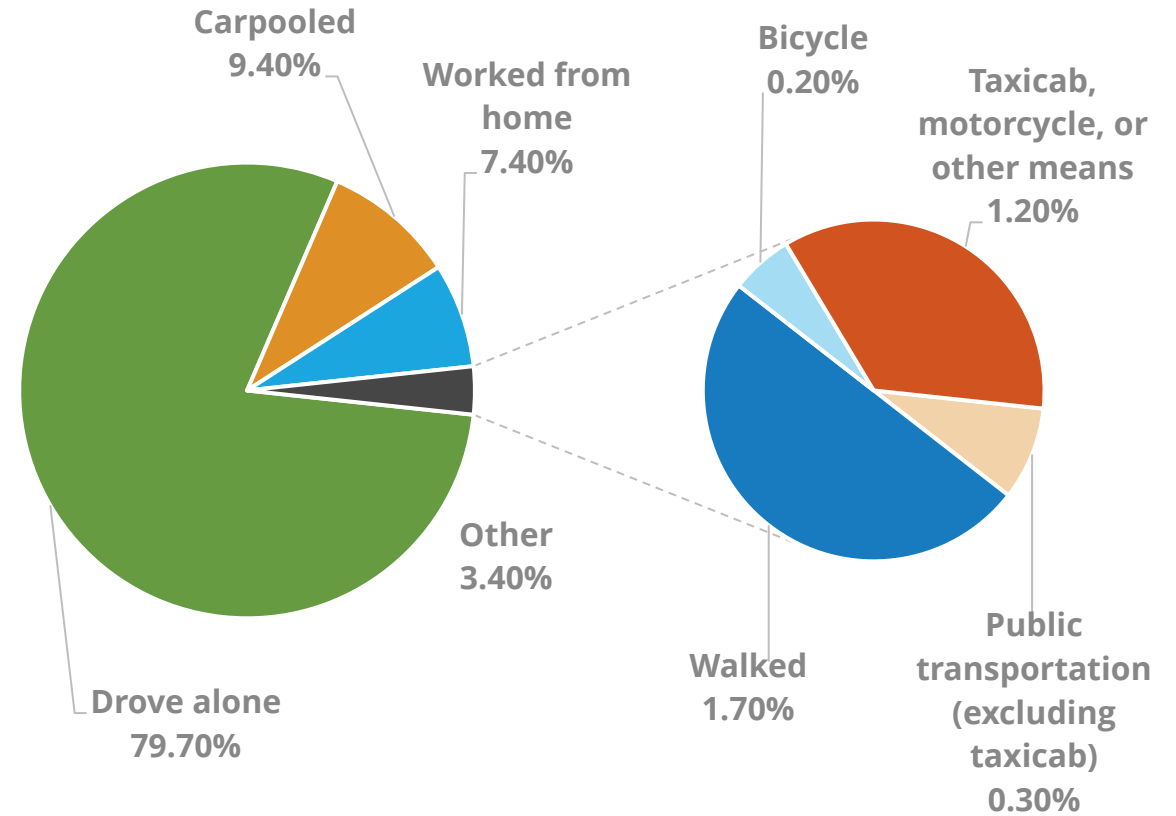
FY25 Plan Update — Draft

Source: ODOT

Commuting Patterns

- Most people use a car – over **90% drive alone or carpool**

- Rate of **working from home more than doubled** after Covid

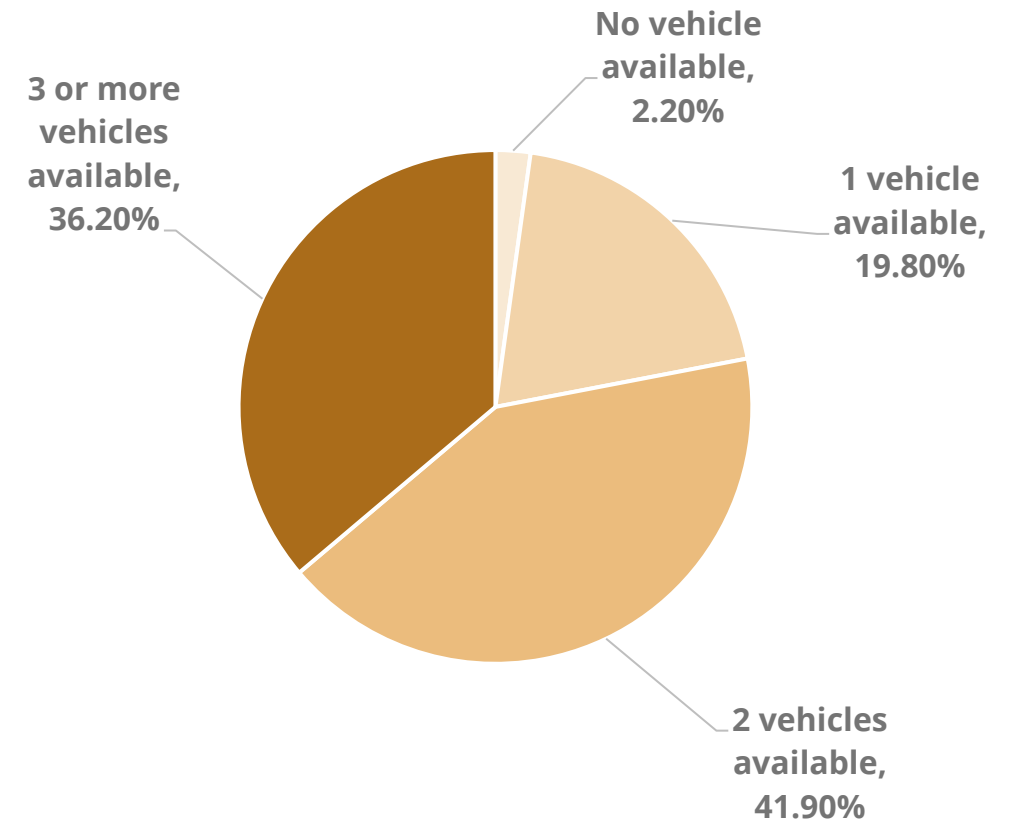- Mean commute time statewide was **22.3 minutes** in 2022

Mode Share of Oklahoma Commutes, 2022

Carpooled
9.40%

Worked from home
7.40%

Bicycle
0.20%

Taxicab, motorcycle, or other means
1.20%

Other
3.40%

Drove alone
79.70%

Walked
1.70%

Public transportation (excluding taxicab)
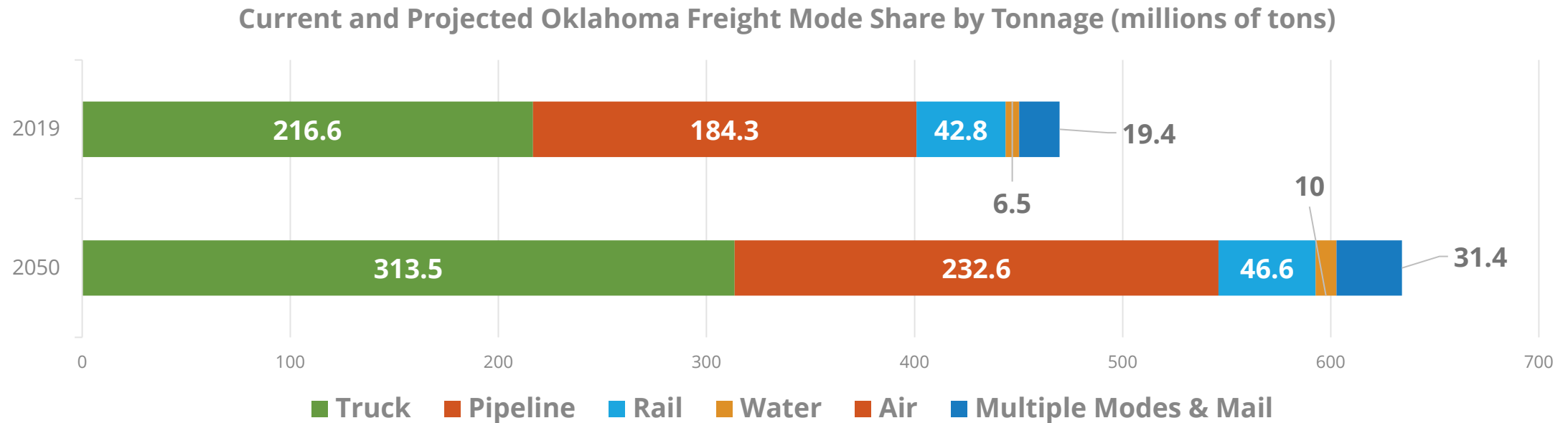0.30%

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Access to a Vehicle

- Only **2.2% of households do not have access to a vehicle**

- 78.1% have two or more

Share of Oklahoma Households by Vehicle Availability, 2022

No vehicle available, 2.20%

1 vehicle available, 19.80%

2 vehicles available, 41.90%

3 or more vehicles available, 36.20%

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Freight Mode Share

- In 2019, **469.7 million tons of freight** were handled in Oklahoma

- Projected to grow to **634.2 million tons by 2050** (35% increase)

Current and Projected Oklahoma Freight Mode Share by Tonnage (millions of tons)

Legend: Truck | Pipeline | Rail | Water | Air | Multiple Modes & Mail

2019: Truck 216.6 | Pipeline 184.3 | Rail 42.8 | Water 6.5 | Multiple Modes & Mail 19.4

2050: Truck 313.5 | Pipeline 232.6 | Rail 46.6 | Water 10 | Multiple Modes & Mail 31.4

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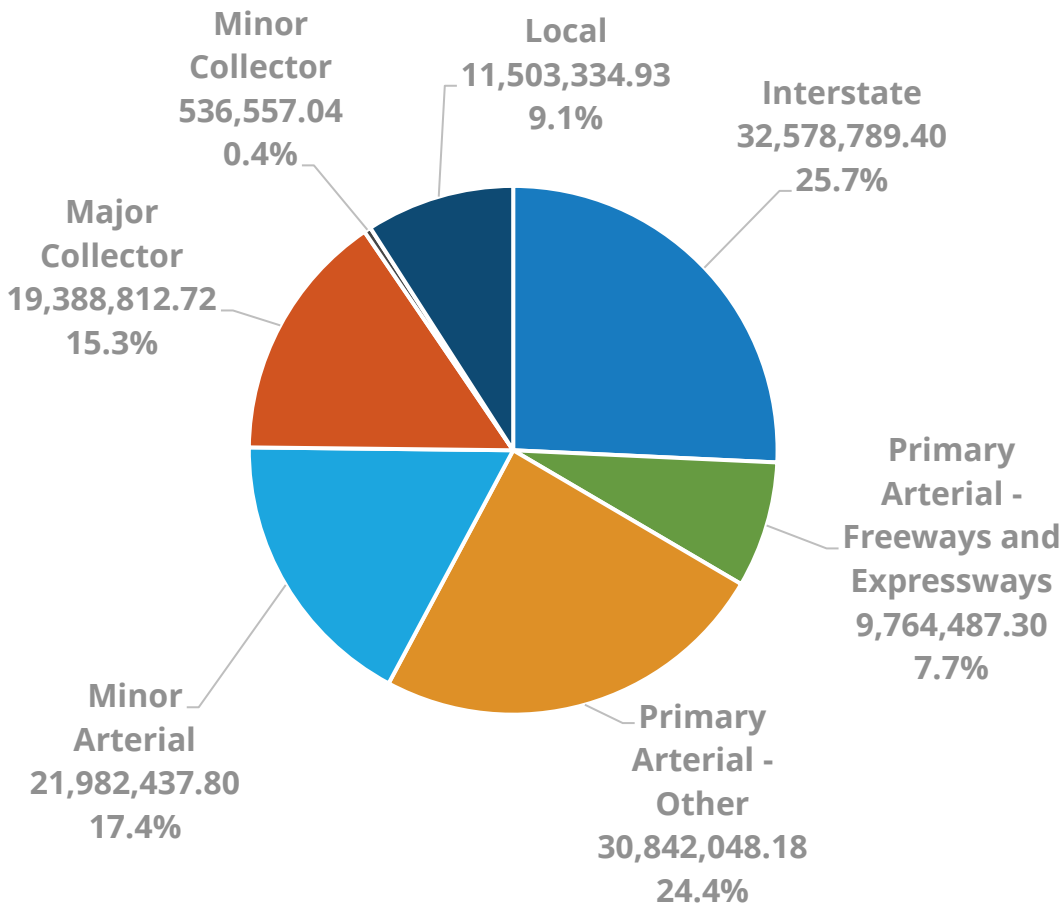# 2. System Analysis

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State Highway System

- ODOT Owns and Operates **12,235 centerline miles**

- Oklahoma Turnpike Authority operates another 615 centerline miles as toll-funded turnpikes

- Average **DVMT is 126 million**

System	ODOT Centerline Miles
Interstate	672.9
Non-Interstate NHS	2509.9
Other SHS	9052.5

SHS daily VMT by System, 2023

Minor Collector
536,557.04
0.4%

Local
11,503,334.93
9.1%

Interstate
32,578,789.40
25.7%

Major Collector
19,388,812.72
15.3%

Primary Arterial - Freeways and Expressways
9,764,487.30
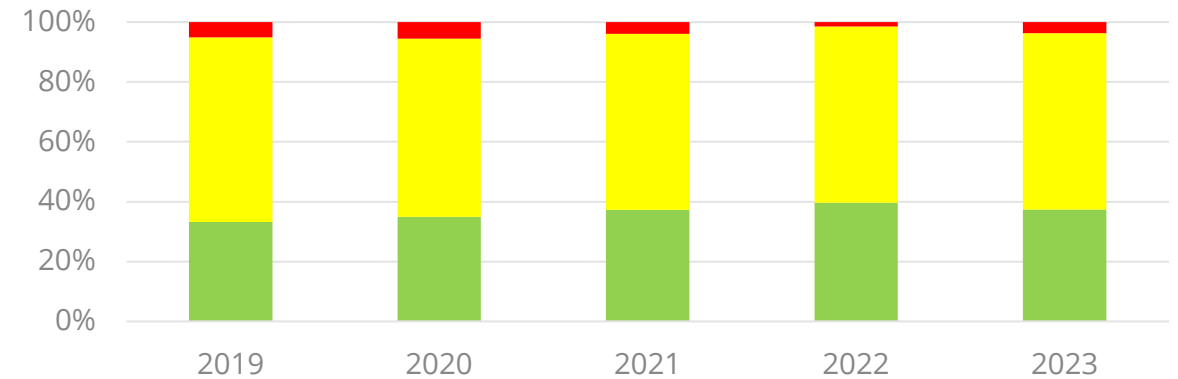7.7%

Minor Arterial
21,982,437.80
17.4%

Primary Arterial - Other
30,842,048.18
24.4%

SHS Pavement Condition

- ODOT Conducts regular pavement inspections to maintain updated understanding of conditions statewide

- **Condition has steadily improved** over recent years, with particular emphasis on interstates
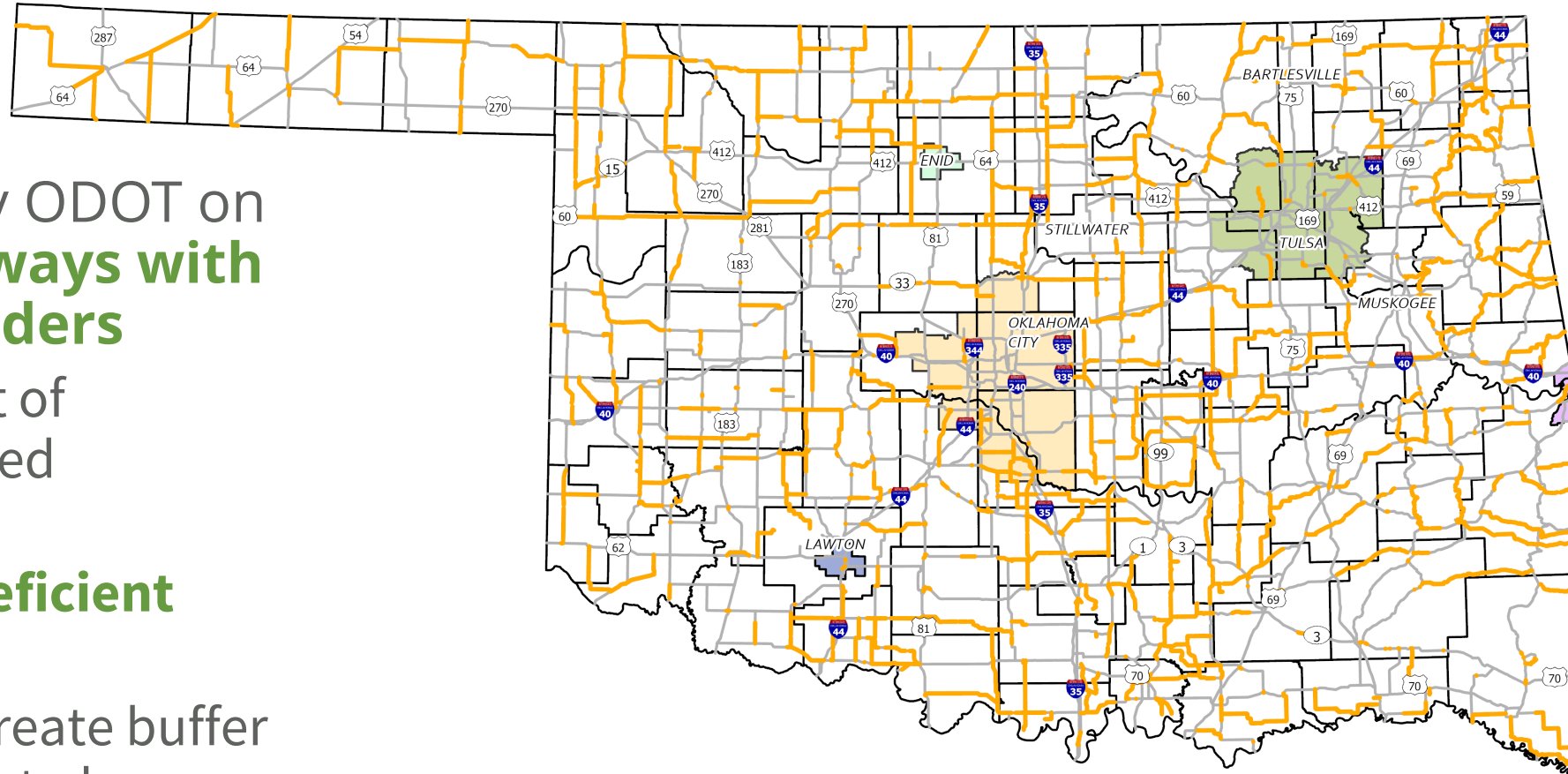

SHS Pavement Condition

Interstate Pavement Conditions

Good Fair Poor

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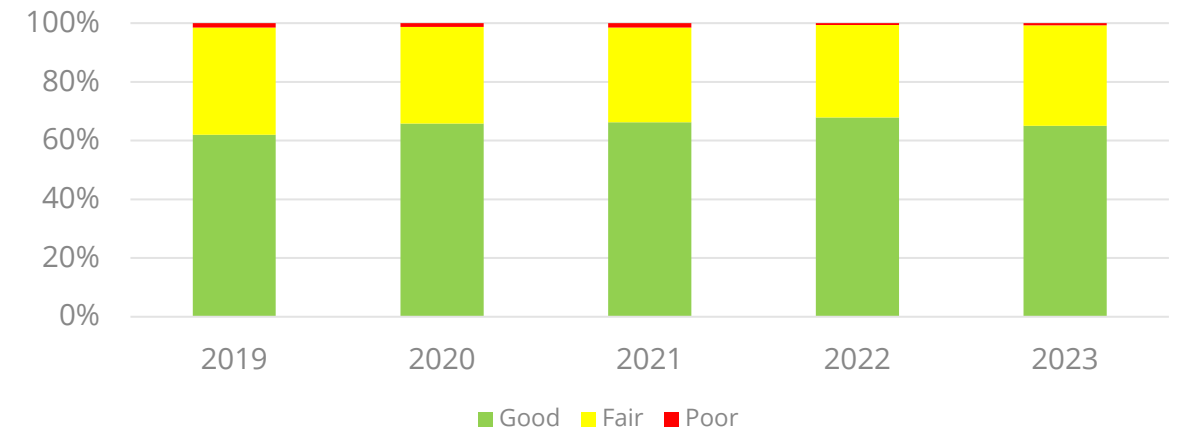
Rural Roadways

- Major emphasis by ODOT on **rural 2-lane Highways with inadequate shoulders**
  - Less than four feet of shoulder considered "deficient"
  - Currently **5,162 deficient miles**
  - Wider shoulders create buffer for drivers to react to lane departure, avoid hazards

**Legend:**
- — Highways with Deficient Shldrs
- — Highways
- ACOG
- Chisholm Trail MPO
- INCOG
- Lawton MPO
- Frontier MPO

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Bridge Conditions

- ODOT owns and maintains **6,800 bridges**

- **Significant** progress has been made in reducing structurally deficient (SD) bridges from **1,168** in **2004** to **46** in 2024 (**less than 1% which is now the state goal).**

- **Preventative Strategies**: **Bridge painting**, **joint rehabilitation**, and the use of **advanced materials** to extend the lifespan of bridges.

On-System Structurally Deficient Bridges
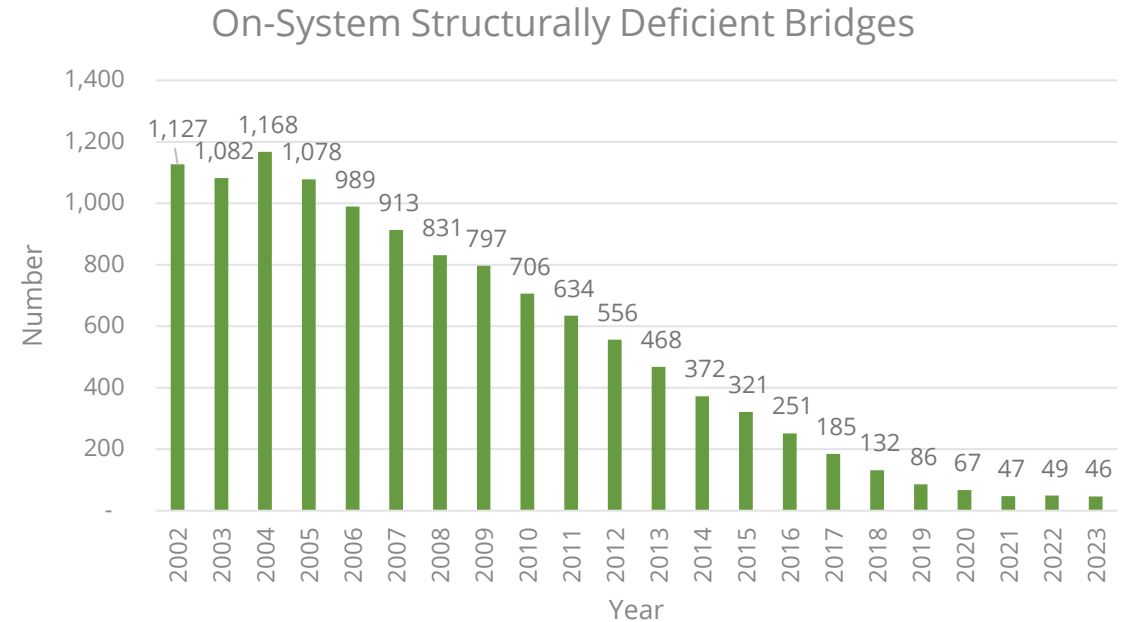
Intelligent Transportation Systems (ITS) & Transportation System Management and Operations (TSMO)

- **ITS Network**: ITS includes **radars**, **cameras**, **message signs**, and **fiber optics** to **enhance safety** and investment impact.

- **Traffic and Safety Technology**:
  - **85** Wrong Way Driving Systems
  - **729** Closed Circuit Television Cameras (CCTV)
  - **71** Dynamic Message Signs (DMS)
    - **37** Portable DMS
  - **163,270** strand miles of fiber optic cable
  - **32** Road Weather Information Systems (RWIS)

- **Traffic Management Center (TMC):** ODOT's TMC is fully virtual, providing remote access across ~40 consoles statewide.

- **Future TSMO Goals**: New focus areas include **Freight**, **Special Event**, **Transit Management**, and **Connected Vehicles** enhancements.

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Public Transit

Rural Transit:

- **Twenty** rural transit operators provide **fixed route** and **demand response services** for **small** and **rural communities**

Urban Transit:

- **Five** urban transit operators provide **fixed route** and **demand response services** for urban communities
  - **Edmond, Enid, Lawton, Norman, Oklahoma City and Tulsa**

Tribal Transit:

- **Nine** tribal agencies provide transit services

Source: Metropolitan Tulsa Transit Authority

*Source: Lawton Area Transit System*

Source: Pelivan Transit

Public Transit – Passenger Rail

- **Heartland Flyer Service**: Operating for 25 years, connecting Oklahoma City with Fort Worth, Texas, with stops in Norman, Purcell, Pauls Valley, Ardmore, and Gainesville, TX.
- **Ridership**: **Ridership** has **rebounded** post-COVID-19. The **2024** fiscal year is expected to have the **highest ridership to date**.
- **Thruway Bus Service**: Amtrak offers Thruway bus connections from Oklahoma City to the Southwest Chief Train in Newton, Kansas,
- **Future Service:** KDOT and ODOT are pursuing federal funding for an **extension to Newton, KS**.

Heartland Flyer Ridership
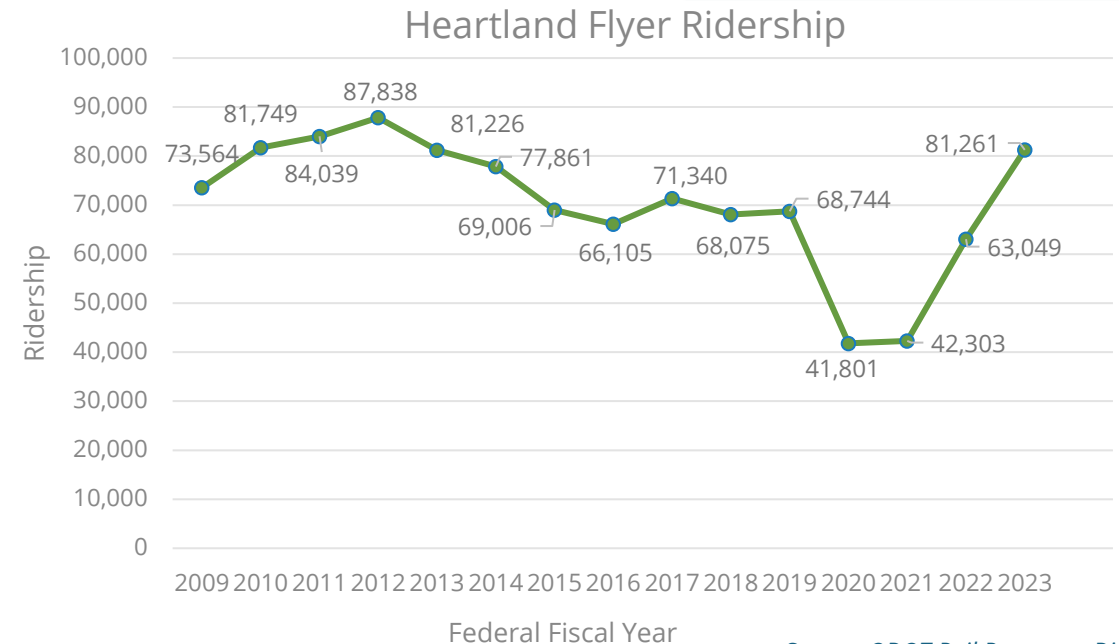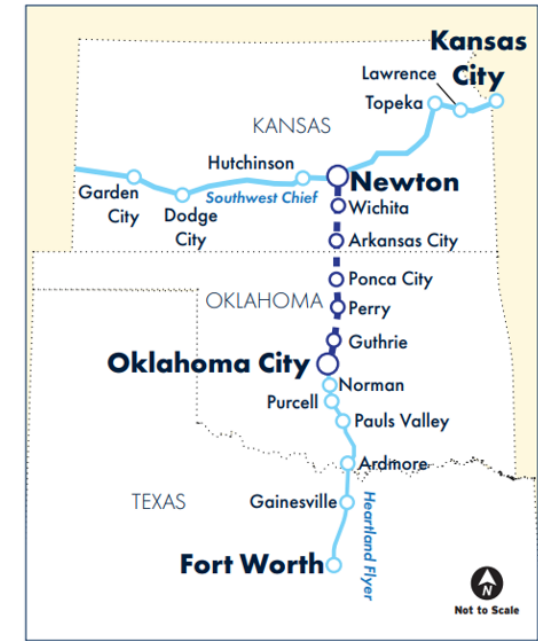
Source: ODOT Rail Programs Division

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Public Transit – Mobility Management

- Mobility management is a transportation strategy that focuses on **addressing** the **needs** of **diverse community** groups, such as **older adults**, **people with disabilities**, and individuals with lower incomes, through the **coordinated use of various transportation providers**.
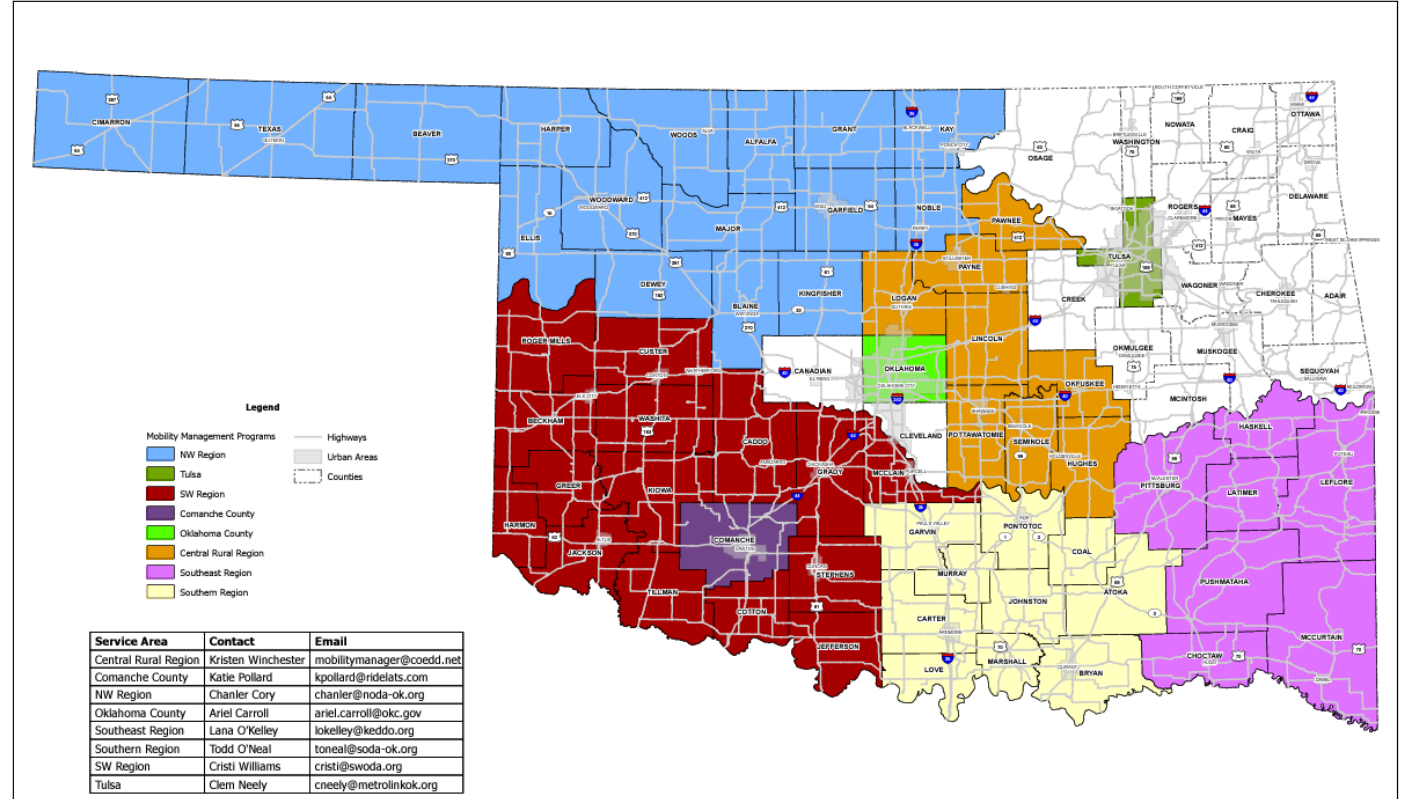
Mobility Management Programs

Statewide Program Contact: Olivia Hook - Mobility Management Director, 405-625-2229, OHook@odot.org
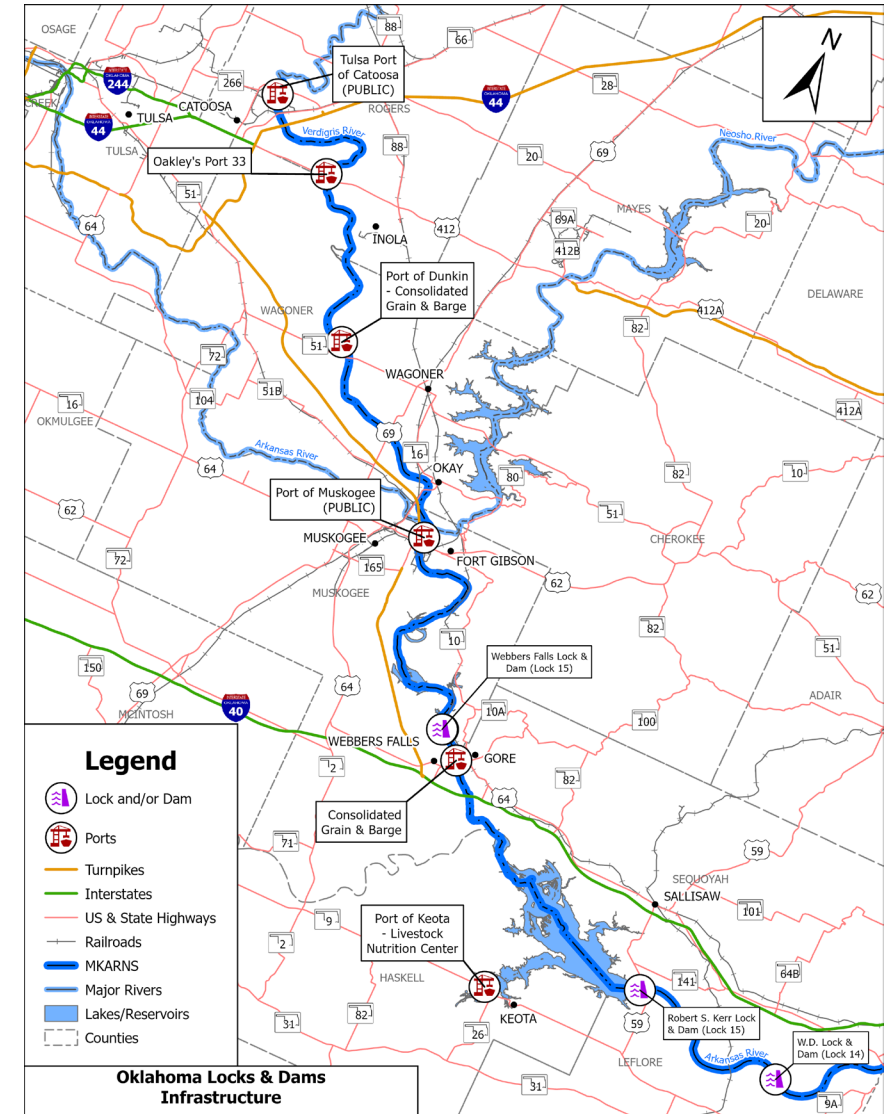
Source: ODOT

Active Transportation

- **Active Transportation**
  - Multi Use Paths
  - Bike Lanes (Protected and On-Road Routes)
  - Unpaved Trails
- **OK Active Transportation Network**: The state promotes **safe**, **accessible**, and **connected** systems for **walking, biking**, and **other active modes**, enhancing public health, safety, and the environment.
- **2024 Active Transportation Plan**: ODOT's **first plan** outlines **policies** and **resources** to **integrate active transportation** into **roadway design**, supporting local communities' efforts.

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ACTIVE TRANSPORTATION

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Ports and Waterways

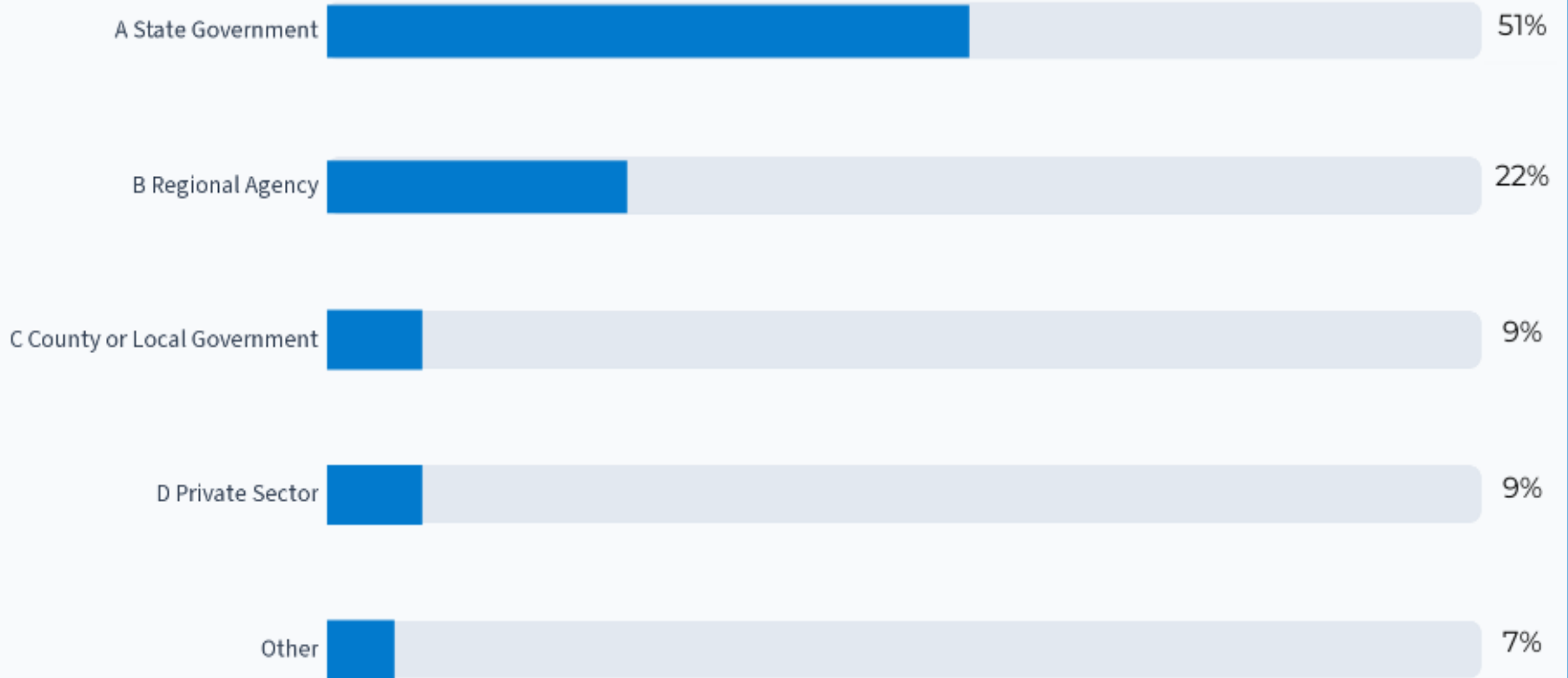- Oklahoma's portion of the MKARNS consists of the upper reaches of the 445-mile-long waterway linked to the Mississippi River.

- 137 miles of MKARNS in Oklahoma

- Six ports interspersed with five locks

- Recent Improvements
  - Port Inola rail connection is up and running with the UP
  - Port Muskogee upgraded their rail with a PIDP grant

Oklahoma Locks & Dams Infrastructure

3. Goals and Objectives

What type of agency or organization do you represent?

Option	Percentage
A State Government	51%
B Regional Agency	22%
C County or Local Government	9%
D Private Sector	9%
Other	7%

Transportation

Family of Plans Reviewed

9	**8**	**4**	**2**	**2**
Federal Plans	**State Plans**	**MTPs**	**Tribal LRTPs**	**RTPs**
7 of which had goals and/or objectives, including the previous LRTP	**3** of which had goals and/or objectives	**All** of which had goals and/or objectives	**1** of which had goals and/or objectives	**All** of which had goals and/or objectives

2045 LRTP Vision Statement

"to provide a connected, multimodal transportation system that supports a thriving economy and improved quality of life for Oklahomans by providing for safe and efficient movement of people and goods"

2045 Issues Identified

We identified 4 main issues with the goals and objectives from the past LRTP:

Overlapping Domains	Lack of Clarity	Missing Themes	Industry Jargon
Several goals **share similar objectives** with each other, making it **difficult to differentiate** the goals from each other	Some objectives that **do not relate** to their primary goals, and others **re-state** what is already stated in the goal	Certain themes appeared in other state or local plans, but **were not present** in the prior set of goals and objectives	Some goals are **overly wordy**, or use **transportation and planning terms** that are unfamiliar to a general audience
Ex: Both *Mobility and Accessibility* and *Economic Vitality* talk about connectivity	Ex: *Fiscal Responsibility* discusses stakeholder coordination	Ex: Possible themes to consider adding include *resiliency*, *equity*, and *technology*	Ex: "Multimodal", "State of Good Repair"

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2050 Recommendations

2045 Goal	2050 Goal Recommendation	Explanation
Safety and Security: Ensure a safe and secure transportation system for all users	**N/A:** keep as-is	Goal is already clearly defined, no update needed

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To what degree are the priorities of Oklahoma reflected in the safety & security goal?

Completely reflected (A) — 9%

Mostly reflected (B) — 73%

Somewhat reflected (C) — 18%

Not reflected at all (D) — 0%

Transportation
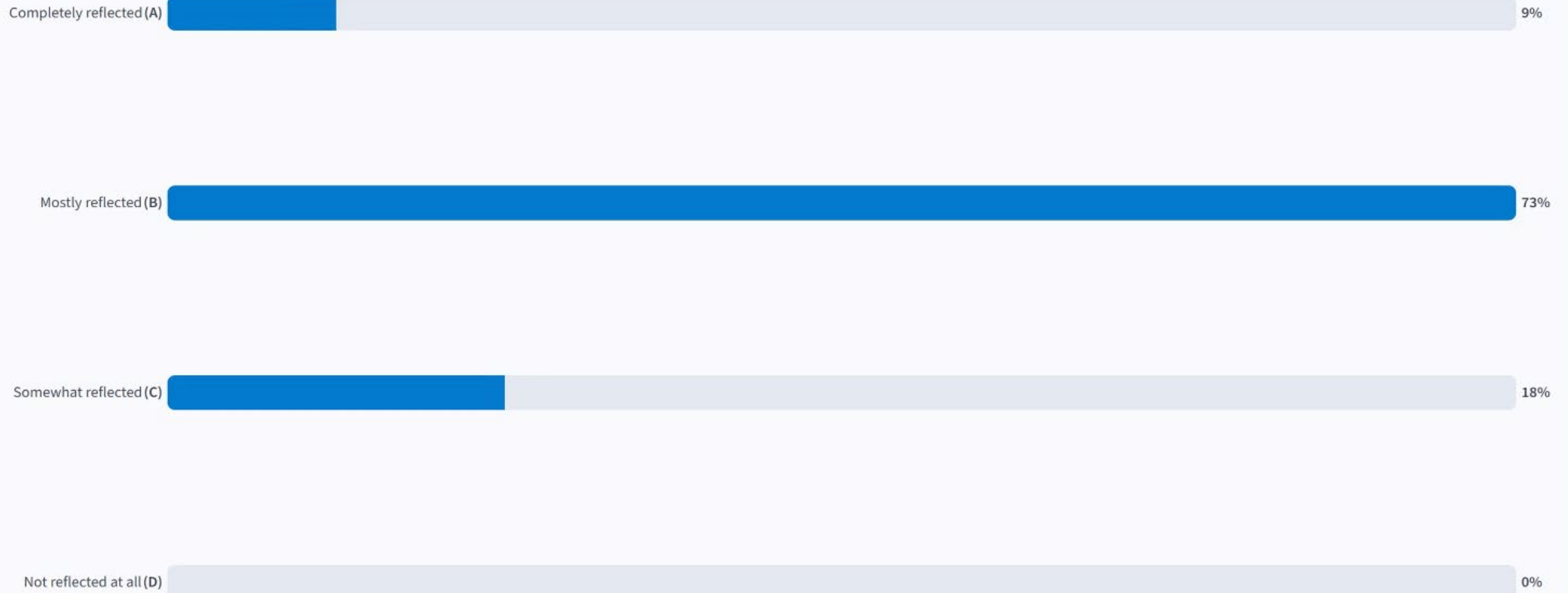
What word would you add to the safety & security goal?

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2050 Recommendations

2045 Goal	2050 LRTP Recommendation	Explanation
Infrastructure Preservation: Preserve and maintain the condition of Oklahoma's multimodal transportation system in a state of good repair through risk-based, data-driven decision-making processes	**Infrastructure Preservation:** Preserve and maintain Oklahoma's transportation system in good condition	Risk-based, data-driven decision-making process language fits better as an objective (and is already included as such), "state of good repair" may not be clear to all readers

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To what degree are the priorities of Oklahoma reflected in the infrastructure preservation goal?

Completely reflected	16%
Mostly reflected	47%
Somewhat reflected	36%
Not reflected at all	0%

Transportation
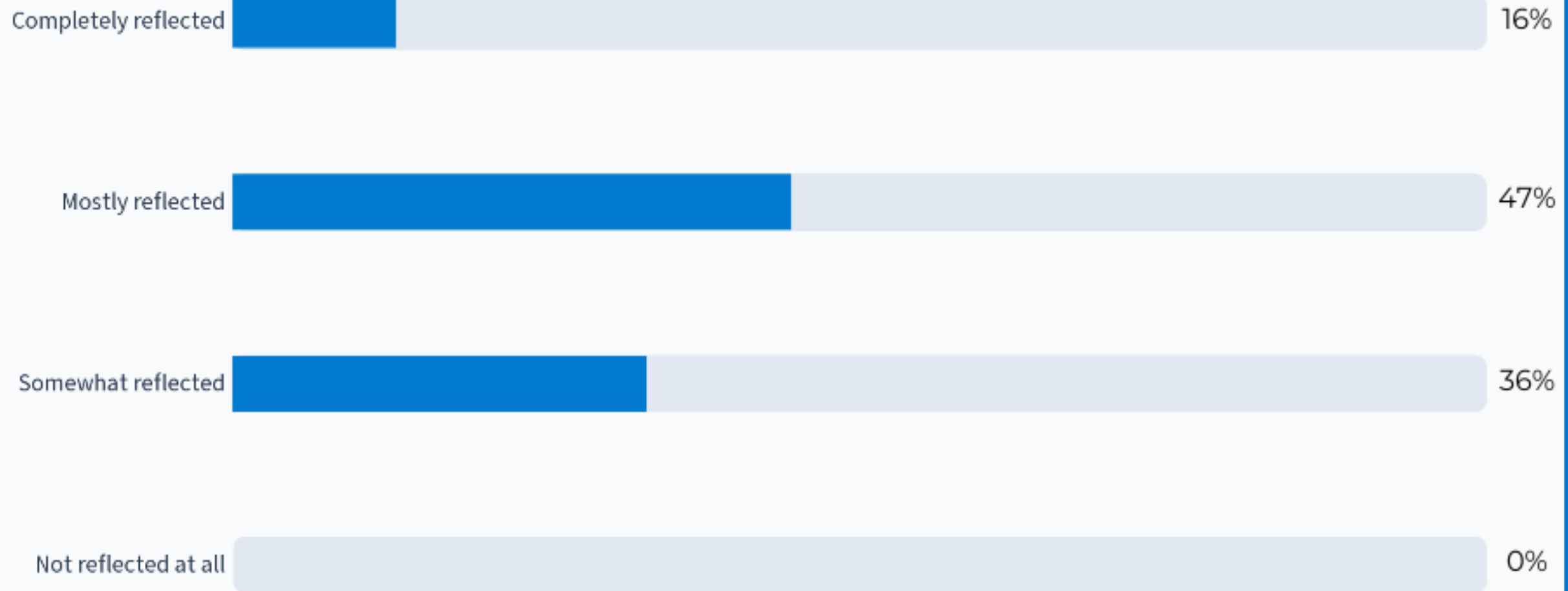
What word would you add to the infrastructure preservation goal?

Transportation

2050 Recommendations

Previous	Recommendation	Explanation
Mobility and Accessibility: Facilitate the movement of people and goods, improve connectivity between regions and activity centers, and increase travel mode choices	**Mobility and Accessibility:** Ensure access for all users of the transportation system and increase travel options	Refocusing goal on access by removing the *connectivity* theme, and adding in new language regarding equity

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To what degree are the priorities of Oklahoma reflected in the mobility & accessibility goal?

Completely reflected	15%
Mostly reflected	67%
Somewhat reflected	18%
Not reflected at all	0%

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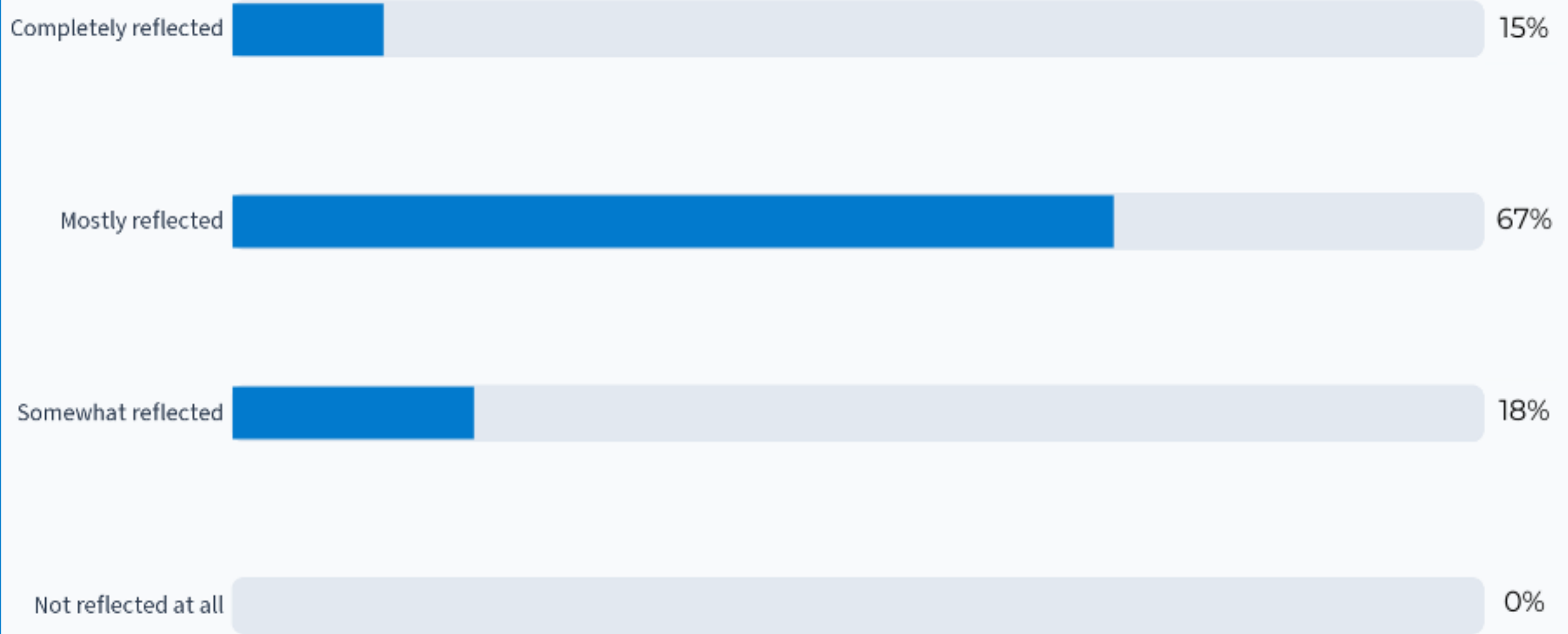
What word would you add to the mobility & accessibility goal?

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2050 Recommendations

Previous	Recommendation	Explanation
Economic Vitality: Provide a reliable multimodal transportation system for people and goods that coordinates with land development patterns, strengthens communities, and supports a healthy and competitive Oklahoma economy	**Economic Vitality:** Provide an efficient and well-connected transportation system to support a healthy and competitive Oklahoma economy	Refocusing goal on connectivity by removing the *reliability* theme, while also removing objective-centric language around communities and land-use

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To what degree are the priorities of Oklahoma reflected in the economic vitality goal?

Completely reflected (A) — 12%

Mostly reflected (B) — 68%

Somewhat reflected (C) — 20%

Not reflected at all (D) — 0%

Transportation
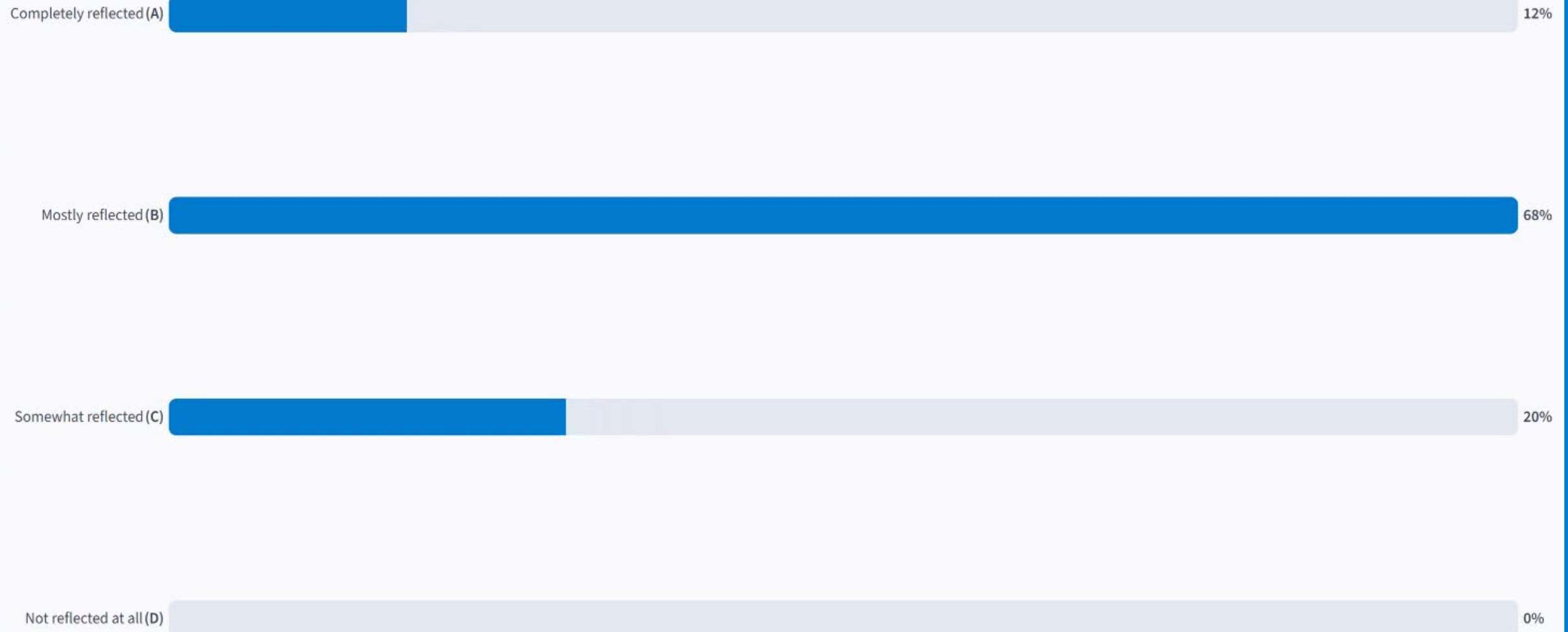
What word would you add to the economic vitality goal?

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Transportation

2050 Recommendations

Previous	Recommendation	Explanation
Efficient Intermodal System Management and Operation: Maximize system performance and operations	**Operations and Management:** Sustainably fund and efficiently deliver quality transportation projects	Both of the previous goals are "internally" focused, concerned primarily with how ODOT operates, but many of their objectives are either shared with other goals or don't seem to relate at all.

Combining into a single goal allows it consolidate all related concepts, as well as new themes, such as technology. |
| **Fiscal Responsibility:** Sustainably fund and efficiently deliver quality transportation projects while continuing to leverage additional resources in coordination with ODOT's partners | | |

OKLAHOMA
Transportation

To what degree are the priorities of Oklahoma reflected in the operations & management goal?

Completely reflected (A)	13%
Mostly reflected (B)	53%
Somewhat reflected (C)	33%
Not reflected at all (D)	0%

Transportation

What word would you add to the operations & management goal?

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Transportation

2050 Recommendations

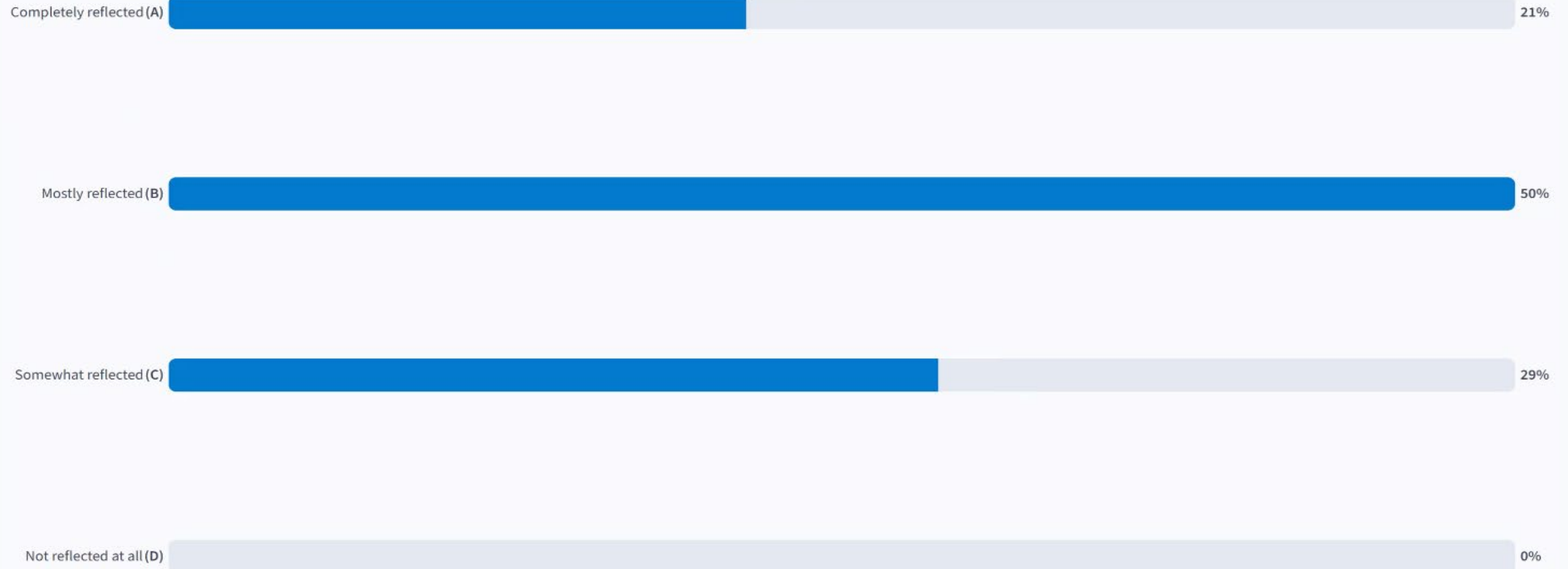| Previous	Recommendation	Explanation
Environmental Responsibility: Minimize and mitigate transportation-related impacts to the natural and human environments	**Environment and Quality of Life:** Minimize and mitigate transportation-related harm to natural environments, cultural resources, and public health	Changing wording slightly to highlight (already-existing) focus on both environmental and human health

OKLAHOMA
Transportation

To what degree are the priorities of Oklahoma reflected in the environment & quality of life goal?

Completely reflected (A)   21%

Mostly reflected (B)   50%

Somewhat reflected (C)   29%

Not reflected at all (D)   0%

Transportation

What word would you add to the environment and quality of life goal?

Transportation

2050 Recommendations

Previous	Recommendation	Explanation
	Resiliency and Reliability: Ensure the reliability of movement for people and goods by enhancing the resiliency and adaptability of the transportation system	New goal that incorporates themes of reliability (previously in *Economic Vitality*) and resiliency (previously missing)

OKLAHOMA
Transportation

To what degree are the priorities of Oklahoma reflected in the resiliency and reliability goal?

Completely reflected (A) — 29%

Mostly reflected (B) — 61%

Somewhat reflected (C) — 11%

Not reflected at all (D) — 0%
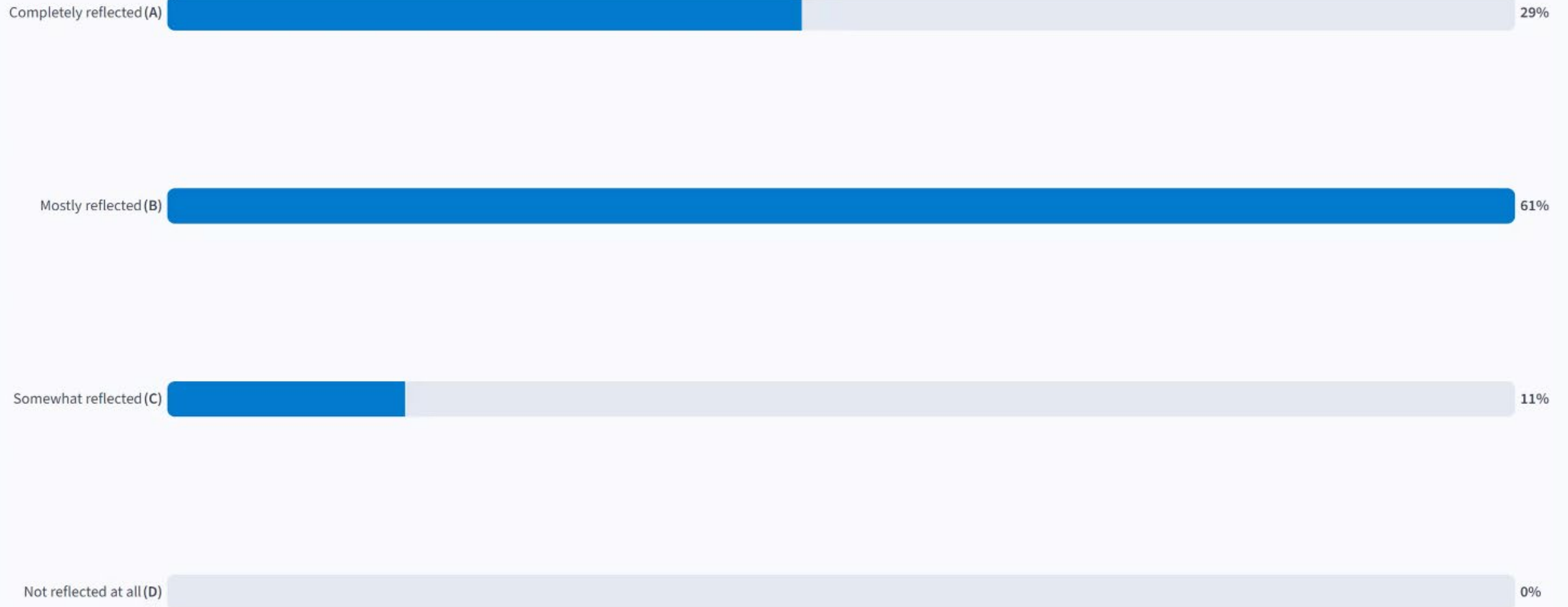
Transportation

What word would you add to the resiliency and reliability goal?

Transportation

What is missing from the draft Oklahoma 2050 LRTP goals?

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Transportation

What is currently included in the draft Oklahoma 2050 LRTP goals that should not be included?

Don't Reference Projects
Focus On Ev
Don't Focus On Ev
Remove The Word Harm from the EQol Goal

Transportation

4. Schedule & Next Steps

2050 LRTP Schedule