

# Extended Enterprise Management: Product Overview



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# Executive Summary

Today's supply chains continue to grow in complexity across several facets. An increasing number of retailers and distributors are sourcing goods from outside the country, which lengthens lead times and increases the variability of deliveries. While providing significant cost advantages, often these suppliers lack the ability to communicate detailed order status information easily. Similarly, logistics service providers often are unable to convey detailed, accurate, and timely order status as goods move in and out of their hubs. And finally, carriers used to transport goods sometimes struggle to convey real time shipment status to their intended delivery destinations.

This uncertainty translates directly into excess inventory, labor and transportation costs as businesses seek to protect themselves from the risks created by their trading partners throughout the supply chain. Likewise, due to their inability to gain visibility into the current status of inventory, orders and shipments, many businesses lose critical revenue opportunities, which impacts long term shareholder value and brand equity.

In an effort to combat these challenges, many industry leaders are now looking for solutions that help them better manage these types of supply chain risks. Ultimately, their goal is to leverage better technology and business processes to optimize their holistic supply chain ecosystem. In

order to optimize the supply chain ecosystem, a heightened level of collaboration and information sharing is required with all participants in the supply chain – suppliers, freight forwarders, brokers, hubs, carriers, distribution centers and customers.

**Extended Enterprise Management provides the overarching visibility and event management capabilities required to align all trading partners up and down the supply chain.**

Manhattan Associates offers Extended Enterprise Management, a X-Suite solution or cross-suite combination, which connects you with trading partners to communicate efficiently and ensure goods move smoothly to your customers at minimum cost. Extended Enterprise Management provides the overarching visibility and event management capabilities required to align all trading partners up and down the supply chain, while ensuring you have the ability to execute the movement of goods in an optimal manner. This closed loop approach to managing the supply chain ecosystem helps to integrate and align the holistic supply chain while completing the execution cycle, all within a single solution.

# Extended Enterprise Management Overview

Manhattan Associates' Extended Enterprise Management (EEM) suite of solutions provides extended execution, event management, and visibility capabilities across a company's global supply chain. EEM integrates with existing ERP and legacy applications to communicate with trading partners efficiently and ensure goods move smoothly through your supply chain at minimum cost. EEM's extended execution components such as Supplier Enablement and Hub Management are designed to help provide tactical execution solutions to address the needs of specific trading partner types. For example, Supplier Enablement provides factories the ability to create case or pallet labels and electronic ASNs via a web portal, greatly improving inventory accuracy and receiving productivity. The Supply Chain Visibility and Supply Chain Event Management applications provide a single, consistent view of your entire global supply chain allowing key resources to monitor progress and to receive proactive alerts for issues before they create problems. These applications can provide rapid business improvement as well as provide a continuous improvement platform to enable supply chain transformation with powerful results and strategic corporate benefits.

A summary of each of the integrated platform applications and components of Extended Enterprise Management is below.

**Supplier Enablement:** Extend powerful supply chain capabilities to your suppliers to manage order fulfillment and automate communications all via a centralized browser-based solution.

**Hub Management:** Enable hubs and 3PL providers to provide instant visibility of orders, shipments, and inventory. Streamline transport and inventory by managing partner-to-partner shipping and enable hubs to complete direct fulfillment.

**Logistics Gateway:** Acknowledge order ready-to-ship to initiate transportation optimization and share critical data in real-time to keep all your transportation partners working together to eliminate empty miles and wasted fuel by filling every truck.

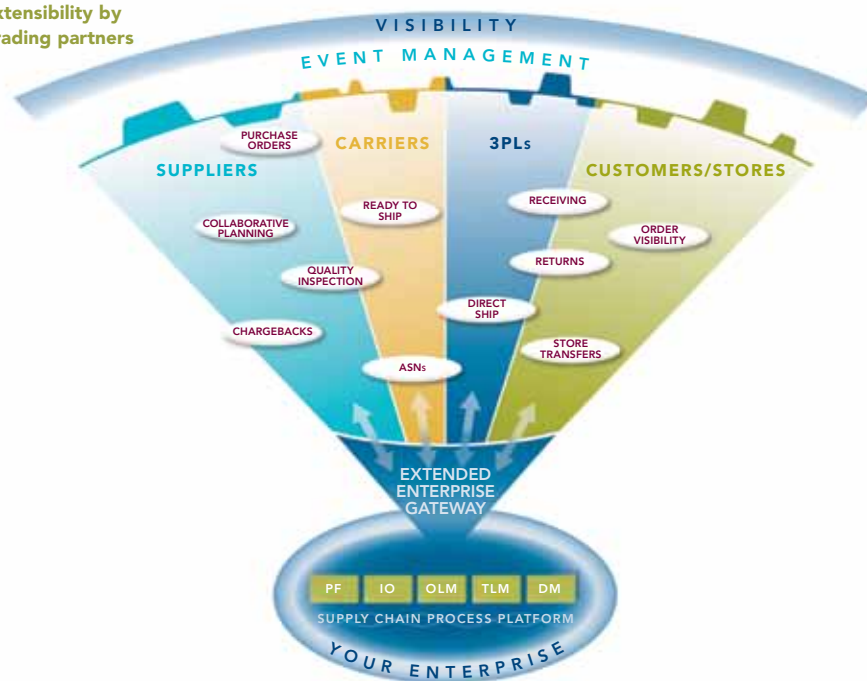
**Store/Customer Gateway:** Let customers and stores track and receive their orders and shipments via one centralized portal and provide receipt of delivery and inventory on-hand.

**Supply Chain Visibility:** See a single, consistent, real-time view of your entire global supply chain for greater inventory control, to promote optimal fulfillment channels, and to reduce cycle time variability to lower safety stock levels.

**Supply Chain Event Management:** Track and monitor supply chain events in real time and respond immediately based on alerts to critical exception events, which may threaten your ability to meet customer demand.

## extended enterprise management:

creating extensibility by  
enabling trading partners



Extended Enterprise Management: Managing Product from Source-to-Consumption

## Extended Execution

### Supplier Enablement

In today's manufacturing environment, supplier networks can be extremely complex. A company must have the flexibility to work with:

- Domestic and foreign suppliers (language barriers, currency issues, time zones)
- Varying levels of technology (fully automated systems, paper-based processes, high-speed Internet, dial up, EDI and fax)
- Multiple tiers of manufacturing.

EEM is designed to integrate with these varied suppliers through EDI, XML, Flat file, and other formats that leverage existing processes and technologies. EEM also allows for 'system-to-user' integration, which provides internet browser screens to facilitate integration where no system exists. The reason for having such a flexible system is so that you can work with various global trading partners without forcing them to make significant technology investments and business process changes (e.g., do not ask a manual factory to

purchase a new system and the infrastructure to support it.)

Supplier Enablement extends execution capabilities to suppliers and factories. There are five primary areas of focus for Supplier Enablement: Requisition Management, PO Management, Inspections, Fulfillment & Shipping, and Chargebacks.

#### 1. Requisition Management

Prior to Purchase Order creation, some companies utilize a requisition or commit process. Requisitions have a separate set of user transactions and role based permissions. Companies can negotiate order quantities, dates, and more online. Once details of the requisition are agreed upon between the supplier and the buyer, the requisition can be used to create a purchase order(s). Typically the purchase order is created in an ERP or purchase order management system. The requisition process is also monitored by that system, and notifications are generated if any exceptions in the process are detected.

Benefits of requisition management include:

- Improved communication and documentation of negotiations with suppliers
- Reduce COGS from economies of scale by identifying consolidation opportunities of purchase orders to reduce item cost basis
- Manufacturer/supplier-based visibility of “pre”-purchase orders for more efficient planning to meet future demand
- Reduced errors by monitoring the requisition process.

Select	Requisition	Accept Status	Type	Priority	Supplier	Ship-to	Start Ship	Start Deliver	Product Id	Product Id description	Requested Qty	Accepted Qty	Total Cost
<input type="checkbox"/>	R024735	Pending supplier	Standard	High	ACME Mfg	Whse 1	07/01/05	07/15/05	77131462	Blue S' Twill Check Shirt	1,000		36,240.00
<input type="checkbox"/>	R025017	Declined	Custom	Normal	ACME Mfg	Whse 1	07/15/05	08/01/05	77131461	S-S low twist jersey polo	2,000		33,500.00
<input type="checkbox"/>	R025017	Declined	Direct Ship	Low	Far East Mfg	Whse 2	08/01/05	09/01/05	77131465	Blue S' Twill Check Shirt	2,000		29,240.00
<input type="checkbox"/>	R025015	Pending buyer	Standard	High	Tinsider Mfg	Whse 1	09/01/05	10/01/05	77131467	Blue S' Twill Check Shirt	2,000		37,195.00
<input type="checkbox"/>	R025026	Accepted	Direct Ship	Low	Far East Mfg	Whse 2	08/01/05	09/01/05	77131463	Blue S' Twill Check Shirt	2,000	1,000	36,240.00

Requisition Listing

## 2. Purchase Order Management

In many organizations, particularly those with offshore manufacturing and an international supplier base, the process of managing the lifecycle of a purchase order (PO) is manual. Although created electronically on an ERP or order management system, POs tend to be phoned, faxed, and emailed to suppliers. Acceptances, updates, and cancellations are similarly manual. For many grocers, retailers, and other companies that generate thousands of POs per year, excluding multiple iterations of a single order, the opportunity for error is significant. Factor in language barriers, and the need for electronic integration is even more critical.

PO management within EEM is the systematic management of executing the purchasing process. As POs are issued, they are downloaded into EEM. EEM routes the order to the appropriate supplier (and service providers, if required), providing email notification as necessary. Suppliers are able to either acknowledge an order electronically with their own systems, or accept/update the order online via EEM. As changes are made, either by the buyer or manufacturer,

both electronic and browser-based updates are made. With the supplier always manufacturing against the current PO, the margin for error is greatly reduced and the PO negotiation effort is simplified.

Beyond error reduction and simplified PO negotiation process, benefits of PO management also include:

- Increased upstream visibility into the manufacturing process, resulting in:
  - More predictable cycle-time
  - Lower safety stock levels
  - Lower stock-outs
  - Enabling available-to-promise capabilities
- Reduced clerical workload through the automation of data exchange and entry
- Reduced transportation costs, based on more accurate inventory information and fewer unplanned modal changes
- Increased accuracy in planning of inventory levels
- Increased supplier accountability.



Inspection	Status	PO	Division	Dept	Supplier	Shpmts	PO Type	Inspection Type	Inspection Category	Inspection Location	Cases Inspected	Cases with Defects	% Cases with Defects	Case Defects	Units Inspected	Units with Defects	% Units with Defects	Unit Defects
125	Open 06/13/06	PO67629	334	24	ACME Mfg	Whee 1	Std	LPN	Std	Hong Kong	203	57	28.07	89	2345	332	14.15	555
124	Passed 05/05/05	PO67698	288	3	ACME Mfg	Whee 1	Std	Order	Samples	Hong Kong					200	23	11.55	24

Inspections for a purchase order

#### 4. Fulfillment and Shipping

In many warehousing environments, the availability of case- and pallet-level ASNs are limited. The benefits of ASNs and standardized labels are many, including:

- One scan receipts for faster receiving
- Automated receiving enabled (via conveyor)
- Cross docking
- Flow-through distribution
- Direct ship programs
- Error reduction
- Improved quality
- Inventory accuracy
- Inventory accountability.

Unfortunately, many suppliers are either unable to provide such information and labels, employ a costly 3rd party, or do so in a manual, mistake-prone process.

EEM Supplier Enablement provides ASN-generation capabilities to trading partners. Upon accepting the purchase order, a variety of packing functions, configurable by the host, are available to the supplier to create electronic ASNs and/or shipping labels. These functions can be as 'loose' as

identifying the SKUs and quantities in a packing container, using standard casepack for minimal UI interaction packing, or as strict as requiring each unit's bar code to be scanned. The net result of this process is a very granular level of data including the following:

- Purchase Order
- Shipment
- LPN (case or pallet)
- SKU
- Quantity
- SKU attributes (e.g., country of origin, lot, expiration date.)
- Bill of Lading (BOL).

This data is subsequently uploaded to the warehouse management system and merchandising/planning systems to achieve the benefits described above.

Lastly, EEM provides the supplier the ability to print accurate, standard shipping documents, such as manifests, pack lists, and bills of lading. These documents are generated using the data captured during fulfillment and therefore, the process is accurate and automated.

Shipment Details																			
Details   LPNs   Documents   Events   Schedules   <a href="#">Exit</a>																			
<a href="#">Update Shipment</a>   <a href="#">Update to Shipped</a>   <a href="#">Update to Arrived</a>   <a href="#">New Document</a>   <a href="#">New Event</a>   <a href="#">New Schedule</a>   <a href="#">Change Shipment Destination</a>   <a href="#">Update to Received</a>   <a href="#">Print Documents</a>																			
Shipment:	Status:	Priority:	From:	Destination:	Ship method:	Vehicle ID:	Qty:	Total cases:	Loose cases:	Pallets:	Actual LPN weight (Kgs / Lbs):	Actual LPN volume:							
SHMT0966	Shipped - 06/04/06	High	ACME/ Factory 1 White 1	Whse 1	Air	TRLR-0264	480 24	24	24	24	493.0 / 1094.6	245.0							
Shipped:	Receiving started:	Shipment ref:	Est ship:	Est deliver:	Actual deliver:	At dock:	Seal ID:	Carrier:	Master BOL:	PRO nbr:									
06/04/06 11:35		87967678	06/04/06	06/04/06 13:30	06/04/06 16:30	06/04/06 19:45	12303033	AAA Freight	0418011940082918	12345678									
Vessel name:	Vessel ID:	Voyage ID:	House BOL:	On-board:	Origin port:	Destination port:													
Maersk-Maersk	88-909778	888077000775	78687689331231112	06/03/06	Jakarta, Indonesia	Seattle, USA													
From address:	Destination address:																		
Factory 1	Whse 1																		
Store 492	Agent 123																		
Main Store	Apparel Kingdom																		
123 Main St	123 Main St																		
Anytown, NY 12345	Anytown, NY 12345																		
Select a view:	<a href="#">Set Default View</a>																		
ASN																			
Retrieved on 11/24 at 07:08																			
PO	PO Priority	PO Type	Supplier	Hub 1	Consolidation status	FO Start ship	PO Start Deliver	ASIN	BOL	PO Acpt	Shipment Qty	Shipment Cases	Received Qty	Received Cases	Unexpected Cases	Received on Different shipment Cases	Missing Cases	Variance Qty	Variance Cases
<b>Total</b>										460	480	24	560	28	7	5	3	80	4
PO25018	High	PO	ACME Mfg	Hub 2	Fulfilling	06/02/04	06/04/04	123304	84897997000921976	220	200	10	300	15	5	5		130	5
PO25012	Std	PO	ACME Mfg	Hub 2	Fulfilling	06/01/04	06/04/04			100	100	5	100	5					
PO25017	Std	PO	ACME Mfg	Hub 3	In-transit	06/03/04	06/04/04	123007	84897997000921872	160	180	9	160	8	2		3	-20	-1
<b>Total</b>										460	480	24	560	28	7	5	3	80	4

Shipment details, including ASN and BOL numbers

Shipment LPNs														
Details   LPNs   Documents   Events   <a href="#">Exit</a>														
<a href="#">Add LPNs</a>   <a href="#">Est. Qty</a>   <a href="#">Update Shipment</a>   <a href="#">Update to Shipped</a>   <a href="#">New Document</a>   <a href="#">New Event</a>   <a href="#">Print Documents</a>														
Shipment:	Status:	Priority:	From:	Destination:	Ship method:	Vehicle ID:	Qty:	Total cases:	Loose cases:	Pallets:	Actual LPN weight (Kgs / Lbs):	Actual LPN volume:		
SHMT0966	Shipped - 06/04/06	High	ACME/ Factory 1 White 1	Whse 1	Air	TRLR-0264	480 24	24	24	24	493.0 / 1094.6	245.0		
Shipped:	Receiving started:	Shipment ref:	Est ship:	Est deliver:	Actual deliver:	At dock:	Seal ID:	Carrier:	Master BOL:	PRO nbr:				
06/04/06 11:35		87967678	06/04/06	06/04/06 13:30	06/04/06 16:30	06/04/06 19:45	12303033	AAA Freight	0418011940082918	12345678				
Vessel name:	Vessel ID:	Voyage ID:	House BOL:	On-board:	Origin port:	Destination port:								
Maersk-Maersk	88-909778	888077000775	78687689331231112	06/03/06	Jakarta, Indonesia	Seattle, USA								
From address:	Destination address:													
Factory 1	Whse 1													
Store 492	Agent 123													
Main Store	Apparel Kingdom													
123 Main St	123 Main St													
Anytown, NY 12345	Anytown, NY 12345													
Sort by:	Type:	Item ID:	FO:	Ship to ID:	PO priority:	PO date within:								
PO	Ascending	-all-			-all-	(None)	within	days						
<a href="#">List</a>   <a href="#">Reset</a>   <a href="#">More Criteria</a>   <a href="#">Exit</a>														
<a href="#">Previous</a>   <a href="#">Next</a>   <a href="#">Go to page</a> [ ] of 12   Retrieved on 11/24 at 07:10														
LPN	Type	Qty	Tracking nbr	Status	Received	ASIN	PO	PO host	Ship-to	Hub 1	Consolidation status	PO Type	Start Ship	Start Deliver
0001234567000012351	Case	20	129890328879022	Received	06/11/06	123004	PO25018	High	Whse 1	Hub 1	Consolidated	PO	06/02/06	06/04/06
0001234567000012360	Case	20	129890328890789	Received, not shipped	06/11/06					Hub 2	Fulfilling			
0001234567000012372	Case	20	129890328811234	Not required	06/11/06						Not required			
0001234567000012385	Case	20	129890328898788	Shipped, not received	06/11/06		PO25012	High	Whse 2	Hub 3	In-transit	PO	06/03/06	06/04/06
0001234567000012390	Case	20	129890328899065	Shipped, not received						Hub 1	Pending			
0001234567000012408	Pallet	80		Not required	06/11/06	123007	PO25017	High	Whse 2		Not required	PO	06/01/06	06/04/06

Case and Pallet level LPNs for a shipment

Packing List (sample)				
<b>Packing List</b> From: ACME Mfg, 123 Washington Road, Perry Star, Evergreen, E28 300 Ship to: DC Inventory, CC Hwy, Atlanta, Ga 30381, USA				
Shipment:	Vehicle ID:	REF:	Date:	LPN:
SHMT0966	TRLR-0264	AR058	06/10/06	E
PO	LPN	Qty	Unit	Qty
PO25018	0001234567000012361	10	3/5 low board jersey cello	10
	0001234567000012362	10	3/5 low board jersey cello	10
	0001234567000012371	10	3/5 low board jersey cello	10
	PO total: 3 LPNs			30
PO25012	0001234567000012408	10	3/5 low board jersey cello	10
	0001234567000012416	10	3/5 low board jersey cello	10
	PO total: 2 LPNs			20
	Grand total: 5 LPNs			50
Page 1 of 1				

Packing List Example

## 5. Chargebacks

It is common for companies unknowingly to ignore inefficiencies in their supply chain at the point of receipt, which can cost them thousands of dollars. Many companies continually receive inaccurate or untimely shipments such as late shipments received, order underfilled, or order overfilled. While there are many key performance indicators (KPI's) to measure supplier compliance, many companies do not have the construct to chargeback costs to the supplier for poor service and execution. EEM provides the ability to create and manage chargebacks to suppliers. This feature is used to create claims for events such as damaged products, non-compliance, demurrage, and more. Chargebacks are associated with PO shipments and are either system or manually generated.

The charges can be created, edited, and cancelled, and configured for visibility and acceptance of the supplier. Charge change history can be viewed in the system, and events and notifications are generated for the major processing milestones.

The benefits of chargebacks include:

- Increased order accuracy
- Increased order fill rates
- Increased on-time deliveries
- Increased shipment accuracy
- Increased supplier accountability
- Reduced supply chain "operating" costs
- Demurrage cost reallocation to trading partner.

The screenshot shows a web application interface for managing chargebacks. At the top, there is a search bar for 'Charge to issue' and a 'New Chargeback' button. Below this are various filters and sorting options, including 'Sort by' (set to PO), 'Chargeback date selection', and 'PO division'. A table of chargeback records is displayed with columns for Select, Charge Id, Chargeback, Charge Code, Charged Location, Charge Amount, Status, Accept Status, Appro Status, Visible, Type, PO, Supplier, Ordered, Shipment, and Shipped. The table contains four rows of data.

Select	Charge Id	Chargeback	Charge Code	Charged Location	Charge Amount	Status	Accept Status	Appro Status	Visible	Type	PO	Supplier	Ordered	Shipment	Shipped
<input type="checkbox"/>	CB008502	Partial shipment	1200	Far East / Factory 1	250.00	Pending - 07/01/04			Yes	Order shipment	E025010	Far East / Factory 1	07/01/04	SHMT0906	08/15/04
<input type="checkbox"/>	CB008431	Ship late	1400	Far East / Factory 1	250.00	Closed - 07/01/04	Accepted - 06/11/04	Approved - 05/24/04	Yes	Order shipment	E025010	Far East / Factory 1	07/01/04	SHMT0907	08/21/04
<input type="checkbox"/>	CB008372	Partially shipped	1500	ACME / Factory 2	250.00	Cancelled - 07/01/04	n/a	n/a	No	Order shipment	E025017	ACME / Factory 2	07/15/04	SHMT0909	08/01/04
<input type="checkbox"/>	CB008358	Quality	800	ACME / Factory 2	250.00	Open - 07/01/04	Accepted - 07/02/04	Pending - 07/05/04	Yes	Order	E025017	ACME / Factory 2	07/15/04		

Chargebacks for a purchase order

## Hub Management

With increased outsourcing of both manufacturing and distribution both domestically and globally, hubs play a more integral role in supply chains than ever before. Hubs frequently support consolidation in transporting multiple small shipments from suppliers. They also help support the outbound distribution process to customers or stores. Companies are increasingly searching for transportation providers to offer more value added services at these hubs, or even bypass warehouses altogether, and ship directly to customers via these hubs. Unfortunately, many of these facilities are small and historically have not been able to justify the investment in automation and systems.

As a result, there is:

- Lack of visibility to receipts and shipments at hubs
- Inability to create ASNs of shipments leaving the hubs
- Limited ability to print shipping labels, documentation
- Inability to re-direct partial or full order direct to customer
- No capability to substitute cases via a PO split for more dynamic order fulfillment
- No integration to back-end systems of customers.

Regardless of the degree of automation at suppliers and warehouses, the lack of these capabilities at hubs and service providers will continue to limit the efficiencies of the overall supply chain.



EEM Hub Management solves these problems by extending execution capabilities to hubs. Through the simple use of a PC, an Internet connection, and a scanner, hubs can automate such processes as receiving, cross docking, and load building, to help address the problems stated above. Additionally, Hub Management can support direct ship processes, allowing companies to consolidate shipments at a hub and ship directly to stores and customers, bypassing warehouses altogether. Through integration with backend systems, Logistics Hub Management not only facilitates the execution of this process, but also provides sophisticated functionality not often found.

## Store/Customer Gateway

The final node in the supply chain for most companies is the end customer -- business partners, corporate-owned stores, consumers, and often times all three. This is the part of the supply chain that directly affects customer service, changes the customer experience, and affects future sales. There are three main areas of Extended Enterprise Management that relates to Store/Customer Gateway:

### o Order/Inventory Visibility

In today's business environment, real-time visibility is not only crucial to an enterprise, but to its customers as well. Historically, providing customer order status information has been the job of customer service departments. Through EEM Store/Customer Gateway, this process can be fully automated, creating 'self service' applications for customers. EEM provides a Web-based order inquiry with complete company-based security, only granting customers visibility to the status of their orders. What makes this inquiry different from others is that it fully and seamlessly integrates into the WMS, ERP, and other OMS systems, providing a granular level of information, down to the case, SKU, and attribute level (e.g., country of origin and expiration date). Furthermore, customers can view current inventory information to help query

Benefits of Logistics Hub Management include:

- More accurate receiving processes through standardized labels and shipping documentation
- Reduced inventory levels and order cycle time through inventory visibility
- Reduced transportation costs and improved customer service through drop shipment programs
- Reduced transportation costs, inventory carrying costs, labor costs, and time-to-customer/store by direct-to-store (DSD) shipments from Hub.

what other products might be available. Comprehensive rules are available to govern visibility into data that might be outside the normal inventory levels. For instance, if inventory falls below a certain tolerance, this can be hidden from customers in order to maintain confidence that shipping requirements can be met.

As with suppliers, each customer has a varying degree of sophistication. For the smaller customer, browser access will be a welcome addition. For the larger customer with hundreds or thousands of suppliers, a browser-based solution would be an inconvenience, as the need to access hundreds of different Web sites, each with its own user ID and password, becomes a costly burden. For these customers, EEM can provide real-time order status updates via XML or other formats, to be integrated into the customer systems for a unified view of data across their suppliers.

Benefits of these types of applications include:

- Reduced need for customer service departments
- Improved customer service departments by offering CSRs a single source for data across multiple, disparate systems
- 24/7 access to real-time data

Item Details											
Item Details   Item Inventory   <a href="#">Exit</a> Document 1   Document 2   <a href="#">Edit Item Header</a>   <a href="#">Edit Item Components</a>											
Owner:	Seller:	Item ID:	Product ID:	Color:	Size:	GTIN:	Department:	Unit cost:	Rebel price:		
ACME	ACME	77131461	10-2033B	C1	S	1234567896201	Mens	49.99 USD	99.99 USD		
Commodity: Misc1: Class 02 code: Misc2: Class 03 code: Attribute 1:											
Description: S/S low twist jersey polo											
UOM:	Std pack qty:	Std case qty:	Unit weight (Kgs / Lbs):	Unit volume:	Unit length:	Unit width:	Unit height:	MSOB:			
EA	3	24	1.0 / 2.2	1.0	1.0	1.0	1.0	111			
Status:	Catalog ID:	Version:	Min order qty:	Increment order qty:	Max order qty:	Start order:	Start ship:	Discontinue:			
Active - 05/06/04	ABX-942	2	10	10	500	5/01/04	6/30/04	11/30/04			
Content: 100% cotton											
Care instructions: Machine wash warm. Wash with like colors. Only non-chlorine bleach when needed. Tumble dry low.											
Released on 11/04 at 03:11											
Item ID:	Product ID:	Color:	Size:	GTIN:	Description:	Qty:					
77131461	10-2033B	C1	S	1234567896201	S/S low twist jersey polo	1					
77131462	10-2033B	C1	M	1234567896202	S/S low twist jersey polo	2					
77131463	10-2033B	C1	L	1234567896203	S/S low twist jersey polo	2					
77131464	10-2033B	C1	XL	1234567896204	S/S low twist jersey polo	1					

Inventory view for a specific Item

#### o Web-Based Order Entry

For many companies, EDI has become the method of choice for placing and accepting orders. EDI brings along the many cost savings associated with automating a process. It also highlights the higher costs of taking orders from those customers who are unable to place orders via EDI. Typically, these are smaller companies who depend on manual processes such as phone, fax, and email. Many companies are starting to conclude that these types of customers do not carry the same profitability as larger customers and are placing an ultimatum -- start providing EDI orders or find another vendor.

EEM Store/Customer Gateway presents an alternative path. Through the same portal that provides order visibility, customers are able to place orders. These orders are then processed by EEM and passed directly to back-end systems (e.g., ERP, OMS or even WMS.) To these systems, orders appear no different than ones processed using EDI. The benefits of Web-based order entry include:

- Higher profit margins through automation
- Improved customer experience and service
- Lower customer service costs
- Increased order intake via additional order entry points.

#### o Receipt Confirmation

The final step in the order cycle is receiving. For most companies, once the product leaves the warehouse, the cycle is considered complete. However, this is a fallacy that can result in lower customer satisfaction and inaccurate company metrics. EEM provides customers and stores the ability to confirm receipts using the same portal provided for order visibility and order entry. At the time of receipt, customers can indicate the exact product received and provide feedback to the supplier as to the quality, timeliness, and service level provided. While a seemingly simple action, receipt confirmation by the customer is critical for obtaining true end-to-end visibility in one's supply chain. Benefits include:

- Relevant, timely customer feedback
- More accurate metrics on such key processes
- Order cycle time
- On-time percentage
- Order fill rate
- Precise invoicing, based on customer receipts rather than shipments
- Accurate revenue recognition
- Improved carrier rating (was the carrier service level met?)

## Putting It All Together

Each of these individual components can provide significant value to companies. Tactical solutions such as Logistics Gateway can provide strategic value through deferred capital expenditure. Supplier Enablement can increase inventory accuracy and create dramatic financial improvements. The maximum benefit of EEM, however, can be attained only when combining the various components

together, along with functionally robust warehousing and transportation solutions to create true end-to-end execution capabilities from supplier to customer. This combination of solutions is unique to Manhattan Associates because of its broad and deep functionality. Companies are now able to reinvent their supply chain and provide a single face for execution across all nodes in the network.

## Supply Chain Visibility

With Extended Enterprise Management solutions deployed to provide integration with suppliers, hubs, carriers, and customers of all capabilities, companies have unparalleled visibility into their entire network. From orders to shipments

to inventory, the most granular level of data is available, down to the country of origin of product in an individual case, on a particular trailer, in transit from Long Beach to Memphis. In every industry, this level of real-time visibility is vital for achieving supply chain efficiencies.

The screenshot shows the 'Inventories' web application interface. It includes a search bar with 'Item # lookup' and 'Product # lookup' fields, and a 'New Item Master' button. Below the search bar are various filter and sorting options, including 'View type', 'Sort by', and 'Item org id'. A table of inventory items is displayed with columns for 'Select', 'Seller', 'Item Id', 'Product Id', 'Color', 'Size', 'Description', 'Location', 'Inventory Owner', 'Facility On-hand Qty', 'Facility On-Order Qty', 'Facility Allocated Qty', 'Facility Available Qty', 'In-yard Qty', 'Inbound Qty', 'Total Qty', and 'Order in Qty'. The table contains four rows of data for 'S/S low twist jersey polo' items from 'ACME' at different locations (DC 1 and DC 2).

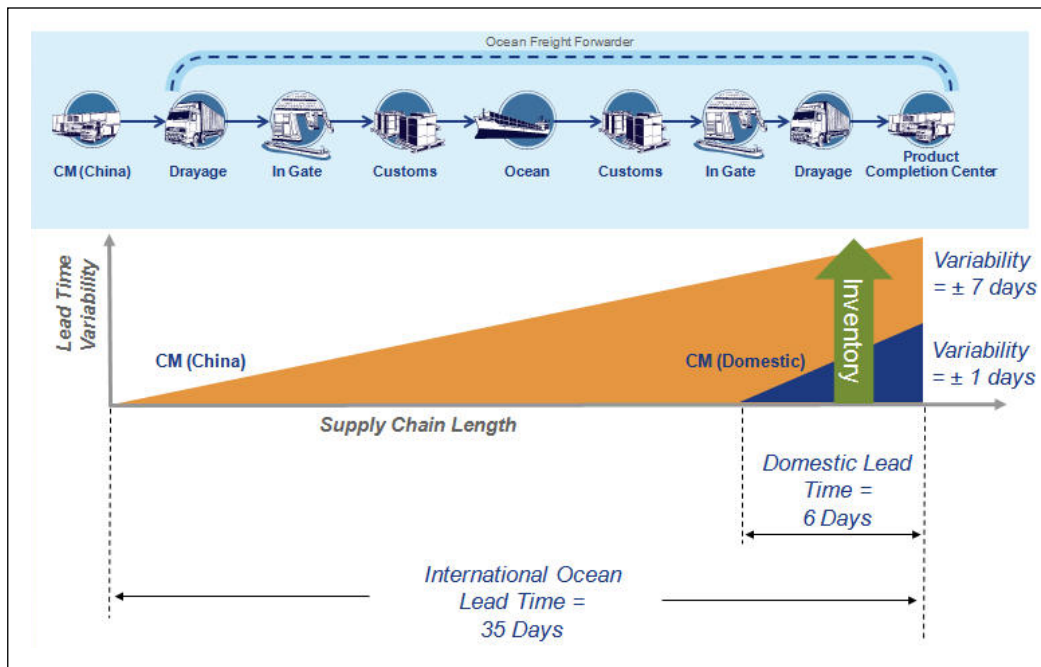
Select	Seller	Item Id	Product Id	Color	Size	Description	Location	Inventory Owner	Facility On-hand Qty	Facility On-Order Qty	Facility Allocated Qty	Facility Available Qty	In-yard Qty	Inbound Qty	Total Qty	Order in Qty
<input type="checkbox"/>	ACME	7711461	10-2033B	C1	S	S/S low twist jersey polo	DC 1	Hbst Inc.	10	45	20	45	50	45	140	45
<input type="checkbox"/>	ACME	7711461	10-2033B	C1	S	S/S low twist jersey polo	DC 2	Hbst Inc.	60	50	30	30	50	50	130	50
<input type="checkbox"/>	ACME	7711461	10-2033B	C1	S	S/S low twist jersey polo	DC 3	Hbst Inc.	40	30	40	40	50	50	140	50
<input type="checkbox"/>	ACME	7711462	10-2033B	C1	M	S/S low twist jersey polo	DC 1	Hbst Inc.	100	70	20	20	50	50	120	45
<input type="checkbox"/>	ACME	7711462	10-2033B	C1	M	S/S low twist jersey polo	DC 2	Hbst Inc.	10	10	30	30	50	50	130	50

Supply Chain Visibility Inventories

As the length of supply chains continue to increase, so does the need for visibility into the supply chain. In the example below, goods being sourced in Asia and shipped via ocean have more lead time variability, leaving you with 3 options:

- Carry more inventory
- Continue to ship product via Air
- Put customer service level at risk

Best in class companies find a way to reduce this lead-time variability through visibility into their supply chains, giving inventory planners more certainty when planning their orders. On-line maps are pre-integrated to provide an intuitive view of global locations along with associated order, inventory, and shipment details by location.



Lead Time Variability Often = More Inventory

Benefits include:

#### Retail/Grocery

- Improved in-stock position
- Lower inventory levels
- Increased inventory turns
- Decreased order cycle times
- Improved on-time delivery
- Reduced expedited costs
- Increased warehouse productivity
- Improved responsiveness to events
- Reduced inventory loss due to expiration of goods
- Better trading partner management through scorecards

#### Consumer Goods

- Lower inventory levels
- Increased inventory turns
- Improved customer service
- Improved CSR productivity
- Increased warehouse productivity
- Better trading partner management through scorecards
- Improved responsiveness to events

#### High-Tech

- Lower inventory levels
- Faster time-to-market for new products
- Effectively outsource logistics to third parties through trading partner management
- Reduced order cycle time
- Improved responsiveness to events
- Reduced cost of goods sold through drop shipping
- Improved customer service levels and management of service parts



EEM provides a holistic view of raw materials and finished goods inventory across the supply chain, including all the way back to your suppliers' on-hand. As mentioned above, even items that are in-transit are visible with EEM, and can be dynamically allocated or routed based on changing demand locations. Manhattan Associates' Distributed

Order Management (DOM) enables you to satisfy demand using the full supply pipeline by diverting in-flight inventory to where it's needed most: directly to customers, directly to stores, or to the appropriate distribution center based on real-time inventory positions.

### Supply Chain Event Management

The ability to identify and respond to events can only be achieved by having real-time, accurate data. With Extended Enterprise Management, companies can leverage Manhattan Associates' event management capabilities. Improve your inventory control, cycle time variability, inventory turns, warehouse productivity, customer satisfaction, and overall efficiency by alerting key personnel of exception events so they can adjust their plans, promotions, and labor schedules. Examples include:

- Buyers receiving alerts if their orders are running late or will be short

- Account managers being notified if their key accounts have been receiving exceptional service (either good or bad)
- Warehouse supervisors being alerted if waves are running behind schedule or if replenishment issues arise
- Traffic managers being made aware of transportation issues, trends, etc.

Supply Chain Event management provides sophisticated tools such as schedules/milestones, escalation, notification delays, and address calendars, to manage these events. EEM's exception-based approach ensures that the resources addressing supply chain issues can focus on resolving the problems, rather than having to find them.

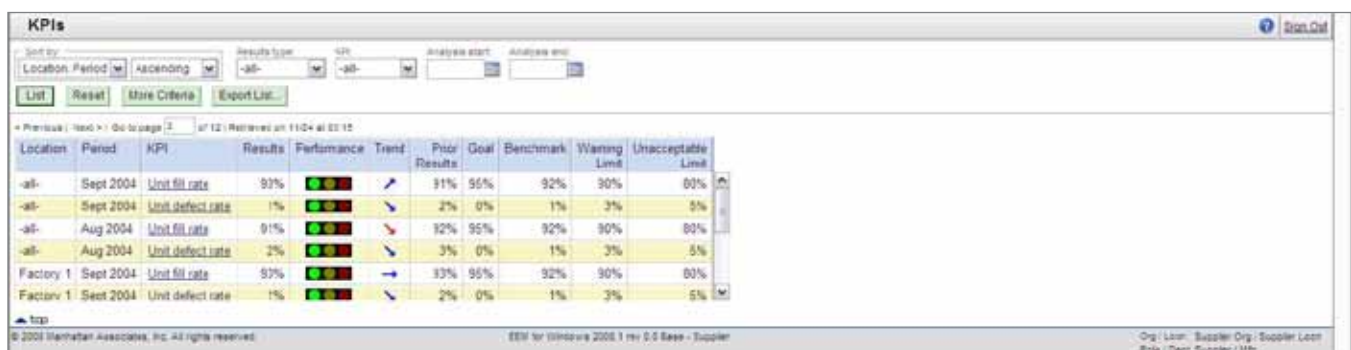
Notification	Status	Priority	Exception Type	Escalation Status	Notified	Entity Type	Order	Shipment	Load	Event Location	Charge Location
Order shipment	New 05/13/05	Std	Exception Pending	4 + 2 00 Today + 16 00	05/13/05 16:21	Event	L2730282	SHR01147		Hub 1	
Order accepted	Deferred 05/11/05	Std			05/10/05 11:07	Event	L2730282			Factory 1	
Order accepted	Deferred 05/10/05	Std	Exception Cancelled		05/09/05 22:08	Check					
Order accepted	Deferred 05/10/05	Std	Exception	05/10/05 20:22	05/09/05 22:08	Chargeback	8000200	SHR01155		Far East / Factory 1	Far East / Factory 1
Load Actual	Deferred 05/10/05	Std			05/09/05 22:18				L1234		

Event Management Notifications

## Analysis

Ultimately, much of the data generated by these systems is stored in a massive datamart for detailed analysis. Using the capabilities of a cutting-edge business intelligence system, key performance indicators (KPIs) and predefined views are tailored by role to provide key users the historical trend analysis tools needed to manage the business. Examples include:

- Vendor performance scorecards (on time percentage, volume, seasonality, etc.)
- Shipping scorecards (weight, volume, dollars by carrier, service, date, etc.)
- Inventory metrics (percentage by country of origin, average on hand, etc.)
- Customer service metrics (order fill rate, cycle time, on time percentage, etc.)



The screenshot shows a web-based KPIs dashboard. At the top, there are filters for 'Location Period' (set to 'all-'), 'Results type' (set to 'all-'), and 'Analysis start/end' dates. Below the filters are buttons for 'List', 'Reset', 'More Criteria', and 'Export List'. The main area contains a table with the following data:

Location	Period	KPI	Results	Performance	Trend	Prior Results	Goal	Benchmark	Warning Limit	Unacceptable Limit
-all-	Sept 2004	Unit fill rate	93%	<span style="color: green;">●</span> <span style="color: red;">●</span> <span style="color: yellow;">●</span>	↗	91%	95%	92%	90%	80%
-all-	Sept 2004	Unit defect rate	1%	<span style="color: green;">●</span> <span style="color: red;">●</span> <span style="color: yellow;">●</span>	↘	2%	0%	1%	3%	5%
-all-	Aug 2004	Unit fill rate	91%	<span style="color: green;">●</span> <span style="color: red;">●</span> <span style="color: yellow;">●</span>	↘	92%	95%	92%	90%	80%
-all-	Aug 2004	Unit defect rate	2%	<span style="color: green;">●</span> <span style="color: red;">●</span> <span style="color: yellow;">●</span>	↘	3%	0%	1%	3%	5%
Factory 1	Sept 2004	Unit fill rate	93%	<span style="color: green;">●</span> <span style="color: red;">●</span> <span style="color: yellow;">●</span>	↗	93%	95%	92%	90%	80%
Factory 1	Sept 2004	Unit defect rate	1%	<span style="color: green;">●</span> <span style="color: red;">●</span> <span style="color: yellow;">●</span>	↘	2%	0%	1%	3%	5%

At the bottom of the dashboard, there is a footer with copyright information: '© 2001 Manhattan Associates, Inc. All rights reserved.' and 'EEM for i3000v6 2008.1 rev 5.0 Base - Supplier'. On the right side of the footer, there are links for 'Log / Logon', 'Supplier Orig / Supplier Logon', 'Role / Desc', 'Supplier / Mfgs'.

Key Performance Indicators

## Conclusion

Whether you need to increase collaboration, provide proactive management around unplanned supply chain disruptions, or facilitate the movement of goods, Extended Enterprise Management can provide a quick return for your organization. By collaborating more effectively with partners anywhere in the world, you can ensure that goods flow dynamically through the optimal channels to your customers. Extended Enterprise Management gives users throughout the extended enterprise – suppliers, hubs, carriers and customers – the ability to share information within a single platform.

With Extended Enterprise Management, you can:

- Manage global collaborative commerce with one centralized solution.
- Increase on-time delivery rate by 10-20%.
- Reduce warehouse receiving time by 20% to 40%.
- Increase order fill rate by 5% to 15%.
- Remove 3-5 days of inventory from your supply chain.
- Decrease cycle-time variability by 2-4 days.
- Lower inventory safety stock levels 5-15%.
- Reduce overall inventory carrying, transportation and labor costs.

Manhattan Associates® continues to deliver on its 19-year heritage of providing global supply chain excellence to more than 1,200 customers worldwide that consider supply chain optimization core to their strategic market leadership. The company's supply chain innovations include: Manhattan SCOPE®, a portfolio of software solutions and technology that leverages a Supply Chain Process Platform to help organizations optimize their supply chains from planning through execution; Manhattan ILS™, a portfolio of distribution management and transportation management solutions built on Microsoft® .NET technology; and Manhattan Carrier™, a suite of supply chain solutions specifically addressing the needs of the motor carrier industry. For more information, please visit [www.manh.com](http://www.manh.com).



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