# DSDC Book/Tender API Product Requirements

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# Overview

The Digital Standards Development Council (DSDC) is actively facilitating an industry-wide effort to create a common standard for API communication between logistics parties for the Truckload mode. The standard is meant as a set of guiding principles for the design of API suites whose value lies in allowing rapid and supportable connections, which reduces transactional friction. The workflow has been subdivided into 6 components which represent a full-story view of a single logistics transaction.

Book & Tender is the workflow phase that represents both the details of the demand for logistics services, as well as the acceptance of that demand from the truckload party.

**Value Proposition**

- **Shipper**: A Book/Tender standard allows shippers to send shipment requests and receive confirmations digitally and consistently, regardless of which carrier they are working with. This reduces time-consuming manual processes like phone calls, emails, or logging into multiple carrier portals. Shippers can automate tendering workflows, receive faster responses, and improve planning accuracy by knowing exactly when loads are accepted or rejected.

- **Carrier**: The Book/Tender standard enables carriers to accept or decline tenders and provide response details through a unified digital interface. It reduces errors and delays caused by miscommunication or inconsistent formats and allows for faster integration with shipper systems. Carriers benefit from streamlined load intake processes and improved operational efficiency by minimizing back-and-forth communications.

- **3rd Party:** Third parties, such as transportation management systems (TMS) and logistics platforms, can use the standardized Book/Tender approach to integrate with multiple shippers and carriers more easily. This reduces the need to build and maintain one-off connections for each trading partner. A common Book/Tender standard enables them to scale services, reduce onboarding time, and offer consistent user experiences across the ecosystem.

## Definitions

The following terms are used in the Book/Tender API Standard specification. Definitions align with the NMFTA Digital Standards Development Council (DSDC) Glossary of Terms:

**Tender:** A formal offer or request from a shipper to a carrier or transportation provider to move a specific Load under defined terms, including origin, intermediate stops, destination, timing, and pricing. A tender may be accepted, rejected, or negotiated and can be issued as part of a spot process or under a contractual agreement.

**Booking:** A reservation of space and/or equipment for a vessel/voyage and possibly inland transport with a specific origin/destination/equipment type and commodity.

**Booking Confirmation:** A confirmation by the carrier to the customer including rate agreement, space allocation, transport plan and empty equipment release instruction.

**Booking Request:** A request for reservation of space and equipment for a vessel/voyage and possibly inland transport.

**Application Programming Interface (API)**: An API is a set of rules using HTTP that enables software applications to communicate with each other, exchanging data, features, and functionality. In transportation, APIs can be used to integrate systems for tracking shipments, managing logistics, and automating processes.

**Event**: An occurrence that updates or is related to an entity (such as a shipment). In the context of visibility, a “status event” refers to a milestone or update in the shipment journey (for example, Pickup, In Transit, etc.). Each event typically has a type (what happened), a timestamp (when it happened), and often a location.

**Shipment**: An item or collection of items that is planned and moved between a single origin and destination location. A Shipment can consist of one or more legs (e.g., a shipment from an origin of vendor or supplier location split through a hub to a destination DC). One or more Shipment(s) are created from a single transport order (e.g., purchase order, sales order, transfer order).

**Load**: A freight service provided by a Carrier to move goods from one or more Stops to one or more Stops. It represents the transportation of one or more Shipments. Loads are typically planned, tracked, and managed as discrete units.

**Carrier**: Any person, organization or government responsible for the transport of goods by any means of transport. In this context, the carrier is the party providing status and location updates for the shipment.

**Shipper**: Any person or legal entity by whom or in whose name, or on whose behalf, a contract of carriage of goods has been concluded with a carrier. Additionally any person by whom or in whose name, or on whose behalf, the goods are delivered to the carrier in relation to the contract of carriage.

**Receiver / Consignee**: The receiver is the person or entity that accepts final receipt of goods, also known as delivery. They are responsible for ensuring the goods are delivered as expected. Could also be referred to as Consignee.

**Third Party (3PL/Broker)**: A third-party logistics provider or broker involved in the shipment but not as the shipper or carrier. They facilitate or manage shipments on behalf of a client. In tracking, a 3PL might subscribe to updates to keep all stakeholders informed. (In general terms, a third party to a shipment is any party that is neither the shipper nor the consignee but has a role in the transaction.)

**Reference Number**: A unique identifier assigned to a shipment or transaction for tracking purposes. In this API, the term “reference number” can refer to any key identifier used to look up the shipment’s status. Examples include a PRO number, booking ID, shipment ID, BOL number, purchase order number, etc. The reference number is how the shipper, carrier, and 3PL will refer to the shipment in API calls.

**Unique Load Identifier**: A generic term for the key ID that uniquely identifies a shipment across systems.

**Full Truckload (FTL)**: Full Truckload refers to a transportation mode where a truck carries a Load for a single customer, meaning the journey is reserved for that customer only. This is typically used for large Shipments that can fill an entire truck.

**Less Than Truckload (LTL):** Less Than Truckload is a shipping service for smaller freight loads that combines shipments from multiple customers to optimize costs and efficiency. It is used when shipments do not require the full capacity of a truck.

These definitions ensure a common understanding of key terms used in the Book/Tender API standard and align with industry-standard terminology.

## Best Practices

When implementing or using the Book/Tender API Standard, it's important to understand which data fields are required vs. optional and how to maximize the value of the shared information. The following best practices should be observed for effective implementation:

- **Unique Shipment Identifiers**: Always include a unique identifier for each shipment when creating or responding to a booking or tender. The standard supports multiple reference numbers (e.g., shipment ID, load number, PO number, booking ID, or BOL number). While the format and preferred identifier may vary by trading partner, both sides should agree on the primary reference ID(s) used to link the booking to downstream processes like tracking or invoicing. When possible, include all relevant reference numbers to reduce ambiguity and ensure accurate matching across systems.

- **Optional Information**: Many data fields in the API are optional (not required to constitute a valid request or event notification). However, it is highly recommended to provide as much optional information as possible whenever it is available. More information typically results in a better experience for all parties involved. For example, if a location update event allows an optional latitude/longitude and an optional city name in addition to a required timestamp, including those details will greatly enhance the clarity and utility of the update. Similarly, if a status event has an optional field for a reason code (explaining, say, a delay) or an estimated time of arrival (ETA) for the next milestone, populating those fields will improve downstream planning and communication. In short, sending richer data (beyond just the minimum required) enables more robust and proactive visibility solutions.

- **Complete Booking Details**: Populate all available fields related to the shipment—such as equipment type, pickup/delivery windows, accessorial requirements, commodity description, and contact details. While some of these fields may be optional in the specification, providing complete information upfront improves the likelihood of a quick and accurate acceptance. Incomplete tenders may be delayed, rejected, or require manual follow-up, defeating the goal of automation.
- **Clear Tender Responses**: Carriers should return clear and timely responses to all booking or tender messages. Whether accepting, rejecting, or requesting changes (e.g., different pickup time), responses should use standard codes or status indicators defined in the specification. This consistency ensures that shipper or 3PL systems can correctly interpret the outcome of a tender and take the appropriate next step.
- **Error Handling and Feedback**: Implement robust error handling to catch issues like missing fields, invalid values, or unsupported request types. Provide meaningful error messages that allow trading partners to resolve problems quickly. This reduces friction during integration and minimizes disruption to daily operations.

- **Security & Authentication**: Although not a field within the payload, it's a best practice to enforce secure authentication for all API interactions. Typically, each request should include valid credentials (such as an API key or OAuth token) identifying the caller. This ensures that only authorized parties can access tracking information for a shipment. For example, a 3PL should only be able to track shipments they are involved with. Many systems use OAuth2 bearer tokens for secure access. It is important to follow the carrier's authentication requirements. Additionally, all data exchange should occur over HTTPS to protect sensitive information like shipment locations and status from interception.

By following these best practices, participants ensure the must-use fields are always present and correct (so the system functions), while optional fields are leveraged to their fullest extent (so the system functions well). Also, aligning with industry-standard event definitions and security protocols makes integration smoother for all parties.

## Workflow Connections

The standard addresses both the triggers and timing of transactions as well as the mechanism by which the messages are shared. Because technical decisions and constraints vary widely between partners, it is recommended that the following be available as common offerings to accelerate pace:

- All 3 booking activities should be available for transactions (tender, confirm, accept)
- Offer both a push (triggered from providing party) and pull (available for timed retrieval) option for the book and tender option
- The ability to create, update, and cancel a transaction should be provided
- Responses to push messages should account for both synchronous and asynchronous options
- For Book & Tender, offer an option to reuse previously submitted quoting details to populate the Book request

## Schema Framework

Schema encapsulates the data communicated for this "chapter" of the transactional story. The agreed schema format is JSON, and is best constructed by placing data into logical subjects, with nesting of details inside each subject. The primary subjects and details for book and tender are:

- Party Details (must include)
  - Customer
  - Billing Party
  - Third parties such as non-paying parties
- Location Details (must include)
  - Physical address
  - Contacts

    - Appointments
    - Location activities (pick, drop)
    - References
- Mode and Service Details (may include)
    - Special Services
    - Mode specifics such as straps, tarps, chains, etc
    - Team, tanker endorsed, etc
- Commodity details (may include)
    - Commodity descriptions
    - Special handling details
    - Packaging and size details
- Shipment dates (must include)
    - Pickup and delivery expectations
- Charges details (optional section)