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# 3PL Management by EDI Messaging

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## 3PL via EDI

We receive many questions about 3PL at Data Masons from both prospects and current customers, and we'd like to share our knowledge of integrating EDI with this business practice.

Outsourcing distribution to 3PLs, also known as public warehouses or logistics service providers, is increasingly popular for companies that are expanding into new markets or simply want to focus on their core strengths by allowing logistics experts to manage the physical storage and distribution of their goods.

To make outsourced logistics seamless and cost-effective, advanced organizations implement electronic communications. Data Masons has worked on over one hundred of these projects with stakeholders who have various levels of capabilities and approach standards. We've learned that these projects have consistent patterns that are useful to understand when approaching this type of project.

In our experience with 3PL automation projects, interactions can be generalized into two master file exchanges and five transaction sets (also known as documents). The authors of the X12 EDI Standard clearly understood how to manage interactions with a 3PL — the documents most commonly used by 3PLs are very well-conceived and documented in the X12 EDI standard frequently used by 3PLs.

## The Master File Exchanges

Master file exchanges enable synchronization of critical data between the 3PL's warehouse management system (WMS) and their customer's ERP system.

### Product Catalog (Sent to the 3PL by the 3PL customer)

The third-party logistics service provider and its WMS system need information about the products they'll be warehousing and distributing, including part numbers, descriptions, special handling information, barcodes, and other elements that allow the 3PL to plan capacity for, The X12 standard for this document is the 832 Price/Sales Catalog or the 888 Item Maintenance. (Author's note: The 832 is used predominantly in 3PL scenarios, but there's a strong argument that the 888 is the better fit.)

**Inventory Status (Sent by the 3PL to the 3PL customer)**

Soon after the initial product receipts and shipments occur between the customer and 3PL, the inevitable question is, "Is our inventory accurate and in sync?"

Periodic transmission of an inventory status document is a best practice for most 3PLs — although that sometimes makes it difficult to reconcile discrepancies, whether they be timing related or more serious shrinkage or theft issues. The document for this interaction is the 846 Inventory Inquiry/Advice.

## The Five Transaction Scenarios

At a high level, warehouses are simple operations. Goods arrive, goods are moved around inside the warehouse, and goods are shipped. In the "real world," things get a little more complicated, as goods can be damaged, stolen, expired, and have other issues that require inventory adjustments.

Another factor (for a future blog), is the value-added services 3PLs provide to repack items into different forms and partner numbers. This "conversion" of inventory is similar to production environments where components are removed from inventory and new inventory is created with no physical receipt or shipment process. However, today we're focused on the basic 3PL process for the simple distribution of finished goods.

o understand the basic premise of the X12 document's intent as it relates to warehousing, imagine we're commencing a new relationship. We've sent the item catalog information to the warehouse, so they know the item numbers and characteristics of the items they'll be housing. The first step in the process is to ship goods to the warehouse. In a best practice scenario, we'll send the warehouse a notice of in-transit goods so they can plan the receiving and storage activities. In the X12 standard, the document that fits this scenario is the 943 Warehouse Stock Transfer Shipment Advice. The data in this document can have many sources, such as a planned inter-warehouse shipment, purchase order, or ship notice from a related party. Regardless, it lets the warehouse know that goods are coming with a high level of detail.

When the goods arrive, the warehouse should inspect and possibly count the goods to make sure that what was scheduled to arrive did. If the goods are coming from a vendor, it's essential to validate invoices and payments. The document that fits this purpose in the X12 standard is the 944 Warehouse Stock Transfer Receipt Advice.

The next logical transaction in the 3PL relationship is the X12 standard's 940 Warehouse Shipping Order, which gives the 3PL the details to integrate into their internal systems for accurate fulfillment of the shipment.

We want to know the goods were shipped and have details on freight carrier information, freight costs, lot numbers, serial numbers, and other crucial details for accounting and inventory control purposes.

The last common transaction in the 3PL process interaction is the Inventory Adjustment Process.  Because there's always the possibility of inventory loss through errors and obsolescence, we'll need a means for the warehouse to communicate what's being disposed of and why. This scenario is covered nicely in the X12 standard by the 947 Warehouse Inventory Adjustment Advice.

## Conclusion

Achieving a finely tuned 3PL process flow can deliver significant benefits to a business that distributes goods through outsourced warehousing. The discussion today is supported by the X12 EDI standard, but that's not a prerequisite of a successful endeavor. Other formats, such as CSVs, XML, EDIFACT, JSON, and others can also do the job — but they require careful evaluation and implementation, as they are not supported by a highly evolved standard such as the X12 standard.

We hope you find this information useful in understanding a simplified approach to 3PL project implementation. To learn more, contact us at dmsales@datamasons.com, or visit us at https://datamasons.com