

# NMFTA Invoice & Document API Document Brief

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## Overview

NMFTA is on a journey with logistical and banking institutions to transform the electronic transfer of invoice data and supporting documents through an open-source API. Systems across the economic landscape will leverage this information to bring speed through data availability. Today, EDI and digital document uploads across numerous company specific applications are required for doing business within the logistical sector. Ultimately, this work will include managing a corpus of electronic data values and document file type returns with the focus on the transfer of the Invoice and supporting documents supporting all logistical types.

Part of the journey is to build an open API to ensure all logistical and banking partners to reach a level of automation that scales with the business demand. With adoption of the FTL council, medium- and long-term value will be achieved for all parties across the economic markets and transportation providers. Teams from J.B. Hunt, CH Robinson, Averitt, and US Bank and support from the LTL council have come together for a collective goal to achieve business value for all.

**The GAP:** Multiple sources and various technology implementations have created an endless landscape for shippers, carriers, and banking institutions that continue to empower antiquated physical documentation or outgrown EDI processes. APIs do not currently have all consistent components to fully operationalize document data transfers and document type dissemination, especially in the areas of “*invoice data values*”, “*bill of lading*” and “*freight bills*”

**Value Proposition:** The Invoice and Documents API will allow for the ability to seamlessly pass specific invoice and related shipment information regardless of transport type to obtain or pass an invoice or related documentation. This will transform the logistics industry by simplification of complex billing processes through accuracy and timeliness in one place will be paramount for all shipments. With a design to handle all complexities for any shipment, a simplified **standard source** will meet all business needs **quickly** while providing companies with the needed **forecasting** for growth.

- **Carriers:** Providing the ability to pass and create an invoice through details to a Shipper or 3<sup>rd</sup> Party through standard shipment details. Additional documentation will also be able to be passed for additional proof of payment through supporting document types



through shipment criteria. The ease will allow for Carriers to ensure that they avoid being cornered within the market.

- **Shippers:** Receiving Carrier invoices and supplemental documentation for payment will allow for central standard empowering timely and accurate validation of services while providing the ability to eliminate slower physical or open-source transfers.
- **3rd Party:** Ensuring no delay in data validation or accuracy in supplying the appropriate information to support Invoice and supporting documentation for all parties.

## Vision Overview

Invoice data standards and document transfers is a major point of friction and necessity from logistic execution, communication, shipment verification, and speed of payment for Carriers, 3<sup>rd</sup> Party, and Shippers alike. Manual and outgrown points of document transfer have created inefficiencies and scaling when executing and managing documents across the freight industry. The NMFTA team aims to simplify the integration of systems across the fragmented ecosystem that exists today. We anticipate a standard set of communication protocols will enable Shippers, 3<sup>rd</sup> Party and Carriers to connect with each other's systems more seamlessly, through one standard enabling efficient in data sharing and greater efficiencies across the supply chain.

## Team Members

### Lead

Michael Mooney *J.B. Hunt*

### Contributors

Joanna Wilkinson *C.H. Robinson*

Les Hoffman *US Bank*

Mary Vechiola *US Bank*

Kevin Looper *Averitt*

### Technologist

Satish Ramani *J.B. Hunt*

April Rollins *Averitt*

Ron Spore *US Bank*

## Key Information

### In Scope

- **Core Systems Involved:** Initial phases will facilitate the primary need for invoice related data elements to facilitate payment related requirements between Carriers and Shippers. Supplemental document types can be created, uploaded and exported to further enrich the needs of all parties involved in the logistical transaction.

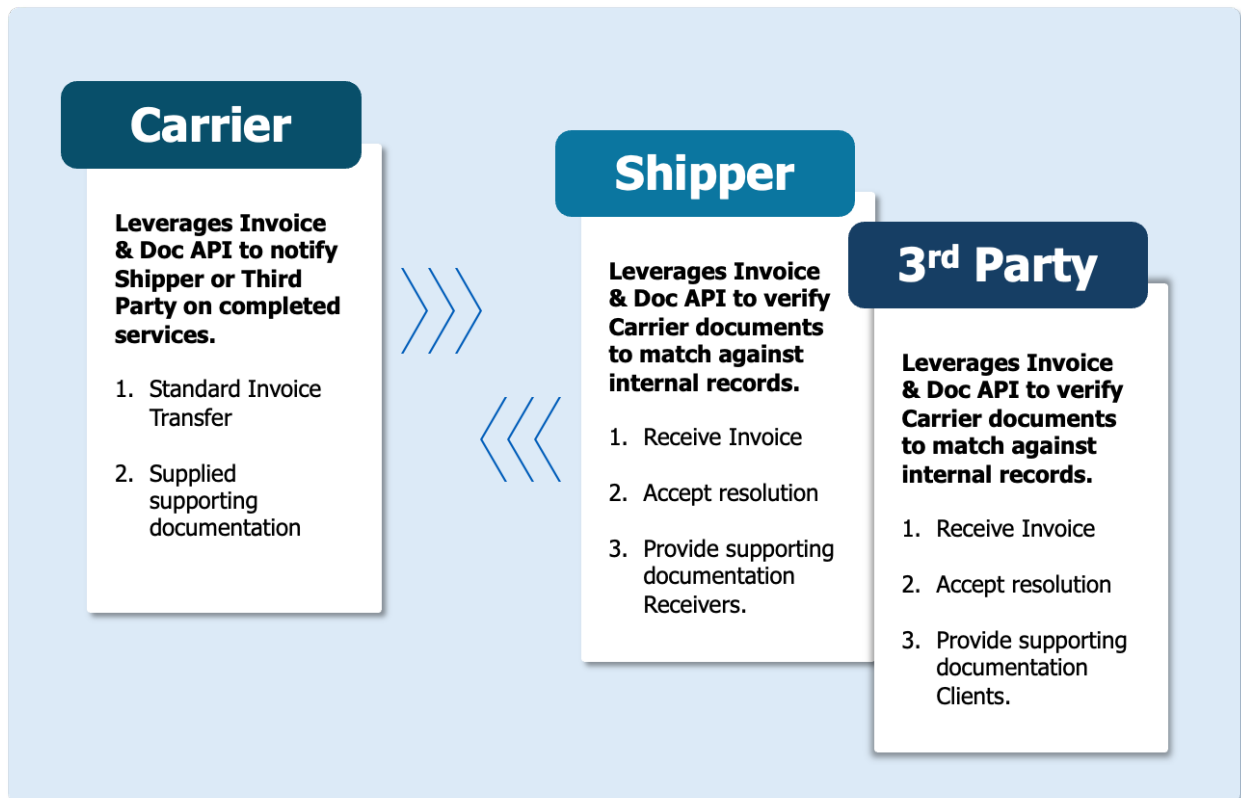
- **Invoice Value Endpoint:** Intermediate invoicing data transfer will assist in the speed to cash environment to best ensure that payments are met within the appropriate window for subsequent business retention.
- **Document Types:** Specific logistical documents will be provided for standardization of formatting and compliance between all entities within the logistical agreement. Blank document creation and transfer is available for standardization purposes and future upload. Document types within an output of PDF, TIF, JPEG, PNG that are included range from the twenty four (24) identified below:
  - Bill of Lading (BOL)
  - Catalog Page (CAT)
  - Communications & Correspondence (COMM)
  - Contract (CON)
  - Customer Specific Rules Tariff (RULE)
  - Dimension Certificate (DIM)
  - Detention Receipt (DTR)
  - Discount Matrix (DIS)
  - Freight Bill (FRB)
  - Fuel Tables (FUEL)
  - Invoice (INV)
  - Inspection Certificate (INSP)
  - Letter of Authority (LOA)
  - Lumper Receipt (LPR)
  - Material Safety Data Sheet (MSDS)
  - Packing Slip (PAC)
  - Photos (IMG)
  - Proof of Delivery (POD)
  - Quote (QUO)
  - Residential Dispute Support (RESI)
  - Spec Sheet (SPEC)
  - Scale (SCL)
  - Statement Bill (STB)
  - Weight & Inspection Certificate (W&I)
- **Document Upload:** Enablement of Carriers, Brokers, and Shippers to upload documents must include at least one of the optional parameters to associate with a shipment. Facilitation of the transfer of documents to be uploaded, in binary format with a max size of 25 MB. File types supported are PDF, TIF, JPEG, PNG.

### Out of Scope

- Disputes

- Claims
- Electronic signature verification (Specific to BOL or POD)
- Zip file transfers

## Process Overview (Standard Scenario)



## Technical Capabilities

### Document Transfer:

Enables users to upload documents and must include at least one of the optional parameters to associate with a shipment. Upon call the specific logistical documents will be provided for standardization of formatting and compliance between all entities within the logistical agreement. Blank document creation and transfer is available for standardization purposes and future upload.

The twenty-four (24) document types from above will require the identified below with the following values:

- uniqueID **<String>**
  - (Unique ID for this transaction)
- Invoice Number **<String>**
  - (Invoice Number can be pro number)
- Submission Date **<Date>**
  - (Invoice date (created by carrier))
- Version **<String>**
  - (Indicates which spec you are consuming)
- Reference Numbers:
  - referenceNumbers.pro **<String>**
    - (Shipper's pre-assigned PRO number for the requested carrier.)
  - referenceNumbers.quoteId **<String>**
    - (The quote (estimate) number provided by the carrier after submitting a rate quote request)
  - referenceNumbers.shipmentId **<String>**
    - (Shipment Id (SID) number for the shipment as provided by the shipper)
  - referenceNumbers.masterBol **<String>**
    - (Master Bill of Lading number for the shipment as provided by the shipper)
- Bol **<String>**
  - (Bill of Lading number(s) as provided by the shipper)
- Supporting PDF Documents **<Boolean>**
  - Image(s) of document
- Image Type **<String>**
  - Reference document type list



# Architecture

## Document Processing Framework

TBD

## General Architecture Requirements

- 1) We have the ability to pass Invoice data values upon request of an identifier (Invoice Number / Invoice Total Amount / Currency).
- 2) We have the ability to transfer documents to be uploaded, in binary format with a max size of 25 MB.
- 3) We allow for file types supported are PDF, TIF, JPEG, PNG.
- 4) We have the ability to output PDF type documents upon request of transfer.
- 5) We have to ingest documents and classify document types based on preset document types.
- 6) We need to have a standard indexing scheme for document mapping and searching capabilities to return and store final documents as PDF.
- 7) We need to be able to return blank versions of all standardized documents such as BoL & PoD document types.
- 8) We need to establish search criteria for single document requests.
- 9) We need to establish search criteria for multiple document requests.
- 10) We need to provide document details to support cross system mappings without repository duplication.