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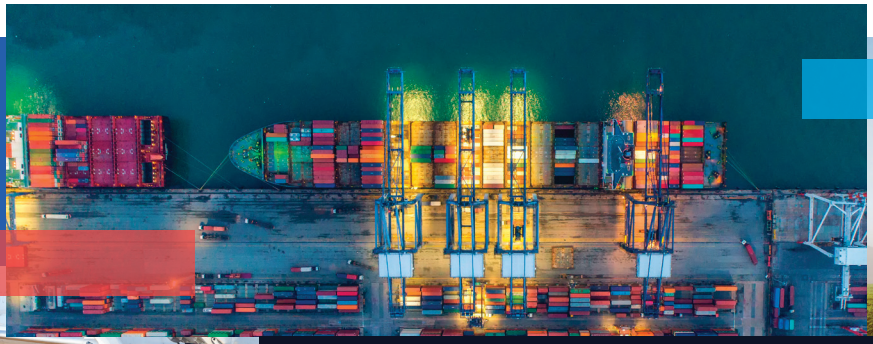


NATIONAL FREIGHT STRATEGIC PLAN

EXECUTIVE SUMMARY

U.S. Department of Transportation

NATIONAL FREIGHT STRATEGIC PLAN


Source: Adobe Stock

Safe, reliable, and efficient freight transportation boosts exports, enhances commerce, and powers economic growth. Our robust national multimodal freight system supports our economy by lowering costs to businesses and consumers and boosting the competitiveness of American goods abroad. The safe and efficient movement of goods through our freight system is a top priority for the U.S Department of Transportation (U.S. DOT).

This National Freight Strategic Plan defines the U.S. DOT's vision and goals for the national multimodal freight system, assesses the conditions and performance of the freight system and barriers to freight system performance, and defines strategies to achieve its vision and goals. The Plan was developed through a multi-agency effort involving extensive consultation with freight stakeholders in both the public and private sectors. The Department will use this Plan to guide national freight policy, programs, initiatives, and investments; inform State freight plans; identify freight data and research needs; and provide a framework for increased cross-sector, multijurisdictional, and multimodal coordination and partnerships.

VISION

The freight transportation system of the United States will strengthen our economic competitiveness with safe and reliable supply chains that efficiently and seamlessly connect producers, shippers, and consumers in domestic and foreign markets.

Source: Adobe Stock

NATIONAL FREIGHT POLICY STRATEGIC GOALS

This National Freight Strategic Plan supports the U.S. DOT 's strategic goals of Safety, Infrastructure, and Innovation.

SAFETY

Improve the safety, security, and resilience of the national freight system.

INFRASTRUCTURE

Modernize freight infrastructure and operations to grow the economy, increase competitiveness, and improve quality of life.

INNOVATION

Prepare for the future by supporting the development of data, technologies, and workforce capabilities that improve freight system performance.

FEDERAL ROLE

The following principles can be used to guide U.S. DOT's strategic leadership to support safe, efficient, and reliable goods movement.

Source: Adobe Stock

1. **Modernize or eliminate unnecessary or duplicative regulations** that inhibit supply chain efficiency, reduce incentives to innovation, delay project delivery, or raise costs to shippers and consumers, while protecting safety and environmental outcomes.
2. **Improve cross-sector, multijurisdictional, and multimodal collaboration** to enhance intermodal connectivity and first- and last-mile connections, streamline interstate policies and regulations, and support multi-state investment.
3. **Provide targeted Federal resources and financial assistance** to support freight projects that provide significant benefits to the national economy.
4. **Invest in freight data, analytical tools, and research** to enhance the abilities of State, regional, and local agencies to evaluate and address freight issues.

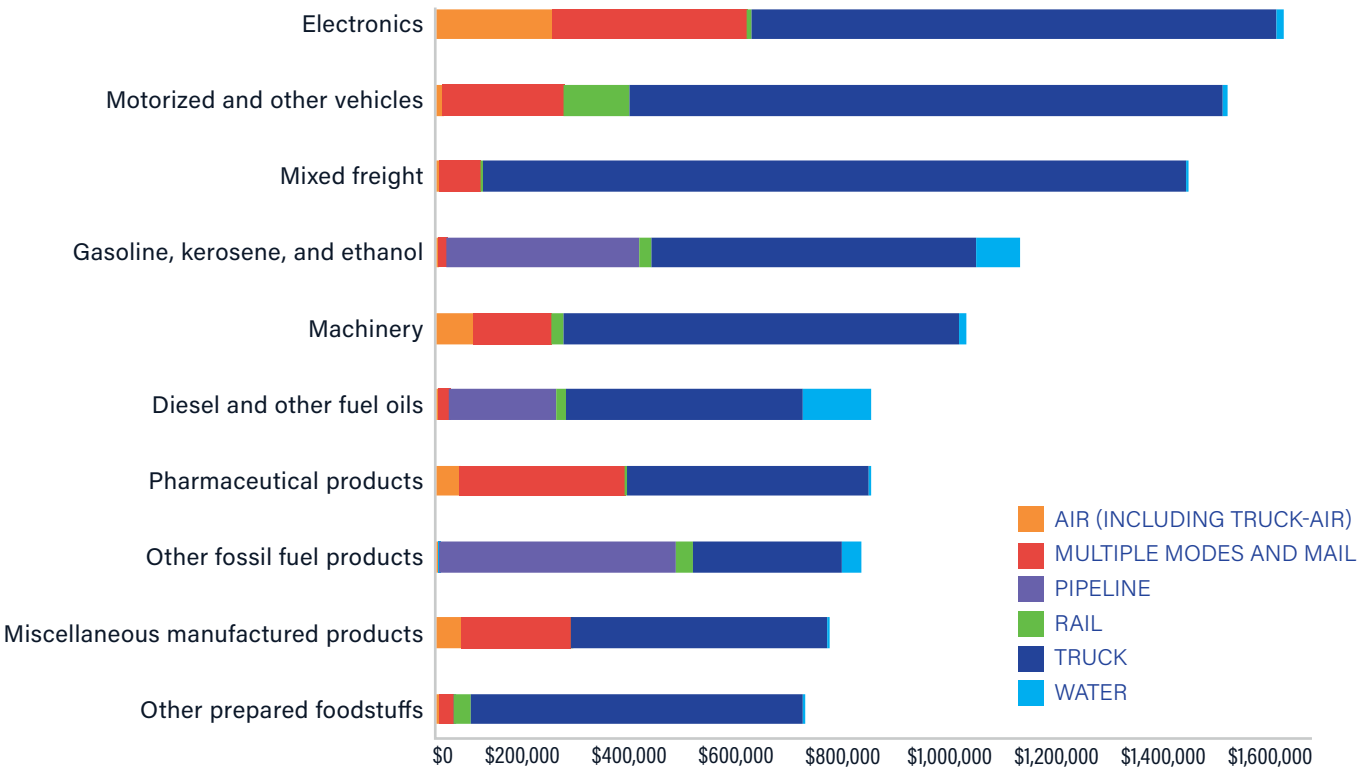
THE U.S. FREIGHT SYSTEM

In **2018**, the U.S. transportation system moved a daily average of about **51 million tons** of freight valued at nearly **$52 billion**.[1]

America's freight system is a complex, interdependent, multimodal system of infrastructure and services owned and operated by a mix of public and private sector entities. The system comprises physical infrastructure or facilities, such as ports, waterways, airports, railroads, pipelines, roadways, and warehouses, as well as diverse carriers, shippers, and suppliers that use this infrastructure to transport goods.

Our Nation's economy depends on an efficient freight system to move commodities to markets at home and abroad. The Nation's freight system is responsible for transporting commodities that drive our economy including agriculture, energy, natural resources, and manufacturing and retail.

FIGURE 1: FREIGHT SHIPMENTS OF TOP 10 COMMODITIES BY VALUE



1. BTS, "Fatalities by Freight Transportation Mode," available at https://www.bts.gov/fatalities-freight-transportation-mode.

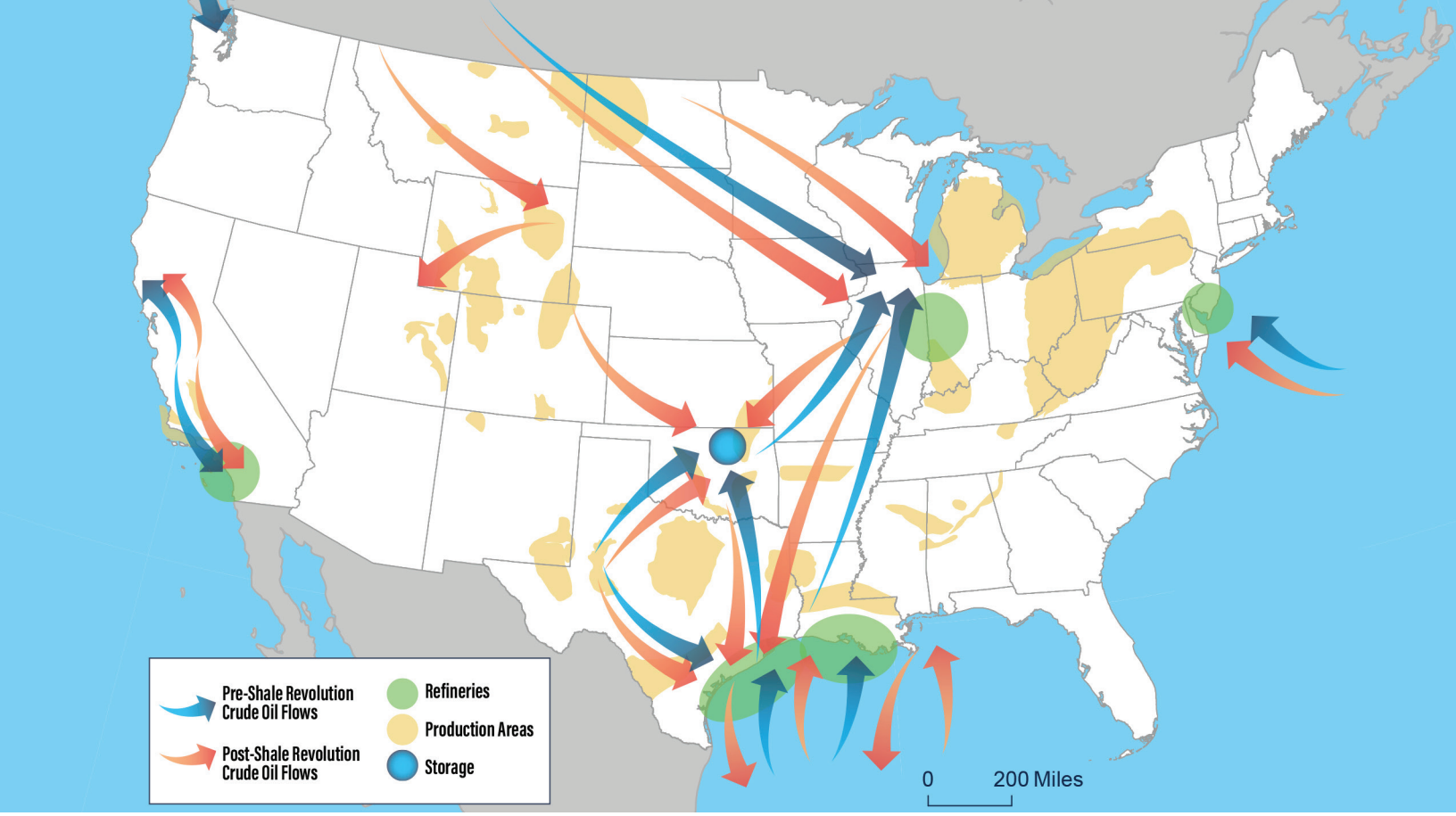


FIGURE 2: CRUDE OIL FLOWS PRE- AND POST-SHALE

Agriculture: Agricultural products represented almost a third of all goods moving across all modes in the U.S. by ton-miles. These products rely on our highway system, as well as our rail and inland waterway systems, to move from American farms to domestic and international markets.

Energy: Oil and gas products are primarily moved by pipeline. The rapid growth of domestic fuel production over the past decade has led to the construction of pipelines to connect emerging production areas to refineries and export and storage facilities. Where pipelines are not available as a transport option, oil producers rely on rail, trucks, barges, and tankers. The majority of coal shipments by tonnage are made by rail.

Natural resources: These include metals, timber, gravel, and sands, as well as chemicals and fertilizers. The Nation's iron and steel industry relies heavily on railroads and barges to transport materials. The lumber industry, on the other hand, depends on trucks to transport logs to mills, although milled lumber, wood particle, and paper products are more likely to be transported by rail. Trucks moved approximately half of chemicals and fertilizers by tonnage, while rail accounted for about a third of tonnage, and waterways and pipelines accounted for the remainder.

Manufacturing and retail: These commodities include many of high value goods, such as electronics, motorized vehicles, and machinery. Modern manufacturing systems rely on advanced logistics systems, precise timing of shipments, and international supply chains. Intermodal transportation of containerized goods is important for the manufacturing and retail sectors, as imported and exported containerized goods move to and from major intermodal ports, rail hubs, and distribution centers.

KEY TRENDS

Several major economic, demographic, technological, and environmental trends are driving changes to freight supply and demand and use of the freight system. Key trends driving change in our freight system are subject to varying degrees of change and uncertainty. These trends are summarized below.

GROWING POPULATION AND ECONOMY

The population and economy of the United States are growing at a steady pace contributing to increased demand for freight. The fastest growing regions of the country are primarily in southern and western States.

DIVERSIFYING GLOBAL SUPPLY CHAINS

International trade is growing and supply chains are becoming increasingly global, increasing congestion at ports, border crossings, and on the infrastructure that connects these trade gateways to the broader transportation system.

RISING DOMESTIC FUEL PRODUCTION

Rapidly increasing domestic fuel production requires new and expanded infrastructure to safely and efficiently move fuel from production areas to refineries and export terminals.

CHANGING URBAN-RURAL DYNAMICS

Furthering a long-term trend, the population of the United States is becoming more concentrated in increasingly congested metropolitan areas, creating challenges for delivery of goods. Declining rural populations must support critical freight corridors, while providing essential goods to sustain urban markets.

INCREASING E-COMMERCE

Online shopping is rapidly increasing as a share of retail sales, creating new demands for faster and cheaper delivery of goods straight to consumers. This trend is changing land use patterns and contributing to increased truck traffic and competition for curb space in residential areas.

ADVANCING TECHNOLOGY

Emerging technologies from automation to delivery drones to the Internet of Things have the potential to transform the freight industry, disrupting old business models and changing the nature of freight jobs.

EVOLVING WORKFORCE

Changing technologies and workforce expectations, coupled with low unemployment, are making it difficult for some freight companies and government agencies to attract and retain qualified employees.

CHALLENGES

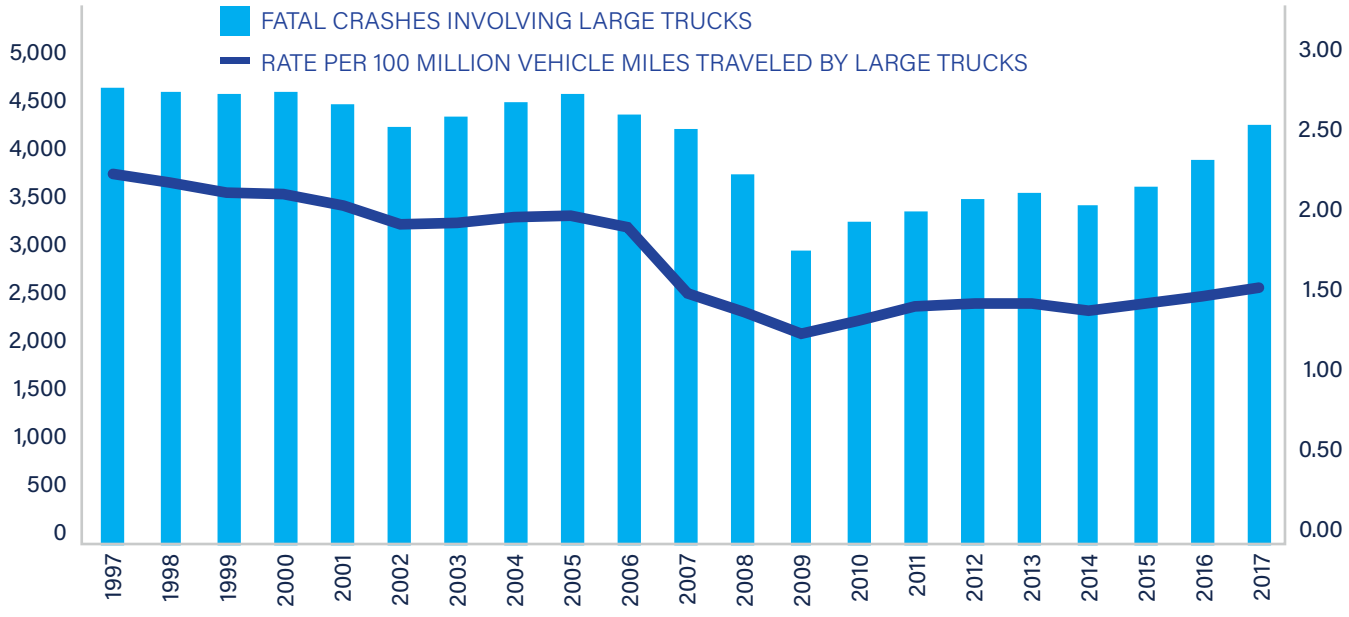
Increasing and shifting demand for freight movement is straining the multimodal freight system on which the Nation's economy and well-being depend. Challenges affecting our freight system include increasing safety risks, increased congestion, and declining infrastructure conditions. Various institutional, financial, and regulatory barriers also make it difficult to advance freight projects, which can exacerbate these challenges.

SAFETY

Key issues: Truck safety, truck parking, grade crossing safety, hazardous materials

As freight transportation activity has increased, the number of freight transportation-related fatalities has risen. Across all modes, 5,340 people died in freight transportation-related crashes and accidents in 2017—a nearly 24 percent increase over the 2010 total. Fatalities resulting from truck-involved crashes made up 89.2 percent of all freight transportation fatalities and 12.8 percent of all highway fatalities in 2017. Key factors that may affect truck safety include increased traffic volume on the Nation's highway networks, driver performance and behavior, and insufficient truck parking in rest zones.

FIGURE 3: LARGE TRUCK-INVOLVED FATAL CRASHES (1975-2017)



Source: Adobe Stock

Congestion cost the trucking industry an estimated **$74.5 billion** in 2018, equal to an entire year of productivity for more than **425,000** truck drivers.[2]

NETWORK EFFICIENCY

Key issues: Bottlenecks, non-recurring congestion, resilience

Increasing congestion, particularly on urban highways, results in billions of dollars in lost economic productivity and wasted fuel. A wide range of events from crashes to planned events to severe weather can temporarily reduce system capacity and disrupt freight flows on an intermittent basis. As our freight systems become increasingly reliant on interconnected systems to track global supply chains and meet the demands of just-in-time logistics, these systems may become more vulnerable to disruption.

2. American Transportation Research Institute (No date) "Congestion Costs to the Economy," https://truckingresearch.org/wp-content/uploads/2019/02/ATRI_Bottlenecks2019_Brochure.pdf.

Source: Adobe Stock

INFRASTRUCTURE CONDITION

Key issues: Highway, Bridge, and Inland Waterway Conditions

While States have made significant efforts to improve bridge conditions over the past two decades, approximately 7.5 percent of all bridges remain in poor conditions and more than 10 percent are posted for load, which can affect freight movements. Aging locks along the inland waterways have become increasingly unreliable leading to unplanned closures and delays.

BARRIERS TO FREIGHT SYSTEM PERFORMANCE

Key issues: Financial, Institutional, Data and Information, and Statutory and Regulatory Barriers

Maintaining a competitive edge is critical to the U.S. economy. However, public funding for infrastructure has not kept up with rising construction costs. Freight projects face special challenges when competing for funding from that limited pool of resources. Freight projects often have benefits that extend across regions or even the entire Nation, but their negative impacts, including traffic congestion, noise, and emissions, can be highly localized, creating challenges with multijurisdictional coordination.

Data limitations also inhibit the ability of public and private sector actors in the freight system to make informed decisions. Public agencies often lack access to timely, consistent, and actionable freight data that could help them justify putting a greater emphasis on freight projects.

Finally, freight stakeholders frequently cite certain safety, environmental, and economic regulations as impediments to freight efficiency. There are often different perspectives as to whether these regulations are the best way to reach their intended goals or whether the costs associated with complying with a particular regulation exceed the benefits.

SAFETY

Improve the safety, security, and resilience of the Nation's freight system.

STRATEGIC OBJECTIVES

- Support the development and adoption of automation, connectivity, and other freight safety technologies
- Modernize safety oversight and security procedures
- Minimize the effects of fatigue and human error on freight safety
- Reduce conflicts between passenger and freight traffic
- Protect the freight system from natural and human-caused disasters and improve system resilience and recovery speed

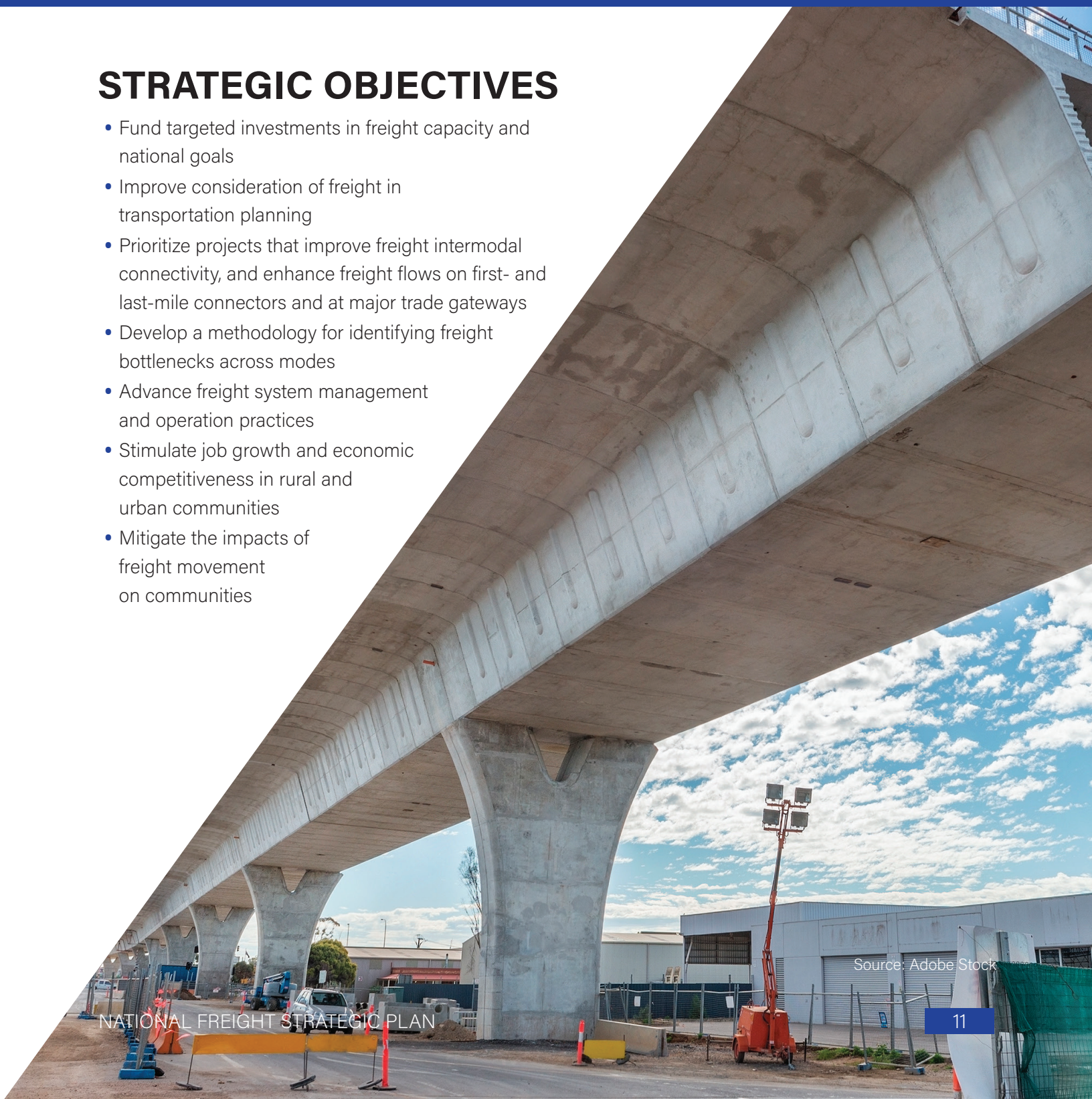
Source: Adobe Stock

INFRASTRUCTURE

Modernize freight infrastructure and operations to grow the economy, increase competitiveness, and improve quality of life.

STRATEGIC OBJECTIVES

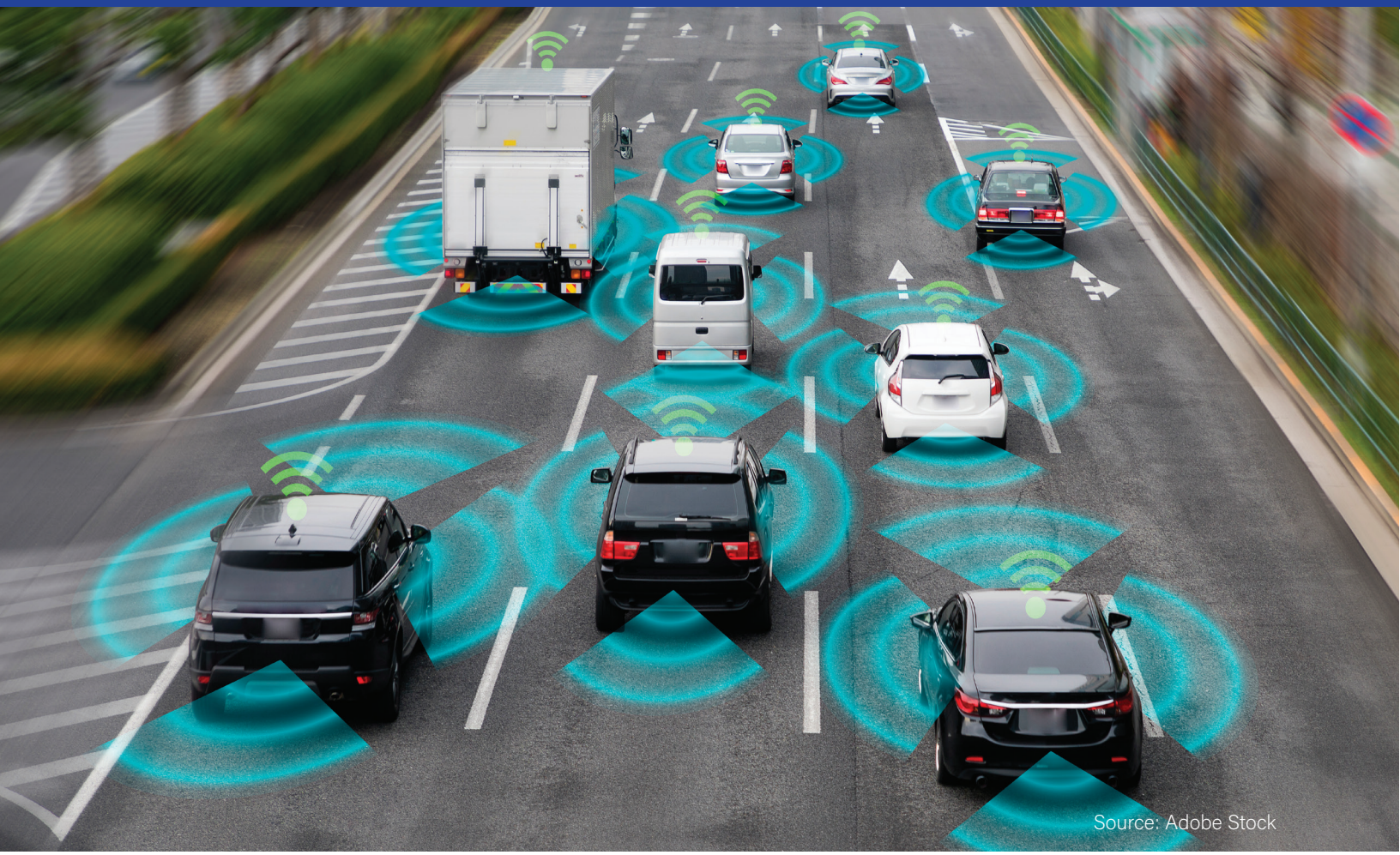
- Fund targeted investments in freight capacity and national goals
- Improve consideration of freight in transportation planning
- Prioritize projects that improve freight intermodal connectivity, and enhance freight flows on first- and last-mile connectors and at major trade gateways
- Develop a methodology for identifying freight bottlenecks across modes
- Advance freight system management and operation practices
- Stimulate job growth and economic competitiveness in rural and urban communities
- Mitigate the impacts of freight movement on communities



Source: Adobe Stock

INNOVATION

Prepare for the future by supporting the development of data, technologies, and workforce capabilities that improve freight system performance.



Source: Adobe Stock

STRATEGIC OBJECTIVES

- Support the development and adoption of automation and connectivity, including V2X technologies
- Support the safe deployment of unmanned aircraft systems (UAS) technology
- Streamline or eliminate regulations to improve governance, efficiency, and economic competitiveness
- Improve freight data, modeling, and analytical tools and resources
- Strengthen workforce professional capacity
- Invest in freight research
- Support regulatory frameworks that foster freight innovation

CONCLUSION

Our freight system is critical to our Nation's economic growth and prosperity. American consumers and businesses rely on a safe, efficient, and reliable freight system to sustain their way of life. This National Freight Strategic Plan incorporates stakeholder input from across the freight industry to provide a vision for our Nation's multimodal freight system and a strategy for achieving that vision. Working together, we can build a freight system that strengthens our Nation's economic competitiveness and ensures the continued well-being of our citizens.

STRATEGIC GOALS AND OBJECTIVES OF NATIONAL FREIGHT POLICY

GOAL	STRATEGIC OBJECTIVES
Safety *Improve the safety, security, and resilience of the national freight system.*	• Support the development and adoption of automation, connectivity, and other freight safety technologies • Modernize safety oversight and security procedures • Minimize the effects of fatigue and human error on freight safety • Reduce conflicts between passenger and freight traffic • Protect the freight system from natural and human-caused disasters and improve system resilience and recovery speed
Infrastructure *Modernize freight infrastructure and operations to grow the economy, increase competitiveness, and improve quality of life.*	• Fund targeted investments in freight capacity and national goals • Improve consideration of freight in transportation planning • Prioritize projects that improve freight intermodal connectivity, and enhance freight flows on first- and last-mile connectors and at major trade gateways • Develop a methodology for identifying freight bottlenecks across modes • Advance freight system management and operation practices • Stimulate job growth and economic competitiveness in rural and urban communities • Mitigate the impacts of freight movement on communities
Innovation *Prepare for the future by supporting the development of data, technologies, and workforce capabilities that improve freight system performance.*	• Support the development and adoption of automation and connectivity, including V2X technologies • Support the safe deployment of UAS technology • Streamline or eliminate regulations to improve governance, efficiency, and economic competitiveness • Improve freight data, modeling, and analytical tools and resources • Strengthen workforce professional capacity • Invest in freight research • Support regulatory frameworks that foster freight innovation

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of Transportation