# Memorandum of Agreement

## For

# Freight Logistics Optimization Works (FLOW)

## Exchange of Data

**Effective Date:**

## 1.0 Parties

This legally binding Memorandum of Agreement (the "MOA" or "Agreement") is entered into by the Bureau of Transportation Statistics ("BTS"), an office within the U.S. Department of Transportation, and *[Participant Legal Name]* , with their primary offices at : *[Participant Address]* ("Participant").

This MOA is based on a voluntary and mutual interest to collect and analyze information to determine statistically significant indicators of potential problems suited to risk reduction measures within the National Logistics System. The Parties will work together in the spirit of cooperation and open communications, consistent with law.

The U.S. Department of Transportation's mission is to serve the United States by ensuring a fast, safe, efficient, accessible, and convenient transportation system that meets our vital national interests and enhances the quality of life of the American people, today and into the future. BTS' mission is to serve as the leading source of timely, accurate, and reliable information on the U.S. transportation systems used for moving people and goods, and on their impacts on the economy, society, and the environment.

Participant is Description of Type of Participant

Participant will:

☐ submit data owned by Participant.

☐ submit data on behalf of other FLOW participants, including:

Name(s) of Others: _____

_____

_____

## 2.0 Legal Authorities

49 U.S.C. § 6302 authorizes the BTS Director to enter into agreements with Federal, State, local, or private agencies for the purposes of data collection and analysis.

49 U.S.C. §6307(b) prohibits disclosure of certain information by the BTS.

The Confidential Information Protection and Statistical Efficiency Act, ("CIPSEA"), is a United States federal law enacted as Title III of the Foundations for Evidence-Based Policymaking Act of 2018 (Public Law 115-435, 132 Stat. 5529, 44 U.S.C. Chapter 35), reauthorizing the 2002 law of the same name. CIPSEA establishes uniform confidentiality protections for information collected for statistical purposes[1] by U.S. statistical agencies.

In accordance with 49 U.S.C. 118(c)(3), the Office of Multimodal Freight Infrastructure and Policy shall "promote and facilitate the sharing of information between the private and public sectors with respect to freight issues."

## 3.0 Confidential Information Protection & Statistical Efficiency Act

The Confidential Information Protection and Statistical Efficiency Act ("CIPSEA") establishes uniform confidentiality provisions for information collected for statistical purposes by U.S. statistical agencies. The purposes of CIPSEA are:

i. to ensure that information supplied by individuals or organizations to an agency for statistical purposes under a pledge of confidentiality is used exclusively for statistical purposes;
ii. to ensure that individuals or organizations who supply information under a pledge of confidentiality to an agency for a statistical purpose will neither have that information disclosed in identifiable form to anyone not authorized to see it nor have that information used for any purpose other than a statistical purpose; and
iii. to safeguard the confidentiality of individually identifiable information acquired under a pledge of confidentiality for statistical purposes by controlling access to, and the uses made of, such information.

In undertaking efforts to obtain information for a statistical purpose under CIPSEA, an agency may designate agents to perform statistical activities on their behalf. Such agents must take and subscribe an oath of office or swear to observe the limitations of section 512 of the CIPSEA provisions. Further, such agents must undertake confidentiality training and sign a binding non-disclosure agreement (the Appendix). Any knowing or willful disclosure of information protected

[1] 44 U.S.C. § 3561(12) states: The term "statistical purpose"— (A) means the description, estimation, or analysis of the characteristics of groups, without identifying the individuals or organizations that comprise such groups; and (B) includes the development, implementation, or maintenance of methods, technical or administrative procedures, or information resources that support the purposes described in subparagraph (A).

under the provisions of CIPSEA in any manner to a person or organization, including Participant, not entitled to receive such information is considered a class E felony and may result in imprisonment for not more than 5 years, a fine of not more than $250,000, or both for the disclosing party[2].

## 4.0 Purpose

This Memorandum of Agreement: (1) establishes the authority by which the USDOT and industry will exchange FLOW Data and (2) identifies the rights and responsibilities of the parties. The exchange of FLOW Data is solely intended to support industry collaborative demand management decision making associated with the daily management of cargo and assets.

## 5.0 Principles

Participation in the FLOW program is predicated on a realized systemic benefit to the National Logistics System (NLS) resulting from the exchange of unique data between the Participants and the United States Department of Transportation. In the FLOW Data exchange program, individual industry Participants provide specific data elements to the Bureau of Transportation Statistics (BTS). BTS (1) safeguards, aggregates, and processes that data into a form that is appropriate for use in the FLOW process and (2) distributes that processed data to all participating government and industry Participants. The FLOW initiative provides for common situational awareness among participating stakeholders, improved demand predictions, enhanced decisions, and reduced delays.

## Definitions

5.1 **Freight Logistics Optimization Works (FLOW):** A joint government/industry initiative aimed at enhancing information sharing within the freight community and adding a customer focus to decision-making. FLOW is an operating paradigm where decisions are based on a shared, common view of the NLS.

5.2 **Collaborative Demand Management (CDM):** CDM makes use of available information and the latest technology to force a shift from independent, forecasted demand to dependent, predictable demand. This implies real-time information sharing about demand and capacity among supply chain partners. It also helps prevent a situation where a business finds itself incapable of meeting an unexpected surge in demand due to lack of prior cues.

5.3 **National Logistics System (NLS):** The complex collection of personnel, transportation assets, vessels, trucks, railcars, equipment, and all other freight components that comprise the United States' supply chain system.

[2] 44 U.S.C. § 3572(f).

5.4 **NLS User:** A person or organization that operates or manages freight operations within the NLS utilizing NLS resources.

5.5 **FLOW Data:** Industry-generated, unique data provided in real time as input to the FLOW process; or USDOT-generated aggregate information that is based upon the industry data.

5.6 **FLOW Index:** Statistical indicator of supply and demand at a given supply chain node.

5.7 **FLOW Products:** Applications and services provided to Participants to enhance situational awareness, including but not limited to the FLOW Index.

5.8 **FLOW Stakeholder Group:** The collective group of the federal government representatives and all participants in the FLOW program.

5.9 **Participant:** A NLS user organization that: (1) provides raw FLOW Data to the USDOT, (2) receives processed FLOW Data from the USDOT, and (3) collaboratively works with the USDOT Office of Multimodal Freight Infrastructure and Policy in responding to NLS demand-capacity imbalances and other system constraints.

5.10 **Service Provider:** A vendor under contract to a Participant that provides the communications network that enables the exchange of FLOW Data and information between the USDOT and the Participants.

5.11 **Third Party:** An entity not directly involved in a transaction between the USDOT and a Participant.

## 6.0 Roles and Responsibilities

### 6.1 Bureau of Transportation Statistics (BTS)

BTS shall:

- Develop and implement a system and a secure hosting environment to support and manage a database of information provided by Participants and others.
- Collect confidential data submitted by Participant, other companies, and individuals solely for statistical analysis as detailed in this MOA.
- Protect the confidentiality of the data submitted under its own confidentiality statute (49 U.S.C. 6307(b)), and CIPSEA.
- Develop user interface tools to provide each Participant secure access to its own data.
- Develop online analytical tools to allow each FLOW Participant to conduct its own analysis of all data residing in the secure database, without disclosing data contributor identifiable information.
- Provide each Participant with specifications, communications protocols, equipment requirements, interface requirements, standards, message formats, and other relevant technical information and support as necessary to transmit, receive, interpret, and analyze FLOW Data.
- Provide a point of contact for technical support.
- Encrypt processed FLOW Data in accordance with the current industry standard.

- Provide each Participant or their Service Provider with physical access to the encrypted FLOW Data.
- Release encrypted FLOW Data and provide FLOW Product access to Participants only after they have demonstrated the capability to provide raw FLOW Data consistent with the documented data quality standards defined by BTS.
- Provide processed FLOW Data consistent with the accuracy, reliability, maintainability, and availability of processing and communications capabilities.
- Have the sole right to relocate, upgrade, and/or update the FLOW Data stream in order to take advantage of advances in technology or for other reasons. BTS shall provide notice of such changes not less than sixty (60) days prior to their implementation.
- Have the right to identify and disclose to the FLOW Stakeholder Group (FSG), FLOW Participants not in compliance with, or in violation of, this agreement and may interrupt, or direct the interruption of, the FLOW Data stream to such Participant until such time that compliance is demonstrated to the satisfaction of the USDOT FLOW Point of Contact (POC).
- Have the right, with timely and appropriate advance notification and coordination, to modify and amend this agreement if it is in the interest of the United States Government, the freight industry, or the general public.

### 6.2 **Participant**

Each Participant shall:

- On a voluntary basis, submit operational data to BTS, including a minimum expected set of core data detailed in the Appendices, for statistical analysis through a secure hosting environment. The manner and format for such submissions by Participant shall be consistent with guidance stipulated in the BTS FLOW Data Users Guide.
- To the extent practical, the Participant shall attest to the quality and accuracy of the data provided.
- Acquire and maintain the hardware, software, communications, facilities, training, and all other resources needed to transmit, receive, and interpret the FLOW Data. In the event the FLOW Data stream is relocated, upgraded, updated, and/or modified, the Participant shall be responsible for providing and maintaining the hardware, software, communications, facilities and any and all other resources needed to continue to transmit, receive and interpret the FLOW Data.
- Provide unique industry-generated FLOW Data to BTS consistent with the data elements and quality standards as specified in the Appendix of this Agreement; and consistent with the accuracy, reliability, maintainability, and availability of the Participant's operational system and/or other processing and communications capabilities.
- Ensure any third-party accessing FLOW Data or Products for research, development, analyses, conclusions, or other capabilities commissioned by the Participant abides by the terms of this Agreement. Third party access must be limited to a specific period of performance and is not allow for a long-term pass-through of FLOW Data that circumvents

this Agreement or BTS data release processes. **BTS MUST APPROVE ALL THIRD-PARTY ACCESS TO FLOW DATA PER CIPSEA PRIOR TO SUCH ACCESS.** The contracting Participant and/or third party must clearly indicate on all outcomes based on FLOW Data that these Products and results are not guaranteed, sponsored, warranted, or endorsed by the USDOT.

- The Participant may designate other FLOW participants to submit FLOW data on their behalf. The Participant shall promptly notify BTS of the designation and any changes to designation.
- The Participant may submit FLOW data on behalf of other FLOW participants. The Participant shall promptly notify BTS of the designation and any changes to the designation.

### 6.3 **Office of Multimodal Freight Infrastructure and Policy (OST-F)**

OST-F shall

- When designated by BTS, serve as a CIPSEA agent with role-based access to disaggregated FLOW data. As a CIPSEA agent, OST-F must protect confidential information from unauthorized disclosures as set forth in Section 3 of this Memorandum of Agreement.
- Ensure the CIPSEA protected FLOW data (both Participant submitted data and that accessed through the dashboard) is limited to *Restricted Use* only, not meant for public dissemination.
- Assure that aggregated FLOW data will only be used for statistical purposes related to FLOW specific research needs.

In collaboration with FLOW participants and BTS, OST-F is responsible for leading the FLOW program and defining the program scope. OST-F is not a signatory to this agreement.

## 7.0 Financial Responsibilities

This Agreement is not a financial or funding obligation document or any commitment of funding by either party. Each party will directly fund its own participation under this Agreement and this effort. Any activity that involves payment for services related to this Agreement will be reflected in an appropriate funding document according to applicable rules and regulations of the party providing the funds. All activities by the BTS under or pursuant to this Agreement are subject to the availability of federally appropriated funds, and the parties intend that no provision of this Agreement will be interpreted to require obligation or payment of funds by any party.

## 8.0 Disputes

In the event of any dispute, question, or disagreement arising out of or relating to this Agreement or the breach thereof, the parties hereto shall first use their best efforts to settle such disputes,

claims, questions, or disagreement. To this effect, they shall consult and negotiate with each other, in good faith and, recognizing their mutual interests, attempt to reach a just and equitable solution satisfactory to both parties. The parties agree and stipulate that this binding Memorandum of Agreement shall be governed by and construed under the laws of the United States

## 9.0 Terms of Agreement and Right of Termination

This Agreement will take effect at the time of execution and will remain in effect until either party gives written notice to terminate this Agreement or until this Agreement is expressly superseded with another agreement signed by both parties.

Both parties to this Agreement shall comply with all applicable laws and regulations in its performance.

## 10.0 Data Transfer Protocol

Participant will transmit their data file to the Bureau of Transportation Statistics (BTS) via the secure data portal located on the FLOW web site (www.bts.gov/flow).

## 11.0 Communication

USDOT will recognize Participant as a "Stakeholder" for this effort by crediting Participant by name in any press or publicity that is related to the effort, and which mentions all other Participants in this effort. The Parties will collectively coordinate all publicity and press during this effort. Both parties to this Agreement will exert their best efforts to obtain prior approval from the other party for the use of any descriptive language describing the other party in a press release or other written public statement.

Other than the transfer of data, technical inquiries regarding the transfer of data, communications relating to the analysis of such data, and the provision of data-based outputs as described in the Appendices, all official communications (i.e., notices, communications, and coordination) shall be directed as follows:

Office of Multimodal Freight Infrastructure and Policy

United States Department of Transportation

Attn: Paul Baumer

1200 New Jersey Ave SE, Washington DC 20590

Room W72-318

(202) 480-6426

All inquiries regarding the transfer of FLOW Data, technical issues with the transfer of FLOW Data, and the analysis of FLOW Data shall be directed as follows:

Bureau of Transportation Statistics

United States Department of Transportation

Attn: Allison Fischman

1200 New Jersey Avenue SE, Washington, DC 20590

Room E36-302

(202) 748-0546

All communication to Participant shall be directed as follows:

Participant: *[Name of Participant Company]*

Attn: *[Participant POC Name]*

*[Participant Address]*

*[Participant Telephone]*

*[Participant Email Address]*

## 12.0 Signatory Authority, Modification, and Relationship of Parties

The signatories to this Agreement represent that they have the authority to enter into this Agreement on behalf of their respective organization.

Changes and/or modifications to this Agreement shall be in writing and signed by the original signatory or his representative, designee, or successor. The modification shall cite the subject Agreement and shall state the exact nature of the modification. No oral statement by any person shall be interpreted as modifying or otherwise affecting the terms of this Agreement.

This Agreement does not give either party any authority to act on behalf of or to obligate any funds to be expended by the other party. This Agreement may not be assigned by either party. The parties do not intend this Agreement to establish a partnership or other type of legal entity and this Agreement does not create any rights in any third party. Nothing in this Agreement shall be construed as superseding or interfering in any way with other agreements or contracts entered into either prior to or subsequent to the signing of this Agreement, nor prevent either party from entering into similar agreements or contracts with other companies or organizations.

By entering into this legally binding Memorandum of Agreement, BTS is confirming that Participant's involvement under this Agreement is not a gift from Participant to BTS or the United States Department of Transportation, and BTS' participation in this effort is not an endorsement of Participant by BTS, the United States Department of Transportation, or its employees. Participant acknowledges that it has no expectation of favorable treatment in pending or future matters, or expectation of other improper benefits from either BTS or the United States Department of Transportation because of its participation in this effort.

- SIGNATURES ON NEXT PAGE -

Executed by:

_____ _____

Rolf Schmitt
Deputy Director performing the functions and duties of the Director, Bureau of Transportation Statistics

Date

_____ _____

Date

## 1. Appendix A-1: FLOW Demand Data Elements – Beneficial Cargo Owner

The exchange of data is a fundamental tenet of FLOW and a requirement for participation. The application, connectivity and protocols used to exchange messages are detailed in the BTS FLOW Data Users Guide.

The first demand signal is beneficial cargo owner (BCO) purchase order (PO) data—everything a BCO *wants delivered* to the end destination of the container within the next ninety-one days (thirteen weeks). This is *not* "what orders BCOs are placing for the next ninety-six days" (as a BCO partner who is automatically replenishing goods will have signed a contract at the beginning of the year for these goods). This PO forecast data will be reported weekly from BCOs from ninety-one to forty-nine days ahead of ETA to the end destination of the containers (warehouse, distribution center (DC), factory).

Information that must be exchanged within FLOW Data exchange includes, but is not limited to:

*Table 1: Purchase Order Information*

| Data Element | Purchase Orders |
|---|---|
| Initiating Action | 91 days before arrival at end destination |
| Estimate lead time to container end destination | 91 days – 42 days |
| Update Frequency | Weekly |
| Applicable Node(s) | Country of origin, port of destination, rail yard, end destination |
| Unit | Estimated number of containers (FCL or LCL) |
| Data Owner | BCO |
| Characteristics | Volume: (Size); Handling: (dry/reefer); Movement (port to port, port to ramp, port to door or local door) |

## 2. Appendix A-2: FLOW Demand Data Elements – Ocean Carrier/Non-Vessel Operating Common Carrier

The exchange of data is a fundamental tenet of FLOW and a requirement for participation. The application, connectivity and protocols used to exchange messages are detailed in the BTS FLOW Data Users Guide.

Booking information will be provided by the ocean carrier and Non-Vessel Operating Common Carrier (NVO) participants weekly. FLOW does not track an individual shipment (where time-sensitive decisions are undertaken the closer that shipment gets to ETA/ATA). This is a preview window; shipments will move in and out of this window. Carriers will share information on containers booked with them, not all containers carrying on their vessels.

Ocean carrier and NVO data will not be aggregated with each other to avoid duplication; both will be submitted and kept separately. Given fewer ocean carriers will represent a larger percentage of the overall market, ocean carriers will be the primary source of demand signals for cargo bookings. Ocean carriers, depending on whether the cargo is booked for merchant or carrier haulage, will not have full information on discharge at the end destination, while NVOs will—another reason to keep the data separate.

The FSG recognizes the total demand captured by PO will not match up with the total demand captured through bookings as the total number of shippers needed to reach the same demand signal as represented by the ocean carriers is much higher. The rate of change in PO information, with some significant demand signal, will be useful to FLOW participants, independent of a perfect match to bookings.

The FLOW Index considers bookings “in-transit” from the last port call before the destination, where the final number of discharge of containers will be set — “actuals before discharge” — a separate demand signal. While the arrival date for the vessel may still change, the total discharge will not. This “in-transit” information will be reported daily.

Information that must be exchanged within FLOW Data exchange includes, but is not limited to:

*Table 2: Cargo Booking Information*

| Data Element | Cargo Booking |
|---|---|
| Initiating Action | When cargo is booked |
| Estimate lead time to container end destination | 42 days – 28 days |

| | |
|---|---|
| Update Frequency | Weekly (will include volume adjustments, booking cancellations) |
| Applicable Node(s) | Port of origin, port of destination, rail yard, end destination |
| Unit | Number of containers |
| Data Owner | Ocean carrier/NVO |
| Characteristics | Volume: (Size, empty/laden); Handling: (dry/reefer); Movement (port to port, port to ramp, port to door or local door) |

*Table 3: In-Transit Information*

| | |
|---|---|
| Data Element | Vessel In-Transit |
| Initiating Action | Vessel leaves last port call before destination |
| Estimate lead time to container end destination | 28 days – 7 days |
| Update Frequency | Daily |
| Applicable Node(s) | Port of origin, destination marine terminal, rail yard, end destination |
| Unit | Number of containers |
| Data Owner | Ocean carrier/NVO |
| Characteristics | Volume: (Size, empty/laden); Handling: (dry/reefer); Movement (port to port, port to ramp, port to door or local door) |

## 3. Appendix A-3: FLOW Capacity Data Elements – Port/Marine Terminal Operator

The exchange of data is a fundamental tenet of FLOW and a requirement for participation. The application, connectivity and protocols used to exchange messages are detailed in the BTS FLOW Data Users Guide.

Marine Terminal Operators (MTOs) will supply daily information on the number of container spaces available on terminal—the total number of container space available less the spaces currently in use. MTOs know their percentage utilization where operations are less optimal (with predictable performance results that can then help the terminal operator plan); the FLOW Index provides this benchmark across supply chain and across logistics providers. That is, when the FLOW Index rises above a certain percentage, there is a predicable impact on dwell, etc. that parties can plan for.

Only on-dock container space will be tracked; however, future iterations may include near dock space and empty container stock levels at depots. The FSG will also give consideration, beyond the pilot phase to adding vessels as a capacity node, with the demand signal as POs and bookings.

Information that must be exchanged within FLOW Data exchange includes, but is not limited to:

*Table 4: Terminal Capacity*

| Data Element | Marine Terminal Slot Availability and Total Slots |
|---|---|
| Update Frequency | Daily |
| Applicable Node(s) | Marine terminal |
| Unit | Container spaces |
| Data Owner | Marine Terminal Operator |
| Characteristics | Volume: (Import/Export, empty/laden); Handling: (dry/reefer) |

## 4. Appendix A-4: FLOW Capacity Data Elements – Motor Carrier

The exchange of data is a fundamental tenet of FLOW and a requirement for participation. The application, connectivity and protocols used to exchange messages are detailed in the BTS FLOW Data Users Guide.

The FLOW Index will count how many trucks are moving or could move at a particular node or region. If a truck is overbooked, that will count a +1 to the capacity measurement (because it's operating that day). If the truck is under-booked, it will still be counted as +1 to the capacity measurement (as it is operating). If the truck is under-booked (i.e., it has nothing to move) but it could operate, it is still counted that as +1 to the capacity measurement.

The FLOW Index is counting all trucks that could work on a given day independent of whether they are working or not. The FLOW Index capacity calculation will not identify how many loads a truck can service a day as it is a function of labor schedules and routes. If a truck has a long route, that truck driver may only be able to support one load per day, and likewise, a trucker can support multiple short routes. What the FLOW Index will track is total operating truck capacity on a given day.

It's important to separate drayage trucks from over-the-road trucks as they mostly serve different legs of the supply chain. Drayage operates right after the ports, while over-the-road trucking providers operate after the warehouse.

Information that must be exchanged within FLOW Data exchange includes, but is not limited to:

*Table 2: Drayage Dispatch Capacity*

| Data Element | Drayage Truck Dispatch Availability |
|---|---|
| Update Frequency | Daily |
| Applicable Node(s) | Marine terminal, rail terminal |
| Unit | Number of trucks |
| Data Owner | Trucking Company |

*Table 3: Over-the-Road Dispatch Capacity*

| Data Element | Over-the-road Truck Dispatch Availability |
|---|---|
| Update Frequency | Daily |
| Applicable Node(s) | Region as defined by ZIP code (to match warehouse node) |
| Unit | Number of trucks |
| Data Owner | Trucking Company |

## 5. Appendix A-5: FLOW Capacity Data Elements – Intermodal Equipment Provider

The exchange of data is a fundamental tenet of FLOW and a requirement for participation. The application, connectivity and protocols used to exchange messages are detailed in the BTS FLOW Data Users Guide.

By providing the total number of chassis available to a particular node, the FLOW Participants will be able to identify the relationship between demand and capacity of chassis impact on performance and make better planning decisions.

This aggregation does not count assets that cannot be operated as part of a total. If the chassis is broken or cannot be operated, it is not counted. If the chassis is available and being used, or available but not being used, it will be counted as part of the total—total and available should be the same number. The total will include everything that *can* be used, regardless of whether it is being used.

Information that must be exchanged within FLOW Data exchange includes, but is not limited to:

| | |
|---|---|
| Data Element | Total Chassis Availability |
| Update Frequency | Daily |
| Node(s) | Marine terminal, rail terminal |
| Unit | Number of chassis |
| Data Owner | Intermodal Equipment Provider |
| Characteristics | Volume: (Size) |

## 6. Appendix A-6: FLOW Capacity Data Elements – Warehouser

The exchange of data is a fundamental tenet of FLOW and a requirement for participation. The application, connectivity and protocols used to exchange messages are detailed in the BTS FLOW Data Users Guide.

For the warehousing index, The FLOW Index will make a unit conversion from containers to cubic feet. The total cubic feet of incoming containers will be reconciled against total warehousing cubic feet, whether the space is full or not. A healthy operating warehouse will be underutilized, similar to the terminal container yard environment. Warehouses need room to shuffle goods around to help with loading, unloading, consolidation, and de-consolidation.

Truck parking space and truck dock capacity at warehouses is an important measure; however, to make that information useful, the FLOW Index would have to intake information hourly. The FLOW Index will skip these metrics for now, as it requires a much more detailed analysis at an hourly level, and is mostly useful for the warehouse, trucking companies, and forwarders (it's an operations optimization problem) more than a system health indicator.

Information that must be exchanged within FLOW Data exchange includes, but is not limited to:

*Table 5: Warehouse Capacity Information*

| Data Element | Warehouse Space Availability and Total Space |
|---|---|
| Update Frequency | Daily |
| Nodes(s) | Individual warehouse (to be aggregated to a ZIP code-defined region) |
| Unit | Cubic feet |
| Data Owner | Warehouse |