FLOW REPORT

A SUMMARY OF PROGRAM DEVELOPMENT AND SUPPLY CHAIN INSIGHTS

FY 2026

U.S. Department of Transportation
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FLOW
Freight Logistics Optimization Works

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Abstract
This report provides information on the Freight Logistics Optimization Works (FLOW) program, a voluntary public–private partnership developed by USDOT in collaboration with industry to create a forward-looking, integrated view of supply chain conditions. The report also shares aggregated FLOW data and corresponding analysis for key indicators and measures, including for FLOW bookings trends, marine terminal utilization, and landside mode split of incoming containers.

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EXECUTIVE SUMMARY

Freight Logistics Optimization Works (FLOW) is a voluntary public-private partnership developed by the U.S. Department of Transportation (USDOT) in collaboration with industry to create a forward-looking, integrated view of supply chain conditions. Since its launch in March 2022, FLOW has expanded to 93 participating companies and covers major container gateways along the East, West, and Gulf Coasts.

By combining advance demand signals from importers and carriers with regional supply and throughput information, the program closes critical visibility gaps across supply chain networks. FLOW data provide a better understanding of future supply chain conditions, equipping supply chain stakeholders with the evidence needed to address significant congestion events and support a more resilient freight network.

This report provides an overview of the FLOW program, including the types of data collected and how FLOW data are used. The report also shares aggregated FLOW data and corresponding analysis for key indicators and measures, including for FLOW bookings trends, marine terminal utilization, and landside mode split of incoming containers.

OVERVIEW OF THE FLOW PROGRAM

1



What is FLOW?

Freight Logistics Optimization Works (FLOW) is a public–private partnership among industry and government to build a forward-looking, integrated view of supply chain conditions in the United States. Participating companies securely share selected logistics data, which are then anonymized, aggregated, and regionally segmented to provide a broader view of the current conditions of the overall logistics network. These aggregated FLOW data enable participants to anticipate how current capacity and throughput will fare against future demand and take proactive steps to mitigate delays or disruptions.

FLOW is led by the U.S. Department of Transportation (USDOT) Office of Multimodal Freight Infrastructure and Policy, in collaboration with industry and the Bureau of Transportation Statistics (BTS), which serves as the independent data steward. FLOW participants—including but not limited to beneficial cargo owners, intermodal equipment providers, logistics real estate providers, marine terminal operators, motor carriers, port authorities, rail carriers, and vessel and non-vessel operating common carriers—contribute data, develop use cases, and participate in FLOW collaborative processes.

Data shared by FLOW participants are protected under the Confidential Information Protection and Statistical Efficiency Act of 2018 (codified at 44 USC 3561–3583) or CIPSEA, which requires BTS to ensure the confidentiality and exclusive statistical use of that data. BTS uses the data shared by FLOW participants to develop aggregated results and analyses, including this report, for dissemination to FLOW participants and the public.

Goals of the FLOW program include:

- Support operational decisions by FLOW participants to strengthen infrastructure resilience of the Nation's freight supply chains and reduce costs for consumers.
- Establish a secure data infrastructure to support a more reliable and accurate information exchange among FLOW participants and USDOT about the goods movement process.
- Foster an environment for collaborative, data-informed decisionmaking by key supply chain stakeholders to improve supply chain performance and fluidity and avoid disruption.

FLOW Data Framework

FLOW participants share forward-looking data on the demand for equipment and assets to move imported shipping containers as well as data on the supply and throughput of these assets. Demand information includes data from importer purchase orders and carrier bookings, while supply and throughput measures are derived from port and marine terminal operations data, chassis and drayage fleet data, and other logistics information shared by FLOW participants.

FLOW Data Category	Types of Data Shared	Data Usage
Demand	Importer purchase orders, carrier bookings, origin/destination information	Advance view of future logistics demand
Supply	Asset availability across different transportation modes	Compare expected demand with available capacity
Throughput	Gate movement indicators across key network locations, by mode	Compare demand and supply fluctuations to container movement over time

FLOW Program Development

FLOW was launched in March 2022 as a proof-of-concept public–private data exchange with 18 initial participants, focusing on four major container gateways: the Ports of Los Angeles, Long Beach, New York/New Jersey, and Savannah. Its creation was in response to acute congestion and limited cross-network visibility during the pandemic-era supply chain crisis. The early focus was on establishing a trusted environment, defining actionable shared data, and demonstrating that competitors and trading partners could contribute data without exposing proprietary company-level information.

By fall 2022, FLOW membership had doubled, and companies began sharing data, marking the transition from program design toward active data exchange. Several first-year milestones include development and publication of the FLOW data dictionary, development of baseline system architecture and secure transmission protocols, and sharing of aggregated FLOW data files with participants.

Since then, FLOW has progressively expanded its data coverage, participants, and analytical products. FLOW now includes major container gateways along the East, West, and Gulf Coasts, expanding beyond the four initial gateways to add Port Houston, the Port of Oakland, and the Northwest Seaport Alliance. With these additions, FLOW includes the five largest West Coast container ports, the largest Gulf Coast container port, and the two largest East Coast container ports, by total twenty-foot equivalent units (TEUs). FLOW continues to onboard new participants across logistics industry sectors, totaling 93 companies as of September 2026. FLOW has also enhanced the data platform to include trends reports, data visualizations, and an application programming interface, allowing participants to access FLOW aggregated data via system-to-system connection.

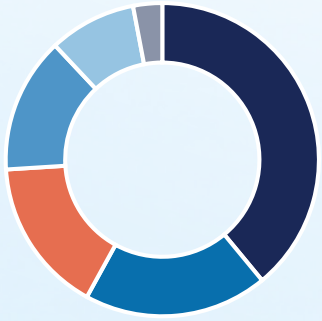


FLOW at a Glance

Who Participates in FLOW?



Participating Partners by Supply Chain Sector



Shipper (importer, beneficial cargo owner)	39%
Marine terminal operator	19%
Truck/chassis	16%
Ocean carrier	14%
Third-party logistics	9%
Logistics real estate	3%

Participating importers
4 OF THE TOP 5

FLOW ports represent
8 OF THE TOP 15
U.S. container ports

80%
of ocean carrier bookings

80%
of marine terminal capacity

Note: Top importers based on the top 100 U.S. importers in 2025 (JOC 2026).
Top U.S. container ports based on BTS port performance freight statistics (BTS 2026).



FLOW DATA VALUE AND APPLICATIONS

2



FLOW Value Proposition

Freight supply chains are highly interconnected, yet market-level insights are frequently obscured. For example, when moving a shipping container, shipment data are shared only among the immediate logistics partners. As a result, many parties directly involved in the process remain unaware of the broader operating environment. FLOW was established to close this visibility gap by collecting and sharing limited shipment and logistics data across a network of supply chain participants.

FLOW aims to provide earlier, shared visibility into potential supply and demand imbalances involving the movement of containerized freight. Purchase orders and carrier bookings signal future demand for logistics equipment and assets. Combining these demand signals with regional supply and throughput data provides FLOW participants with a better understanding of future supply chain conditions, equipping them with the evidence needed to address significant congestion events and support a more resilient freight network.

How Industry Uses FLOW Data

Participants use FLOW data to increase their visibility into forward-looking supply chain conditions. Common participant use cases include:

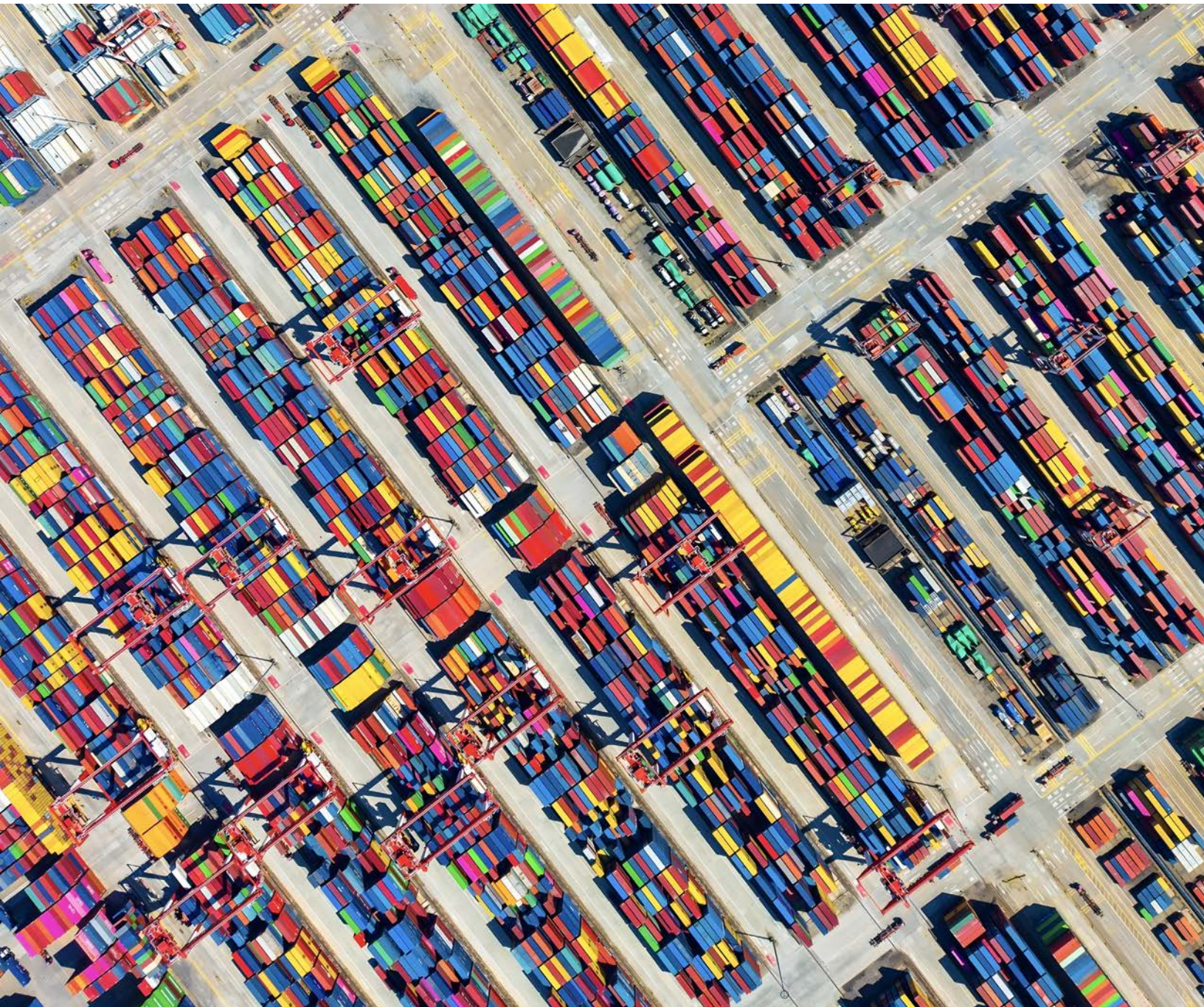
- **Descriptive:** Visualizations or summaries of certain FLOW data. For example, throughput reporting and visualization to provide transparency into the current conditions of logistics networks of interest.
- **Predictive:** Using FLOW data to improve estimates or predictions. For example, integrating FLOW data to improve arrival or dwell estimates.

- **Prescriptive:** Leveraging FLOW data to meet a specific operational objective. For example, reducing dwell times or improving asset utilization.

Use cases are often specific to a participant's informational or operational objectives. FLOW offers templates and guidance to participants for developing company-specific use cases. Examples of use cases developed and shared by participants include demand forecasts for warehouse space and chassis availability at and near ports.

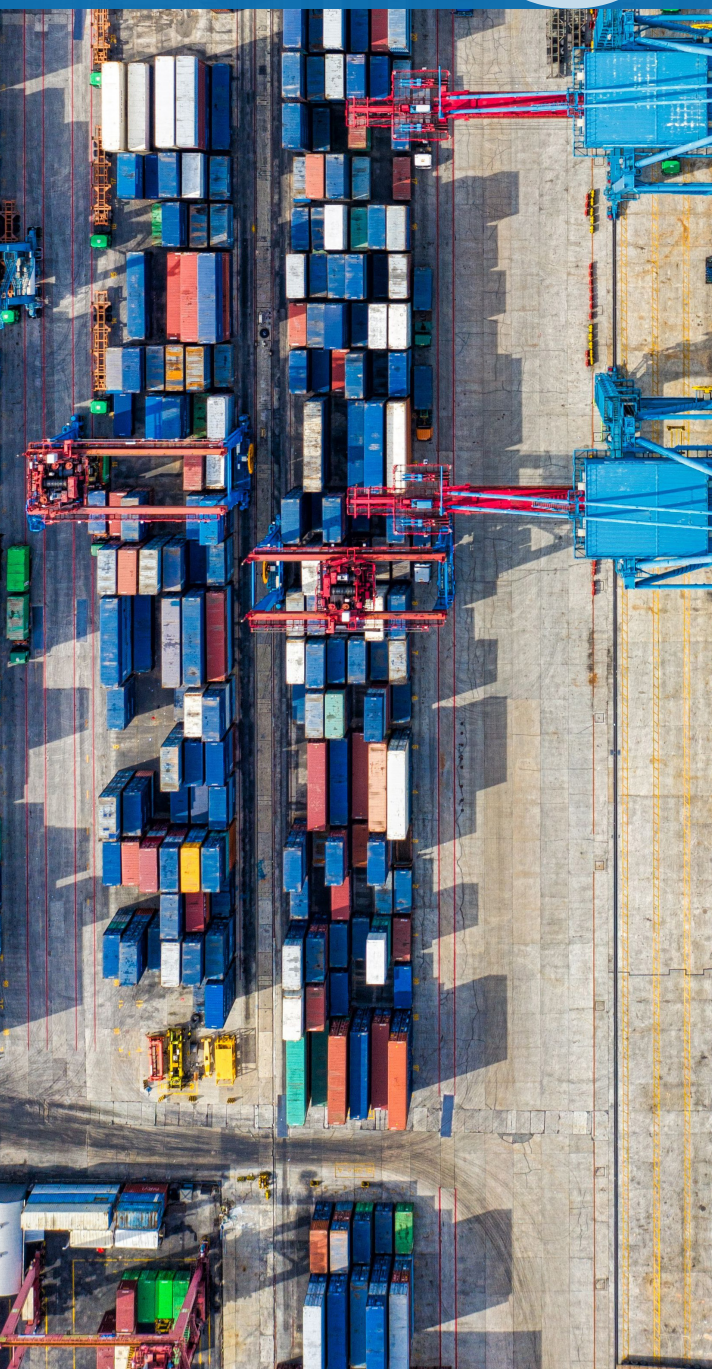
To facilitate use case development, FLOW provides standardized data-mapping templates and guidance to participants. Additional guidance and examples are also available through the FLOW public GitHub repository.[1]

[1] FLOW public GitHub repository, https://github.com/VolpeUSDOT/BTS_FLOW.



FLOW ANNUAL INDICATORS AND OPERATIONAL MEASURES

3



This section presents aggregated FLOW data and corresponding analysis for key supply chain indicators and measures tracked by the FLOW program across major U.S. intermodal gateways. It is organized to follow the general movement of import containers from the port of origin, through U.S. ports, and further into the U.S. hinterland. Figure 1 presents the percentage of import containers distributed among the top five importing countries at FLOW participating ports. Figure 2 displays the dynamic nature of import bookings and how the volume of import cargo represented shifts as the date of discharge at the port approaches. Figure 3 displays historical marine terminal utilization data. Users monitor these data for tightening conditions at FLOW ports. Finally, Figures 4 and 5 depict the percent of truck and rail use to move import containers off terminal and toward their final destinations. FLOW ocean carrier participants are responsible for about 80 percent of total import TEUs.[2]

FLOW Bookings Trends

Origin-to-Destination Volumes

FLOW collects daily ocean carrier bookings data that identify the country of the last port of call, the U.S. port of discharge, and the volume in TEUs associated with that pair. These data allow FLOW participants to monitor the share of import containerized cargo coming from the top U.S. trading partners.

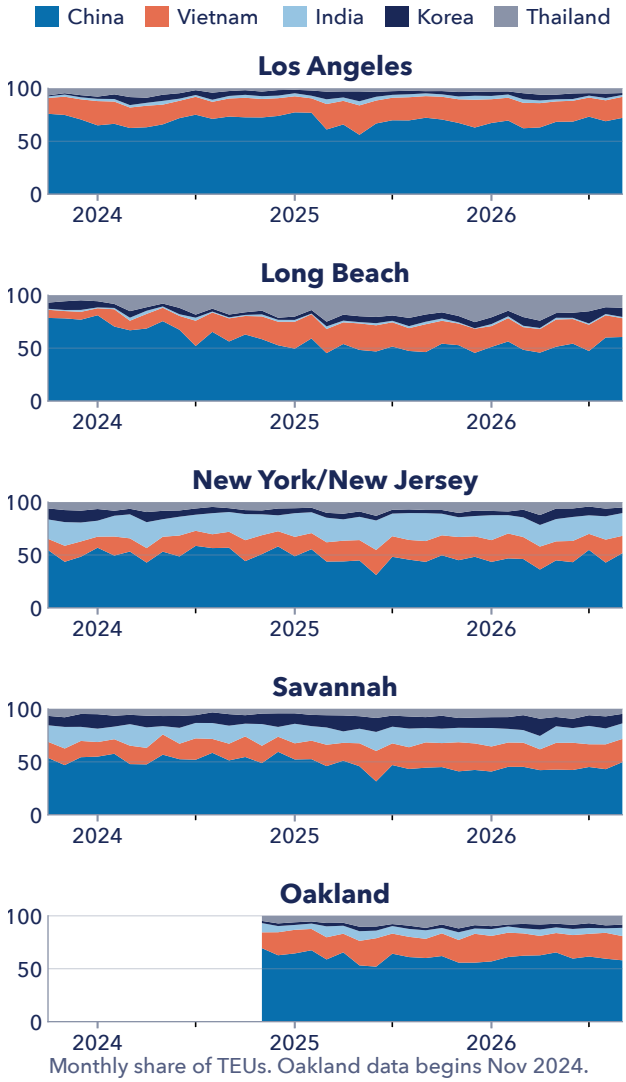
An analysis by country of origin reveals fluctuations in the share of containerized imports by country over time, as shown in Figure 1. While the overall national trends remain fairly consistent, regional and port level differences emerge. For example, while China consistently accounts for the

[2] FMC Containerized Freight Statistics 2025, https://www.fmc.gov/databases-and-publications/containerized-freight-statistics/.

highest shipping volumes across FLOW ports, India routes higher cargo volumes to East Coast ports compared to West Coast ports. Thailand tends to see its highest cargo volumes entering through Long Beach, compared to other FLOW ports.

FLOW provides import volumes based on total TEUs moved by participating carriers through FLOW ports. This analysis is expanded in geographic scope in BTS's Port Performance Freight Statistics Program.[3]

Figure 1. Percentage of Import Containers from the Top 5 U.S. Trading Partners through FLOW Ports



Monthly share of TEUs. Oakland data begins Nov 2024.

Source: BTS

[3] BTS Port Performance Freight Statistics Program, https://www.bts.gov/ports.

Dynamic Nature of the Bookings Data

For bookings records, ocean carriers share daily data with FLOW from the time of initial booking until its date of discharge. The aggregated FLOW data show a pattern of volume growth and contraction as an initial booking progresses to loading, transit, and final discharge. The FLOW data allow for the exploration and monitoring of this pattern over time.

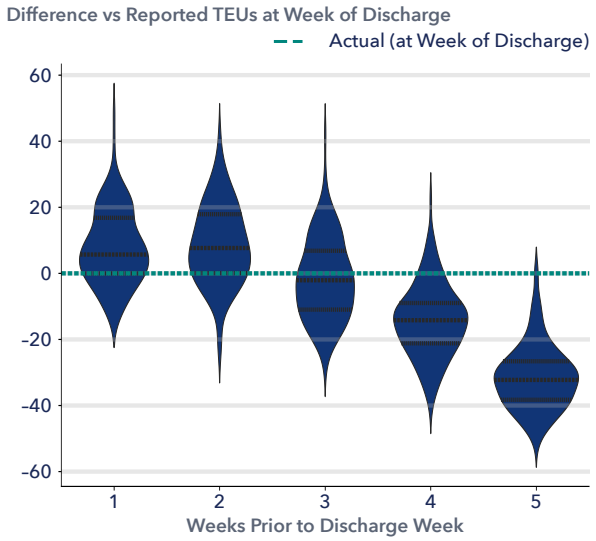
Figure 2 tracks the accuracy of import shipping container (TEU) volume forecasts leading up to their actual week of discharge at the U.S. port. The horizontal axis represents the number of weeks before the actual discharge that the estimated discharge date was shared with FLOW. Moving from right to left shows earlier to more recent estimates. The vertical axis measures the estimated error as a percentage. The dashed line represents the most recent number of TEUs reported during the week of discharge.

The shapes show the historical distribution of these predictions. When a shape stretches high above the zero line, it indicates that the volume of arriving containers was overestimated; when it dips below the line, the volume was underestimated. The widest parts of the shapes highlight the most common margin of error for that specific timeframe, showing where most historical forecasts landed.

As shown in Figure 2, the shapes shrink vertically and pull tighter around the zero line moving from right to left (earlier to more recent estimates). This visualizes the narrowing "cone of uncertainty" as the actual discharge date approaches. It demonstrates exactly how much the forecast improves and

stabilizes as the arrival date approaches and supply chain variables become fixed.

Figure 2. Shift in Forecast Container Discharge 0-5 Weeks from Actual Discharge



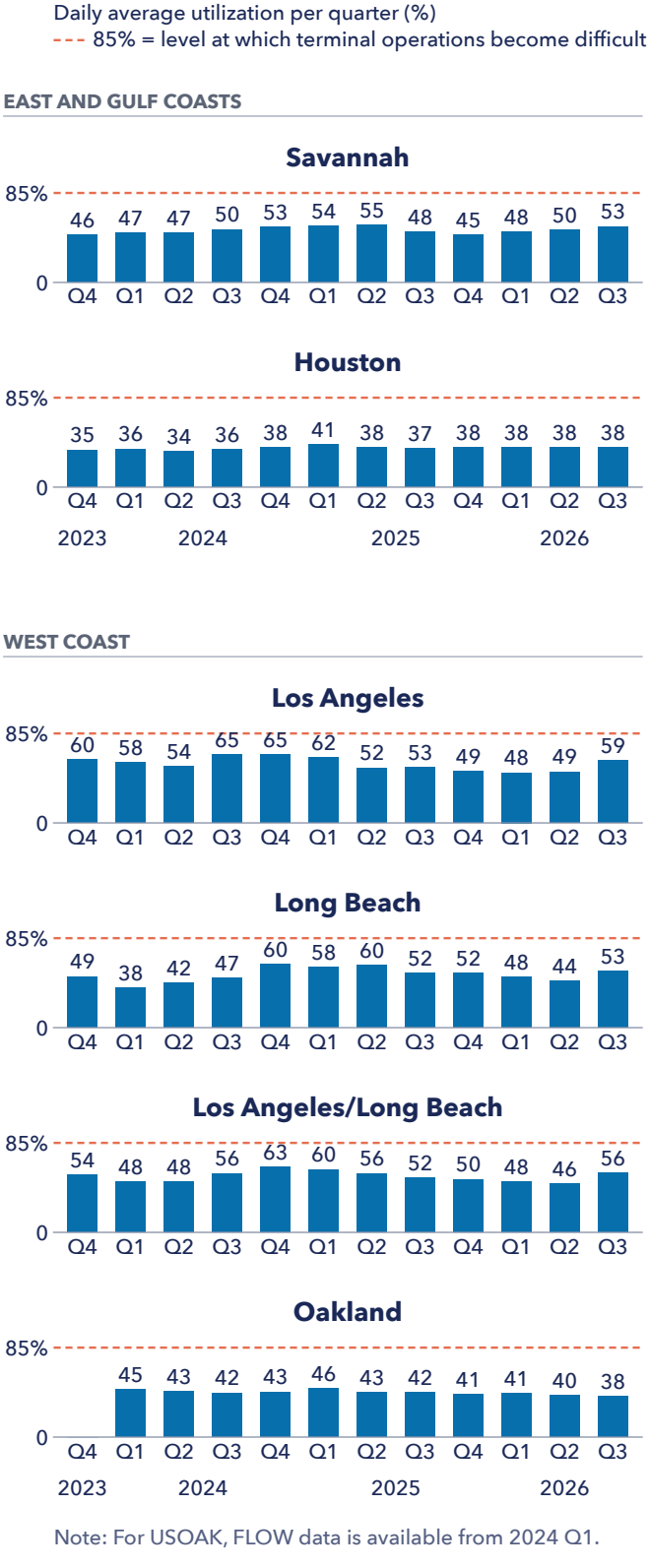
Source: BTS

Marine Terminal Utilization

Terminal utilization at FLOW ports is calculated as the average daily inventory of containers on terminal as a percentage of the overall design capacity. Figure 3 shows the average terminal utilization at FLOW ports by calendar quarter over the past three years. The dashed line at 85 percent shows a typical maximum operational capacity.

Over the three-year period, terminal utilization consistently remained below critical thresholds, indicating no significant risk of exceeding operational capacity. Los Angeles, Long Beach, and Savannah experienced distinct utilization increases during the third and fourth quarters of 2024 and the third quarter of 2026, aligning with expected cargo volume patterns during traditional peak shipping seasons.

Figure 3. Quarterly Percent of Terminal Utilization by Port



Note: For USOAK, FLOW data is available from 2024 Q1.

Source: BTS

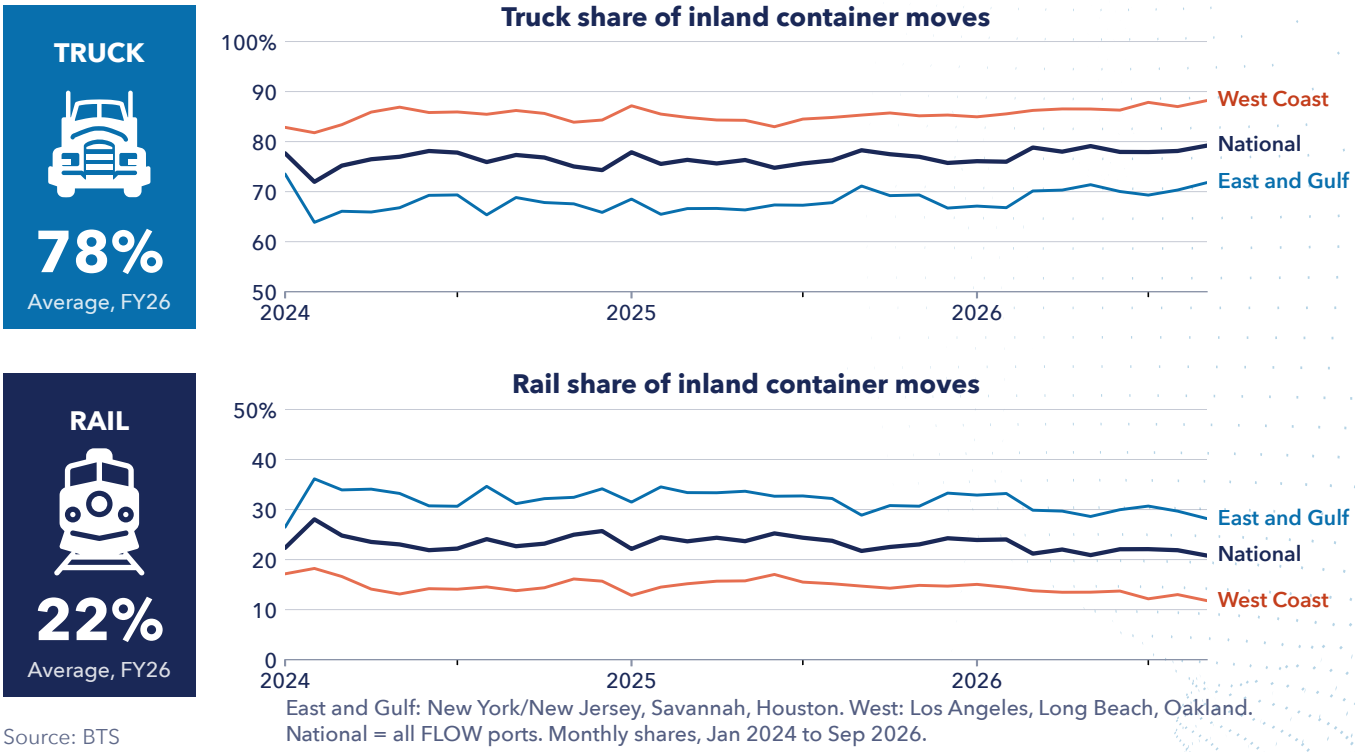
Landside Mode Split of Incoming Containers

Landside mode split refers to the percentage of imported containers moved from the marine terminal inland by truck versus rail. For purposes of this analysis, the mode corresponds to the longest leg of inland transit from the marine terminal. These data are collected from the FLOW ocean carrier bookings data.

Figures 4 and 5 show the average truck and rail mode share, respectively, since January 2024. (Notice that Figure 4's vertical axis begins at 50 percent to facilitate examination of the change in truck share over time.) As shown in the plots, trucking moved more containers inland compared to rail, for FLOW ports on the East and Gulf Coasts and the West Coast, with the national average fluctuating between 70 and 80 percent during the period shown. From 2024 to 2025, the truck share of inland container moves increased by about 0.4 percent year-over-year. During the first three quarters of 2026, the truck share increased by 4.1 percent. FLOW ports on the East and Gulf Coasts showed a higher percentage of rail movements compared to FLOW ports on the West Coast (average 31.8 percent vs. 14.6 percent), which demonstrated a gradual decline in rail mode share.

FLOW provides mode split information based on total TEUs moved by participating carriers through FLOW ports. This analysis is expanded in geographic scope in BTS's Freight Analysis Framework, which includes estimates on mode shares for truck, rail, and other freight modes.[4]

Figures 4 and 5. Monthly Percent of FLOW Imports Moved Inland by Truck and Rail



East and Gulf: New York/New Jersey, Savannah, Houston. West: Los Angeles, Long Beach, Oakland. National = all FLOW ports. Monthly shares, Jan 2024 to Sep 2026.

Source: BTS

[4] BTS Freight Analysis Framework, https://www.bts.gov/faf.

LOOKING AHEAD

4



The FLOW program continues to focus on advancing data quality and enabling more useful analyses for decisionmaking. Areas of exploration include:

- **Enhanced chassis fleet details:** Incorporating detailed chassis pool utilization metrics and dwell tracking to highlight regional equipment availability.
- **Marine terminal utilization forecasting:** Developing predictive modeling tools to forecast gate traffic and container dwell times based on incoming booking feeds.
- **Terminal expansion:** Integrating additional gateway data into FLOW.
- **Rail data integration:** Exploring direct Class 1 rail data integrations to establish end-to-end corridor visibility from coastal ports to inland intermodal ramps.
- **Merchant haulage/carrier haulage framework development:** Refining equipment tracking methodologies to better understand and measure inland container movements.

As FLOW continues to mature, the program will focus not only on expanding participation and data coverage, but also on developing increasingly reliable, actionable, and decision-ready intelligence. Priorities include developing consistent longitudinal indicators, incorporating more detailed equipment and terminal data, expanding multimodal inland visibility, strengthening forecasting capabilities, and developing interpretable indicators of emerging supply chain risks. Through its ongoing and planned initiatives, FLOW will continue working closely with industry partners to strengthen these capabilities and deliver value as a trusted source of forward-looking information for a more efficient, responsive, and resilient national logistics system.



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