Managing Supply Chain with Third Party Logistics Provider – an Overview of the Integration

Applies to:
Supply Chain Management

Summary
Businesses have to manage their Supply Chain effectively to provide Rapid Response to the customers while being cost-effective and competitive. In order to implement lean Supply Chain and achieve operational efficiency, companies forms partnership with the Third Party Logistics Providers.

Logistics Provider can help with transportation as well as managing the Warehouse and related transactions. Third Party Logistics Partner brings in the expertise that it posses in efficiently managing Products and Materials within the Warehouse. Third Party Logistics Partner has the expertise when managing different type products requiring special handling and storage such as Hazardous Materials and Controlled Substances.

Along with the managing Inbound and Outbound Logistics processes, Third Party Logistics Partner offers services such as Kitting, Consolidation and other Value Added Services. This helps the company to bring the flexibility in their services and achieve Customer Delight.

This Article discusses important transactions and integration that is required between both the systems.

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**Business Benefits**

Third Party Logistics Provider strives to achieve and excel following Key Performance Indicators (KPI)

- Order Fill Rate
- Service Level
- Inventory Accuracy
- Turnaround Time

By Partnering with Third Party Logistics Provider, Company can work towards achieving:

- Improved Efficiency
- Rapid Response Time
- Best Utilization of Resources
- Reduced Costs

**Integration between both Systems**

Companies can integrate their SAP system with the Third Party Logistics Partner’s system which ensures that SAP ECC system is updated with the most recent information about Inventory, Shipments to the Customer and Procurement documents. Integration with Third Party Logistics Partner’s system keeps company’s SAP ECC system updated and which in turn helps in the Supply Chain Planning and Forecasting.

Company can manage the inventory in the Plant and Storage Location that is associated with Third Party Logistics Partner’s Warehouse at MM-IM (Inventory Management) level in their own system since it need not know the exact Bin location of the Products or Materials within Third Party Logistics Partner’s premises. Third Party Logistics Partner manages Stock owned by the Company at the Storage Bin level in their system.

**Integration with Third Party Logistics Provider**

![Diagram of integration process](image-url)
Receipt Advice
SAP IDoc message type – ORDERS / ORDCHG
EDIFACT Standard – EDI 856
Purchase Orders are created in ECC for getting the materials from the External Suppliers. The materials being procured with reference to these Purchase Orders can be received in the Warehouse which is managed by Third Party Logistics Partner. Such Purchase order contains address of Third Party Logistics Provider’s Warehouse as the Delivery Address. These Purchase Orders can be transmitted to the Supplier using EDI. At the same time, another communication as Receipt Advice can be generated which is directed towards Third Party Logistics Partner. Receipt Advice is used as reference by Third Party Logistics Provider to receive the material from External Supplier.

Changes to the Purchase Orders are also transmitted to Third Party Logistics Partner.

Stock Transport Orders and Intercompany Purchase Orders created in the Stock Transfer process are also transmitted to the Third Party Logistics Provider.

Following is some of the important information contained in the message:
- Purchasing Document Number
- Vendor Details
- Purchasing Document Item Number
- Material Number
- Quantity

Goods Receipt
SAP IDoc message type – MBMGCR
EDIFACT Standard – EDI 944
Supplier delivers Materials as per the Purchase Orders to Third Party Logistics Partner. Material is received in the Warehouse with reference to the Purchase Order or Receipt Advice communicated to Third Party Logistics Provider.

Received materials are putaway into destination storage bins as per the rules configured in the Third Party Logistics Partner’s system. Information message containing the Goods Receipt is generated and sent to the Company.

Company receives Goods Receipt information and it is recorded against the SAP Purchasing Document. GR updates the Inventory in the Company’s SAP ECC bring visibility to the Stock that is owned by the Company. GR is further used in the 3 Way matching or Invoice Verification and Payment processing to the Supplier.

Following is some of the important information contained in the message:
- Material
- Plant
- Storage Location
- Batch
- Quantity
- Movement Type
- Reference Document Number
Shipping Advice

SAP IDoc message type – CARNOT

EDIFACT Standard – EDI 940

Company receives the Orders from Customers. Orders can be received and entered in SAP ECC system by different ways such as Telephone, Fax or EDI. Outbound Deliveries are created in SAP ECC system by using Delivery Due List transactions. Appropriate Batches can be determined and assigned to Outbound Delivery during creation. Outbound deliveries are communicated to the Third Party Logistics Partner using the Outbound Message as Shipping Advice.

Shipping Advice forms basis of the outbound fulfillment process for the Third Party Logistics Partner’s Warehouse.

Following is some of the important information contained in the message:

- Outbound Delivery Number
- Outbound Delivery Item Number
- Material Number
- Quantity
- Batch
- Ship-To Party’s address

Shipping Confirmations

SAP IDoc Message type – SHPCON

EDIFACT Standard – EDI 945

Shipping process at Third party logistics provider uses the Shipping Advice. Information such as Sales document, Delivery, Batch and Customer’s address information is used during the fulfillment process. Materials pertaining to the Outbound Delivery are picked up from the Storage Bin. Third Party Logistics Partner may utilize the Picking Strategy configured in its system. Picking strategies that are commonly used in Warehouses are as follows:

- Procedure based
  - Order Picking
  - Zone Picking
  - Wave Picking
- Level based
  - Pallet Picking
  - Case Picking
  - Split-case Picking

Third Party Logistics Partner can provide update to the company in the form of Shipping Confirmations on each step of the outbound process such as Picking, Packing and Shipping.

Final Shipping confirmation is transmitted once material leaves the Third Party Logistics Provider Warehouse doorstep. Third Party Logistics Partner can also send the Advanced Shipping Notification to the Customer on behalf of the Company. Shipping and Packaging documents and labels are also generated by Third Party Logistics Partner.

Outbound Deliveries in SAP ECC are updated with the actual Picking and Packing information received from the Third Party Logistics Partner as Inbound Shipping Confirmation. Goods Issue is posted once GI
Confirmation is obtained and Inventory balances are updated accordingly. Company can keep track of the outstanding quantities, if any, with reference to the Outbound Delivery.

Following is some of the important information contained in the message:

- Outbound Delivery Number
- Outbound Delivery Item Number
- Material Number
- Batch
- Picked Quantity

**Inventory Adjustments**

**SAP IDoc Message Type – MBGMCR**

**EDIFACT Standard – EDI 947**

Third Party Logistics Provider stores and manages the Materials in its Warehouse facility. Managing the Warehouse also involves Internal Logistics management apart from the Inbound and Outbound supply chain activities performed on behalf of the Company. In order to be a contributing and value creating partner of the Supply Chain, Third Party Logistics Provider has to achieve operational excellence and strive to maintain or improve the Key Performance Indicators (KPI). From time to time, Third Party Logistics Partner may be carrying out certain activities such as Reorganizations and Replenishment. Internal material transfer from Storage Bin to another Storage Bin on account of these activities may not necessarily need an update in the Company’s SAP ECC system. However depending upon the interface that has been designed for both the systems, certain internal movements may also have to be communicated back to Company’s SAP ECC system.

Few examples of such movements could be any transfer involving the area demarcated as Restocking location, Demo or loan equipment location or materials kept aside for further Quality related inspection. Information related to Material movements involving these internal transfers can be transmitted back to Company’s SAP ECC system.

Third Party Logistics Partner employs various techniques of Physical Inventory to ensure the Accuracy of the Stock level. Some of the common inventory methods are Cycle Counting and/or Periodic Physical Inventory. Any differences such as Shortages or excesses that are observed during the Physical Inventory are communicated to SAP ECC system through the EDI interface.

During the process of handling the Materials or Products, damages or spoilages can take place. Any loss due to handling or Quality related defects are communicated back to SAP ECC system using the EDI message.

Inventory Adjustments messages contain the information which is used by SAP ECC system to post the material movement and adjust the inventory. Following is some of the important information contained in the message:

- Material
- Plant
- Storage Location
- Batch
- Quantity
- Movement Type
- Reference Document Number
Related Content
For more information, visit the Supply Chain Management homepage.
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