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Committee F49

Digital Information in the Supply Chain

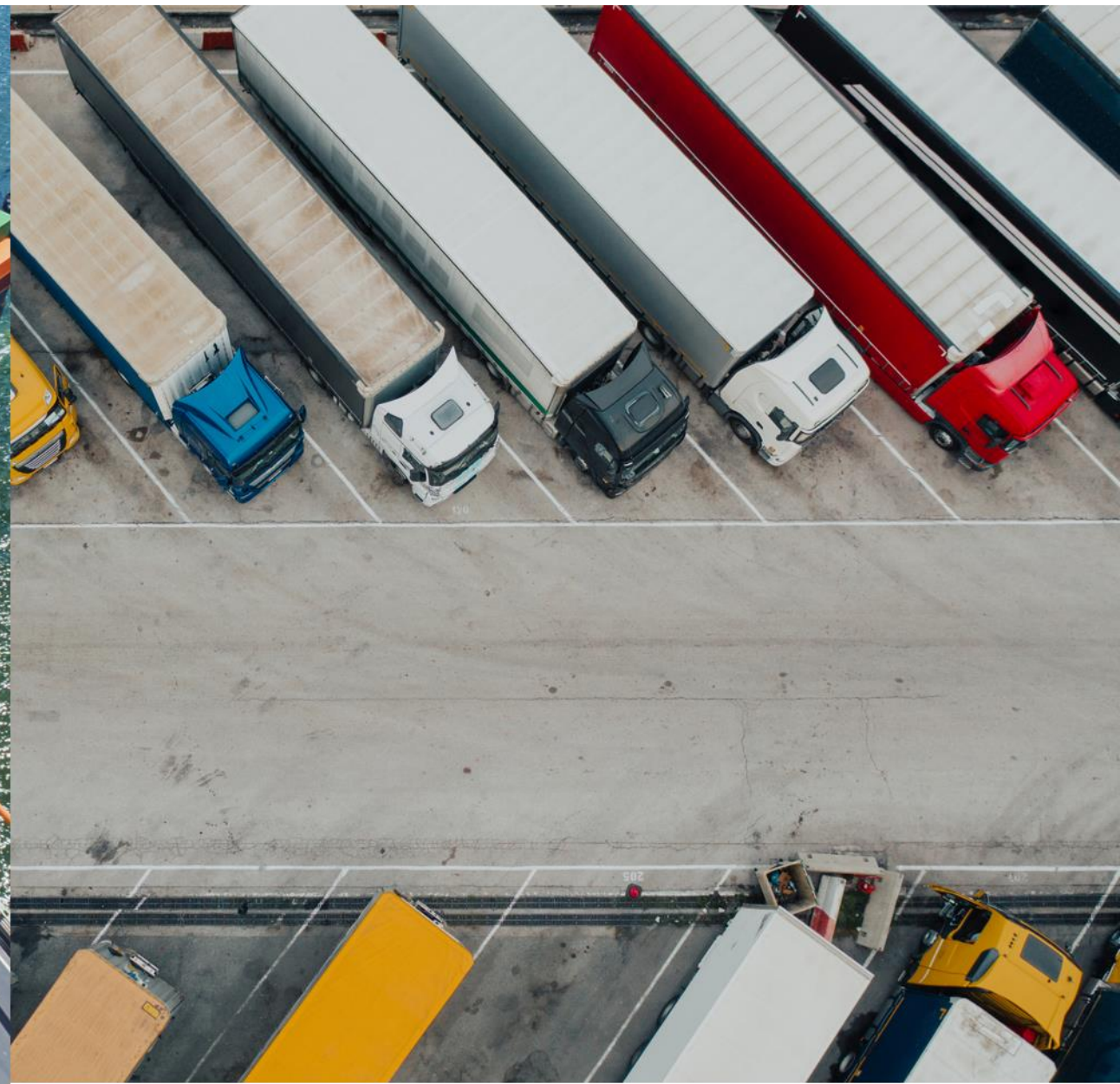
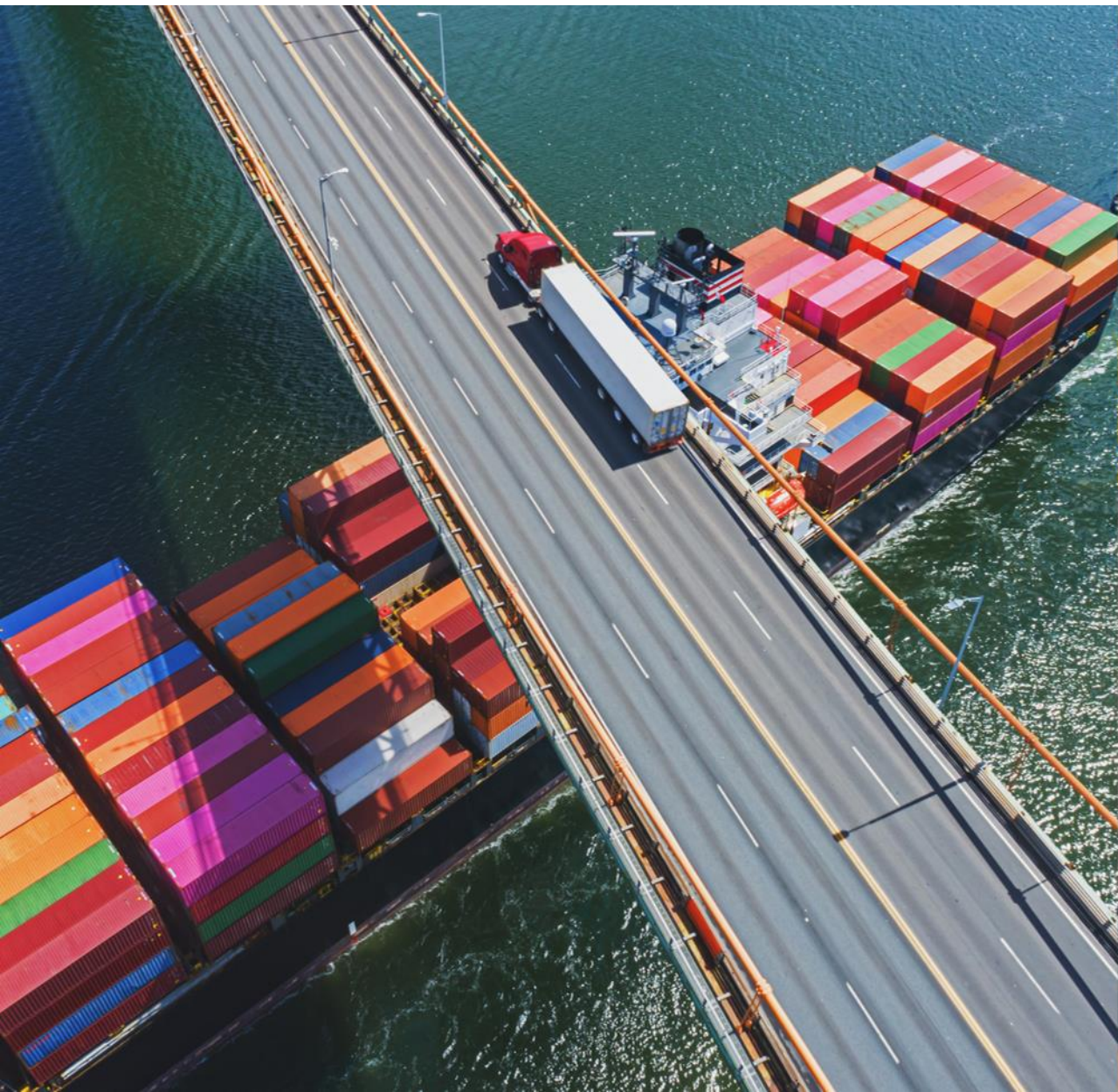
A Briefing for the National Shippers Advisory Committee
and Potential Collaboration

November 16, 2023

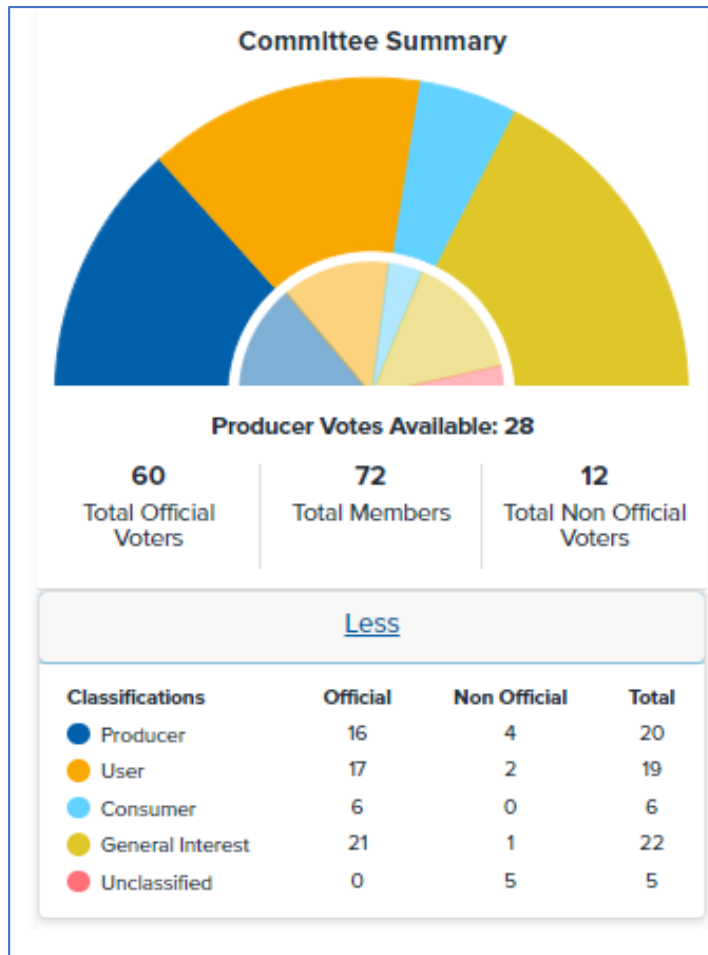




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F49 Committee Members/Participants



Private Sector:
AAR, Cisco, Coalition for Reimagined Mobility, CropTrak, Farm to Plate, GS1, HIDA, IDFA, IFPA, Microsoft, MITRE, NRF, Open Visibility Network, QuayChain, RILA, Semios, Stress Engineering, WWF



Agencies:
FMC, DOT, STB, NIST, FDA, Defense Logistics Agency, US Army

Academia:
Georgia Tech, NC State, Tuskegee, Johns Hopkins

November ASTM Committee Week

- F49 Seminar: Briefings from FMC (Bentzel), STB (Fuchs), and DOT (Petrisin)
- Active F49 subcommittees set up productive discussions on milestones and interoperability
- 2024 Goals
 - Next Committee Week: April 10-11, 2024 in Philadelphia (hybrid event)
 - Subcommittees meet on weekly or biweekly basis
 - Draft standards for all 12 work items by summer 2024
 - New work items on working data set and interoperability by spring 2024



REGULATION/POLICY

National Shipper Advisory Committee (NSAC)

Subcommittees:

- Fees and Surcharges
- **Data and Visibility**
- Chassis

Submitted Recommendations:

- Dwell Fees
- Intermodal Oversight
- **Earliest Return Date**
- Ocean Carrier Advisory Committee
- **Shipment Level, Container Level, Intermodal Data Alignment**
- Government Inspections
- **Export Cargo and Import Cargo Data Elements**
- Demurrage and Detention Billing Practices

STANDARDS



Committee F49 Digital Information in the Supply Chain

Subcommittees:

- [F49.01](#) Terminology
- [F49.02](#) Interoperability
- [F49.03](#) Essential Data Set
- [F49.04](#) Recommended Practices, Guides, and Specifications
- [F49.05](#) Enabling Technology
- [F49.06](#) Measurement
- [F49.91](#) Long-range Planning

Active Work Items:

[WK87207](#), [WK87215](#), [WK87321](#),
[WK87871](#), [WK88045](#), [WK88046](#), [WK88047](#),
[WK88048](#), [WK88049](#), [WK88050](#), [WK88126](#),
[WK88617](#)

Working together

1. Regular discussions between NSAC Data Subcommittee and F49 leadership
 - NSAC standards needs
 - F49 to advise on existing standards
 - F49 may work on items suggested by NSAC
2. NSAC members may benefit from [joining F49](#)
 - NSAC members may serve on the Long-Range Planning Subcommittee and other Subcommittees
 - NSAC will have early visibility on draft standards



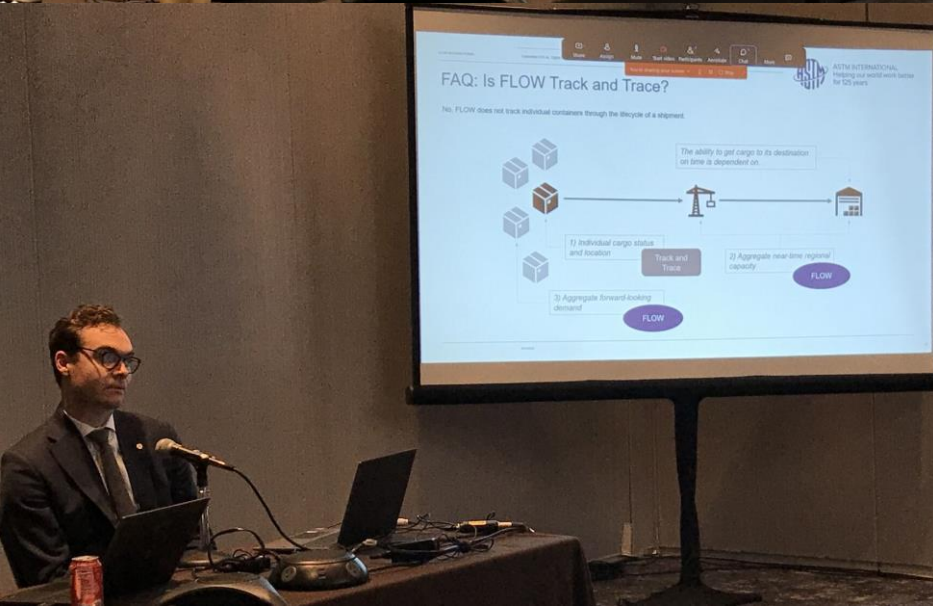
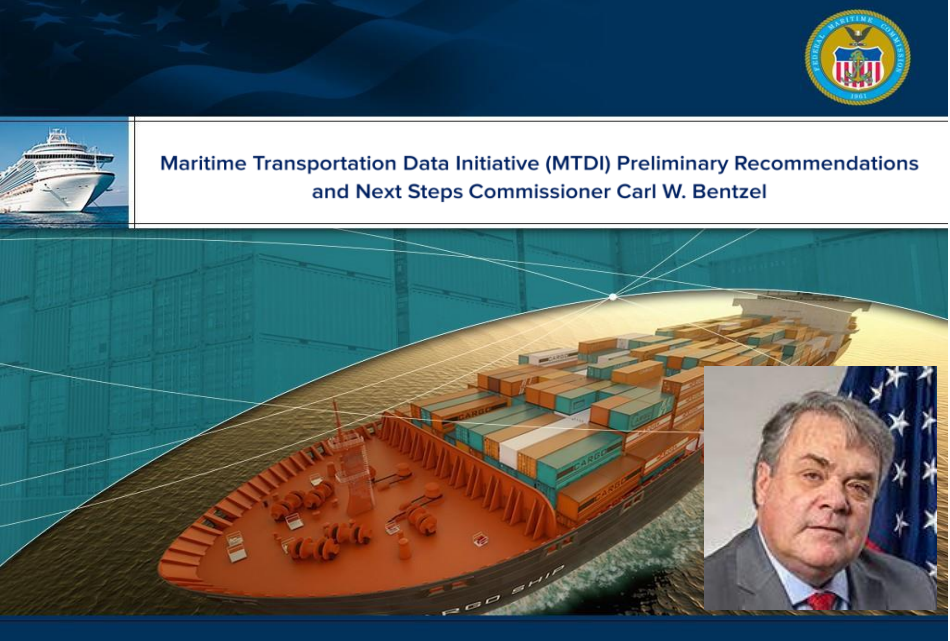
Q&A



Jeff Weiss

- Partner
- Steptoe & Johnson LLP
- Chair, F49 Committee
- jweiss@Steptoe.com

F49 Committee Week (Nov 1-2, 2023)



LAWS AND REGULATIONS (mandatory)

- Shipping Act, as amended
- Regulations to implement OSRA
- National Technology Transfer and Advancement Act

POLICY (voluntary guidance)

- Maritime Transportation Data System
- OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities
- The White House Fact Sheet: Biden-Harris Administration Announces National Standards Strategy for Critical and Emerging Technology

STANDARDS (voluntary)

- International/global standards bodies (e.g., **ASTM International**, GS1, ISO)
- Intergovernmental bodies (e.g., WCO, IMO)
- National standards bodies (e.g., ANSI)
- Non-consensus standards bodies (e.g., DCSA)
- National measurement institutes (e.g., NIST)



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Committee F49 Digital Information in the Supply Chain

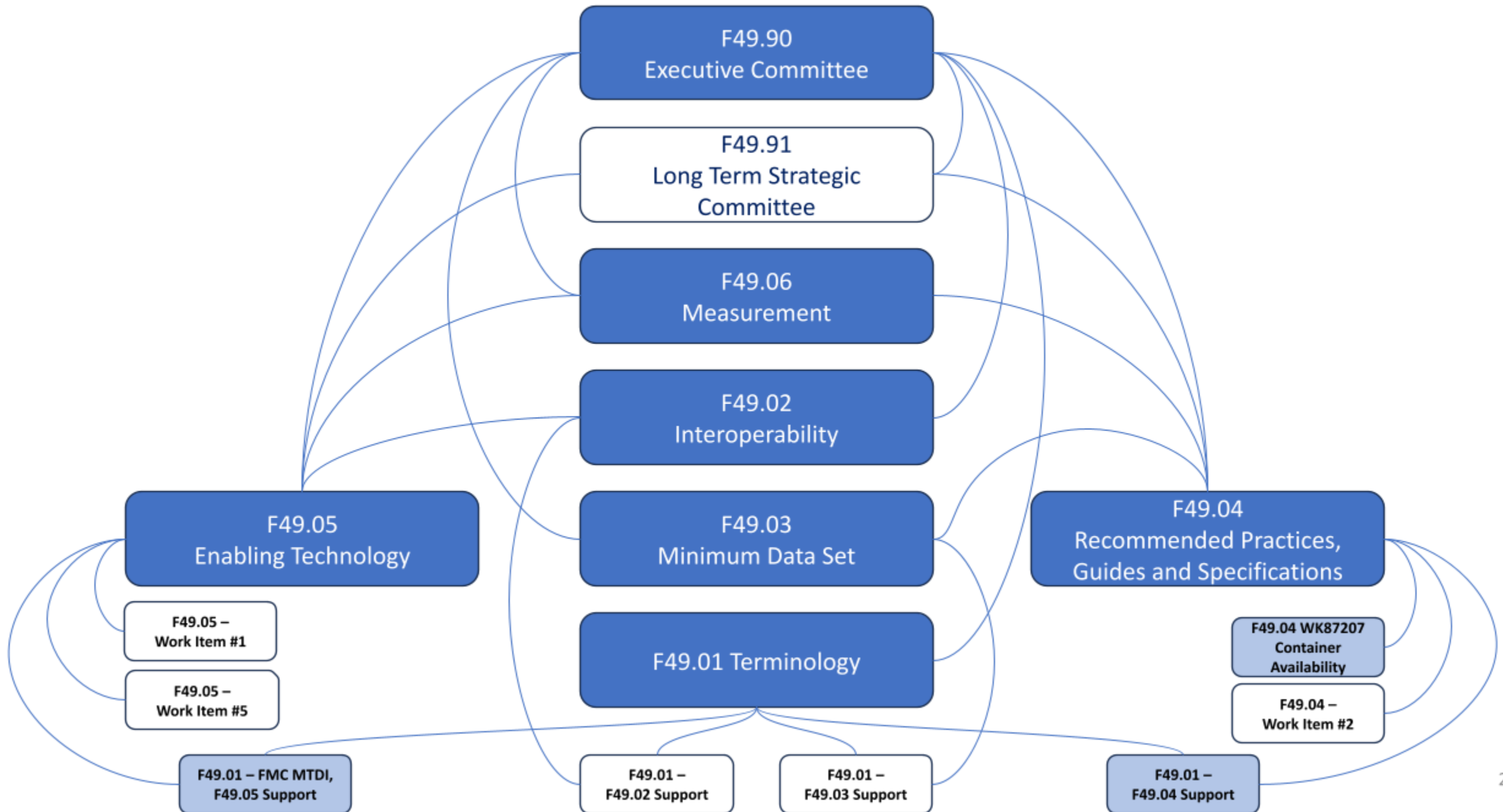
Scope:

The promotion of knowledge, stimulation of research, and the development of standards and specifications, formulation of definitions and terminology, and development of recommended practices and guides related to the sharing and use of digital information in the supply chain. The Committee will coordinate with any other ASTM Technical Committees and other standards development organizations (SDO) with related interests and ensure that the standards are technology and vendor neutral, and the standards development process is consistent with WTO principles.

Mission:

ASTM International Committee F49 is focused on providing the data standards necessary for next generation efficiencies in the global supply chain process covering all major modes of transport: Ocean Full Container, Ocean Less-Than-Container, Short-Sea, Road, Rail and Air. The high shipping volumes in 2020-2022 forced the industry to confront massive port congestion that resulted from the limitations of the current, manual communication process.

ASTM Committee F49 on Digital Information in the Supply Chain



F49 Active Work Items

- F49.04 [WK87207](#) New Practice for Container Availability
- F49.01 [WK87215](#) New Terminology for FMC's MTDI Lexicon Comparison or Alignment
- F49.01 [WK87321](#) New Terminology for Goods Movement Process (GMP) Precise Foundational Definitions
- F49.01 [WK87871](#) New Terminology for Supply Chain Terms and Modifiers for Objects, Events and States
- F49.01 [WK88045](#) New Terminology for Event Terms Used Between Posted and Pre-Booked
- F49.01 [WK88046](#) New Terminology for Event Terms Used Between Pre-Booked and Booked
- F49.01 [WK88047](#) New Terminology for Event Terms Used Between Booked and En Route
- F49.01 [WK88048](#) New Terminology for Event Terms Used Between En Route and Delivered
- F49.01 [WK88049](#) New Terminology for Event Terms Used Between Delivered and Invoiced
- F49.01 [WK88050](#) New Terminology for Event Terms Used Between Invoiced and Archived
- F49.03 [WK88126](#) New Specification for on the Essential Data Set for the Transport of Cargo
- F49.01 [WK88617](#) New Terminology for Aligning MTDI Lexicon with NSAC Minimum Required Export and Import Data Set

Goods Movement Process (GMP)

The **Goods Movement Process**, described in ISO CD 8000-119, contains the minimum milestone steps organized into three phases: Planning Phase, Execution Phase, Settlement Phase.

PLANNING PHASE

Planning Phase, n—As related to the Goods Movement Process, the phase defined by understanding the requirements and precisely defined range of time commitments and making an agreement to perform a series of services to move cargo from a precisely defined origin to a precisely defined destination.

EXECUTION PHASE

Execution Phase, n—As related to the Goods Movement Process, the phase where the cargo is in the custody of transportation service providers authorized or subcontracted to move the cargo.

SETTLEMENT PHASE

Settlement Phase, n—As related to the Goods Movement Process, the phase occurs as the resolution of services offered versus rendered, accommodating for variances in price.

POSTED

Posted, v—
The expression of future needed transport services to authorized transport service providers that may be interested to execute the transportation services, defining cargo, origin, destination, time frame, and special handling requests.

PRE-BOOKED

Pre-booked, v—
At least one transport service provider offered to execute the *posted* transport order.

BOOKED

Booked, v—
The seller and buyer of the transport services have agreed on full specifications and terms and conditions for the transport order.

EN-ROUTE

En-Route, v—
The cargo has departed from the shipper facility and is now being transported to its destination as specified on the transport order.

DELIVERED

Delivered, v—
Refers to the cargo subject to the transport order, after arrival, unloading, inspection for visible defects, and received at the destination with custody being transitioned from carrier to the recipient.

INVOICED


Invoiced, v—
The result of the carrier or the service provider providing the data and information for subsequent processes of matching and payment.

ARCHIVED


Archived, v—
The total closing off of the administrative processing of the transport order.

**Recommendations on the
Maritime Transportation Data System
Requirements**

Commissioner Carl W. Bentzel



Federal Maritime Commission
Washington, DC
April 2023



WK88617

New Terminology for Aligning MTDI Lexicon with NSAC Minimum Required Export and Import Data Set

Sponsoring Subcommittee:

F49.01

Technical Contact:

Michael Darden - michael@dfmdata.com

Standard Type:

Terminology for

Proposed Title:

Aligning MTDI Lexicon with NSAC Minimum Required Export and Import Data Set

Proposed Scope:

Within the FMC Recommendations on the Maritime Transportation Data System Requirements, Appendix 1.5 includes NSAC Recommendations on Export and Import Data Set submitted on December 12, 2022. Appendix 1.7 MTDI Lexicon defines terms that reportedly will be used in future rulemakings by the FMC. NSAC Recommendations include terms not found in the MTDI Lexicon. This work item proposes aligning NSAC Recommendation terms with the MTDI Lexicon and further adding/suggesting additions/modifications to the MTDI definitions.

Target Ballot Date:

04/2024

Authorization Date:

11/2023

Emergency Response:

No

Patented or Pending Patent Material:

No

Target Completion Date:

02/2024 to 05/2024

Rationale:

Recommendations that use terms which are not defined in an agreeable lexicon promotes confusion and misalignment. The MTDI Lexicon is a first draft that will require additional terms to be added and defined for common understanding and consumption by stakeholders across the logistics landscape.

Notify Other:

FMC, NSAC

Appendix 1.5 National Shipper Advisory Committee Recommendations on Data

Recommendation. Require Ocean carriers to publish these container level data elements maintaining historical time stamps of milestones in a public format for 180 days and accessible for up to two years.

Minimum required U.S. Export Cargo Data Set:

- Empty pickup container yard location
- Empty pickup date
- Loaded container location and earliest return date
- Loaded container ingate return
- Last free port demurrage date
- Last free equipment detention date
- Actual origin departure date
- Port of transshipment, when applicable
- Estimated arrival at port of transshipment
- Actual arrival at port of transshipment
- Actual departure from port of transshipment
- Additional unplanned transshipment information
- Estimated arrival at port of destination
- Actual arrival at port of destination
- Vessel berthing date at port of destination
- Container unloaded at port destination
- Container location on terminal
- Container pickup available date

Minimum required U. S. Import Cargo Data Set:

- Loaded container origin terminal ingate date
- Estimated origin departure date
- Actual origin departure date
- Port of transshipment, when applicable
- Estimated arrival at port of transshipment
- Actual arrival at port of transshipment
- Additional unplanned transshipment information
- Estimated arrival at port of destination
- Actual arrival at port of destination
- Vessel berthing date at port of destination
- Container unloaded at port destination Container location on terminal
- Container Hold details (when applicable)

39

Appendix 1.7 MTDI Lexicon

Actual (event) An event is a service in the process of being completed, along with a real-time estimation (ETA) of completion of service, or the time that it completed the service, in accordance with the definition of the relevant event type. It should be time and date stamped and provide supporting status information.

Administrative clearance The process of getting the necessary permits (written, electronic or informal) to be compliant with relevant local legislation including customs, immigration, health, cargo operations, and security.

Also notify A party (person or company) who should also be notified of the arrival of the cargo along with the notified party.

Arrival Arrival is the event which occurs, when a mode of transport reaches its final or intermediate destination, and the mode of transport is ready for load/discharge operations to begin at the specified location. Depending on the mode of transport arrival will have different definitions:

- Vessel: a vessel has arrived once the vessel is berthed at the port terminal.
- Rail: a rail transport has arrived once the transport is stationary at the intended platform or rail head.
- Truck: a truck has arrived once the truck is stationary in front of the loading dock or other loading facility.

Arrival notice Notification to the notifying party (often the consignee and or notify party) on the estimated arrival time of the shipment.

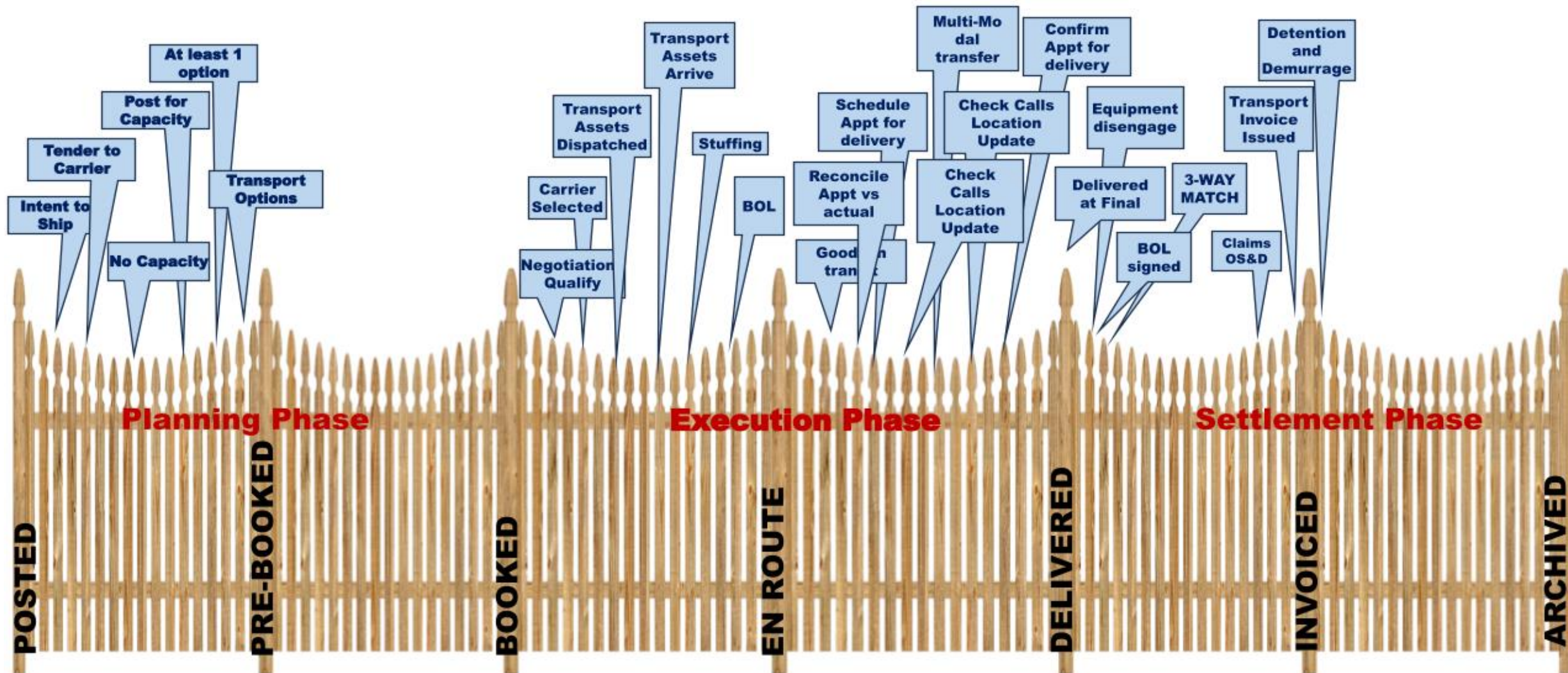
Barge A flat-bottomed floating structure built mainly for transport of cargo equipment at coastal areas, rivers, canals or on open sea. A barge may or may not be self-propelled.

Bayplan The bayplan is the complete overview of containers stowed on the vessel. This includes slots for each container. It is provided by the terminal to the vessel operator, who will distribute it further, if needed. The associated EDI-message, Bayplan, is often used instead of the term bayplan.

Berth The space assigned to or taken up by a ship when anchored or when lying alongside a quay, wharf, jetty, or other structure.

Berth information Information made publicly available through the Port Operations Coordination process to provide information on the appropriate

44



F49 Committee Officers

- **Chair:** Jeff Weiss, Steptoe & Johnson LLP
- **Vice-Chair:** Jack B. Crumbly, Tuskegee University
- **Membership Secretary:** Drew Zabrocki, Semios
- **Recording Secretary:** Robert Handfield, North Carolina State University
- **Subcommittee chair (terminology):** Michael Darden, DFM Data Corp
- **Subcommittee chair (interoperability):** Iliriana Kacaniku, Open Visibility Network
- **Subcommittee chair (essential data set):** Bryn Heimbeck, Trade Tech
- **Subcommittee chair (recommended practices, guides, and specifications):** Jaco Voorspuij, FixLog Consulting
- **Subcommittee chair (enabling technology):** Rob Rosenberg, NTELX