MANHATTAN ACTIVE™

SUPPLY CHAIN – WMS & Distribution Management

Manhattan Associates®

PUSH POSSIBLE™

IN A FAST-MOVING WORLD

The Manhattan Active™ Supply Chain suite of solutions allows enterprises to optimize large and complex operations, adapt to market and demand changes, and iterate and innovate at speed. With our solutions, you have technology that is always current, seamlessly interconnected, and easily adaptable.

ALWAYS FLEXIBLE, ALWAYS CURRENT

Staying active requires a flexible approach in which enterprises can take advantage of the newest technology, quickly. To achieve a faster pace and support constant innovation, Manhattan Active Supply Chain solutions are designed to adapt. Available across a variety of deployment options—public cloud, private cloud, managed/ hosted, multi-tenant, or on-premises—these solutions serve a broad range of needs, capabilities, and budgets. With options to receive annual upgrades, you can implement the next version of an application each year to take advantage of new features and functions. Our Manhattan Active WM service provides annual upgrades, both on premises and in the cloud, including the option to automatically migrate custom extensions.

INTERCONNECT SEAMLESSLY FOR ALL-AROUND OPTIMIZATION

Manhattan Active Supply Chain allows you to innovate and optimize complex distribution and transportation operations with actionable visibility across the network. Purpose-built features are tailored for a range of industries, including food distribution and grocery, retail, life sciences, apparel and footwear, high-tech electronics, third-party logistics, and others.

A new report from Forrester projects that U.S. shoppers will spend nearly $460 billion online in 2017. Online sales are making gains and are projected to account for 17.0% of all retail sales within the next five years up from a projected 12.9% in 2017, according to its August 2017 report.

FORRESTER DATA: ONLINE RETAIL FORECAST, 2017 TO 2022 (US)

MANHATTAN ACTIVE™

SUPPLY CHAIN – Distribution & WMS

DISTRIBUTION

Warehouses and distribution centers have always been a blur of activity. Change is constant, requiring well-choreographed operations to keep everything running smoothly, with associates and equipment working at optimal efficiency.

E-COMMERCE DRIVES GROWTH IN
FACILITIES, EMPLOYEES, AND AUTOMATION

With e-commerce, distribution networks stretch from suppliers' receiving docks to customers' front doors. Many distribution centers that only handle store replenishment or wholesale distribution are retooling to support e-commerce. They need flexibility to address order profiles that range from multiple pallets to a single item.

And with customer expectations around speed of delivery, more distribution hubs are being built in closer proximity to customers[1] to handle the growing number of e-commerce orders. The Wall Street Journal reports, "Retailers and logistics companies have been opening warehouses at a record pace."[2]

To add to the complexity, 30 percent of all online purchases are returned,[3] which means that rapid inventory disposition, faster inventory recovery, and more rapid customer credits are essential capabilities for active enterprises.

To support these unique e-commerce order profiles, the number of employees needed on a per-warehouse basis is rising, outpacing overall job growth.[4] Making these new employees productive faster and equipping supervisors with mobile technology to keep a growing workforce engaged are imperatives for the modern warehouse.

SOLUTION COMPONENTS

Manhattan's Distribution solutions include Warehouse Management, Labor Management, Slotting Optimization, Billing Management, and DM Mobile, along with industry-specific capabilities designed to increase product velocity, customer service, and efficiency across your operations.

WAREHOUSE MANAGEMENT

Manhattan's Warehouse Management sets the standard for leading-edge, highly-mobile warehouse management system (WMS) technology and innovation—in both cloud and on-premise solutions.

Using advanced, proprietary algorithms to mathematically organize and optimize operations, Warehouse Management speeds the flow of goods and information to enable flawless execution across inventory, labor, and space and places companies on a firm footing for compliance with regulations and standards.

Our modern mobile applications help customers efficiently manage omnichannel fulfillment by converging capabilities commonly found in disparate labor management and slotting optimization systems.

With our industry-leading Warehouse Management solution, your team has the power to:

– Enhance inventory management by increasing accuracy, improving order fulfillment, and reducing order cycle time
– Streamline receiving and shipping to facilitate cross-docking and expedite back-ordered products
– Engage with floor personnel while seeing real-time performance visibility
– Increase inventory turns and speed order processing to boost customer satisfaction and improve financial performance

WAREHOUSE MANAGEMENT CORE CAPABILITIES

Designed to help you exceed customer expectations in the omnichannel marketplace, our Warehouse Management solution maximizes efficiency and optimizes the potential of every fulfillment center. The solution advances your warehouse operations from beyond basic picking, packing, and shipping, speeding up the flow of goods and information through your warehouse and enabling flawless execution of all warehouse operations.

Features + Functions

– Streamline inventory receiving processes with cross-docking, quality audit, and vendor performance
– Eliminate costly physical counts with auditor-approved, cycle-counting functionality
– Support sophisticated warehousing needs, including value-added services, lot management, serial number tracking, and product recalls
– Accommodate omnichannel and/or multi-tenant fulfillment
– Leverage advanced order fulfillment strategies with wave and/or waveless approaches
– Automate information capture via modern handheld mobile devices, voice recognition, and/or seamless material handling equipment (MHE) integration
– Utilize native transportation execution capabilities or leverage the External Parcel Integration (EPI) framework to connect with external multi-carrier solutions
– Increase visibility, security, and throughput with native Appointment Scheduling, Guard Check-in and Check-out, Dock Door Management, and Yard Management functionality
– Improve product placement and employee performance with the Slotting Optimization and Labor Management modules

DM MOBILE

A recent survey of IT and operations professionals in the logistics, manufacturing, retail, transportation, and wholesale markets revealed the three most critical picking and fulfillment issues: labor productivity, order turnaround time, and order accuracy. In the world of omnichannel commerce, improving in these areas starts with quick, real-time access to information, not only for monitoring work and inventory but also for driving engagement and productivity among warehouse associates. To meet the needs of today, data must be delivered to associates and managers alike in a mobile format across warehouse management, inventory, and slotting processes.

THE POWER OF MODERN MOBILITY

DM Mobile overcomes labor productivity, order turnaround time, and order accuracy challenges by providing managers and associates applications—accessible via tablets and handheld devices—that provide information and capabilities essential for taking immediate action. Distribution managers can finally break away from the desk since DM Mobile gives them all the information they need to interact and affect change among employees and tasks in real time on the warehouse floor.

By combining data and functionality from Warehouse Management, Labor Management, and Slotting Optimization solutions, DM Mobile offers a wide array of powerful capabilities. Labor management information, such as employee performance, observation management, team assignment, and employee interactions, is readily accessible. In addition, work monitoring options like task monitoring, throughput, order prioritization, and customer views allow warehouse supervisors to keep customer service and operational efficiency top-of-mind.

A SINGLE, SEAMLESS MOBILE APPLICATION

DM Mobile allows warehouse managers to move throughout their facility and engage with floor personnel while having real-time information visibility. This industry-leading solution offers robust functionality and tight interconnectivity with Manhattan Distribution solutions, enabling distribution managers to oversee labor, inventory, and work in real time—even in the most complex facilities. Because it's anchored by our industry-leading Warehouse Management solutions, DM Mobile helps increase product velocity, customer service, and efficiency across your distribution operations.

DM Mobile offers a comprehensive set of capabilities that are seamlessly interconnected with the Manhattan Distribution suite:

Labor Management. DM Mobile equips supervisors with vital performance information necessary for real-time interaction with employees on the warehouse floor. The solution helps improve employee engagement by providing a system for identifying and rewarding strong performers, while coaching employees who are not meeting their goals.

Work Monitoring. Through an easy-to-use, consumer-oriented user interface, DM Mobile offers a work monitoring framework, with multiple hierarchies for task management in all warehouse environments.

Inventory Management. DM Mobile has a powerful capability to manage or interact with inventory directly from the warehouse floor. Warehouse managers can view or manage inventory using intuitive inventory searches by location, item, or LPN. Inventory management provides warehouse managers real-time inventory data while they're moving throughout the facility and encountering current or potential inventory issues. Managers can make immediate inventory updates and even view slot score and re-slot locations.

Order Streaming. DM Mobile supports order streaming, which dynamically adjusts picking priorities on the fly and helps keep labor resources and sortation equipment moving at a more regular pace, while reducing the amount of downtime for labor and sortation processes.

Features + Functions

– Facilitate more supervisor time spent on the floor with real-time data on employee productivity and performance
– Record active interactions systematically with employees, including observations and performance measurements
– Review work in the warehouse by wave, job function, and task or activity
– Put a task on hold, reprioritize a task, assign a task to an employee, or release a set of tasks to be completed
– Monitor, plan, and forecast work in real time
– Track the status for a customer, including order lookups and wave progress

WAREHOUSE MANAGEMENT CAPABILITIES BY INDUSTRY

Industry-specific capabilities are purpose-built to help you increase product velocity, customer service, and efficiency across your distribution operations.

FOOD DISTRIBUTION AND GROCERY RETAIL

Traceability

– Lot management
– Inventory recall
– Event tracking
– Date rotation
– Fast flow for perishables
– Product aging, including First Expire First Out (FEFO), First In First Out (FIFO), and Last In First Out (LIFO)

Food Picking and Loading Functionality

– Multi-order pallet and/or work assignment creation
– Picking using label, RF, and voice
– Load sequence by stop/route

Multi-Temperature Distribution

– Locating, allocation, and picking rules by zone (dry, fridge and freezer)
– Task prioritization by zone

Inventory Control

– Real-time visibility into product status, product aging, and product batches
– Advanced cycle counting

RETAIL

Cross Docking

Flow Through

Transloading

Value-Added Services

Vendor Compliance

Put-to Zone and Put-to-Store

Pre-Pack

Kitting

Dye-Lot Management

Floor-Ready Processing

Garment on Hanger (GOH) Support

SKU Substitution

Pack and Hold

Load Building

Directed Loading by Stop

DIRECT TO CONSUMER

High-Volume Order Processing

Singles and Small Order Processing

Multiple Pick Methods (Cluster Picking, and Zone Pick)

High SKU-Count Support

– Scalability
– Item placement/slotting

Personalization (Gift Cards, Gift Wrap, etc.)

3D Cartonization

Collate (Invoice) Document Generation

Configurable Material Handling Equipment (MHE) Integration

Dynamic Location Assignment and Location Replenishment

Returns Disposition Processing

Product Assortments (Gift Packs)

CubiScan Cubing, Weighing, and Dimensioning System Integration

Parcel Shipping

Parcel Shipping

APPAREL AND FOOTWEAR

Apparel SKU Characteristics

– Style, color, size, and width tracking
– Quality and version support
– Release date support

High SKU-Count Support

– Scalability
– Item placement/slotting

Flexible Dimension and Weight Support

– Advanced cartonization algorithms
  – CubiScan cubing, weighing, and dimensioning system integration

Pre-Packs/Musical Runs

Value-Added Services

Configurable Material Handling Equipment (MHE) Integration

Advanced Outbound Allocation, Picking, and Replenishment

Strategies Pack-and-Hold

Storage Parcel Shipping

While nearly nine percent of sales are through e-commerce today, McKinsey predicts that number will rise to 15 percent by 2025, when one out of every six sales will be via online and mobile channels.

U.S. DEPT. OF COMMERCE

LIFE SCIENCE

Traceability

– Lot management
– Inventory recall
– Event tracking
– Date rotation
– Product aging, including FEFO, FIFO, and LIFO

Life Science Picking and Loading Functionality

– Multi-Order case or pallet and work assignment creation
– Picking using label, RF, and/or voice
– Load Sequence by stop and route

Multi-Temperature Distribution

– Locating, allocating, and picking rules by zone (cage, fridge, dry, etc.)
– Task prioritization by zone

Inventory Control

– Real-time visibility to product status, product aging, and lots
– Advanced cycle counting

HIGH-TECH ELECTRONICS

End-to-end Serial Number Tracking

– Multi-level/nested serial numbers
– Serial number range capture
– Level of tracking controlled at SKU level

Advanced Lot Management

SKU Attribute Management

– Revision number
– Country of origin

Work Orders/Kitting and Value-Added Services

Advanced Cartonization

Configurable MHE/Voice Integration

Advanced Outbound Allocation/Picking/Replenishment Strategies

Inventory Ownership/Segregation (Vendor-Owned Inventory)

Parcel Shipping

THIRD-PARTY LOGISTICS (3PL)

Architectural Support

– Multiple warehouses on single application and database instance
– Multiple customers in a single facility

Operational Flexibility

– Configure business flows at the customer level
– Support multiple flows within single warehouse
– Configure storage to be customer-specific or allow mixing of inventory across companies within single location, zone, etc. to optimize space

Optimize Labor Across Customers

– Handle multiple customers with different operating rules within single facility without adversely affecting labor

Billing Management for Customer Charge and Invoicing Requirements

Visibility Across Warehouses and Customers for Orders and Inventory

Manhattan Associates maintains its position as a Gartner Magic Quadrant for Warehouse Management Systems Leader for the ninth consecutive time. This year we are positioned highest in Ability to Execute and furthest in Completeness of Vision.*

DISTRIBUTION

WAVELESS ORDER STREAMING: A NEW APPROACH TO MAXIMIZING THROUGHPUT

At Manhattan, we are committed to helping our customers maximize overall facility throughput and more easily and cost-effectively flex their workforces during peak periods. At a high level, the key to maximizing throughput is moving from an exclusive reliance on traditional wave-based processes to one which blends waves and waveless strategies. That's why we offer non-wave-based math and science models that easily integrate with market-leading material handling equipment (MHE), such as sortation equipment, put walls, and automated storage and retrieval systems (ASRS) for waveless order fulfillment.

This waveless order streaming approach is crucial for fully utilizing material handling equipment and meeting service-level agreements on direct-to-consumer (DTC) orders. Order Streaming provides a more dynamic order fulfillment model that orchestrates orders immediately to improve labor and equipment planning and proactive location assignment and replenishment. At the same time, Order Streaming delays final task construction and assignment, including travel/pick paths, until the work is ready to be assigned to a work queue.

The benefits are better utilization of unit sorters, more efficient manual sortation, higher labor utilization, more flexibility in order grouping and prioritization, and, ultimately, a more scalable warehouse at a lower capital expense.

MORE PRODUCTIVE ASSOCIATES

For warehouse associates, our mobile app provides a touch-enabled, modern approach to common warehouse tasks that focuses on maximizing the productivity of personnel in an intuitive, consumer-oriented user interface. A diverse assortment of device operating systems and device form factors are supported such as voice-driven, triggered barcode scanners, wearable input devices, vehicle-mounted screens, and handheld touchscreens. A graphical, purpose-built user interface with product images and easy-to-follow prompts allows for rapid training, high productivity, and high accuracy.

AGILITY TO ITERATE AND INNOVATE

As warehouses become increasingly more automated, Warehouse Management's ability to integrate with warehouse control systems (WCS) will add even greater value and efficiency. By leveraging the data explosion created by the internet of things (IoT), Warehouse Management advances fulfillment capabilities for both manufacturers and wholesalers. We are committed to omnichannel retail and distribution center innovation. Our solutions will take full advantage of fulfillment automation and machine learning in order to drive more efficient and optimal outcomes for our customers.

E-COMMERCE ORDER FULFILLMENT: PACK STATION, RETURNS PROCESSING AND PARCEL INTEGRATION

Designed to address the unique challenges that retailers face in the world of omnichannel commerce, our pack station, returns processing, and parcel integration capabilities increase efficiency and improve service.

Our pack station interface provides fully configurable screens that lead packing personnel through tasks using large, easy-to-use touchscreens with product images and robust exception handling. Pack station capabilities increase efficiency and accuracy of the packing process, while decreasing ramp-up time for new and temporary employees during peak periods.

While processing returns can be a time-consuming task that needs to be made as efficient as possible, a top-line opportunity also exists in returning this merchandise to sellable condition as quickly as possible. That's why our modern, purpose-built returns processing interface supports multiple initiation workflows and rapid inventory disposition with the goals of faster inventory recovery and more rapid customer credits.

With parcel integration—our optional, robust integration framework for third-party parcel connectivity—your team can rate, ship, and track parcel packages with absolutely no rate and carrier label maintenance. Parcel integration provides flexible integration with leading parcel carriers such as UPS, FedEx, USPS, and regional carriers, as well as most international carriers.

A COMPLETE SOLUTION FOR ACTIVE DISTRIBUTION

Leading companies have recognized Manhattan's Warehouse Management solution for delivering best-in-class performance for decades. And while we do provide the leading WMS with industry-specific domain expertise, effective distribution management is about more than just warehousing. Optimization tools like Slotting and Labor Management drive workforce efficiency—through facility layout, planning, and management tools.

LABOR MANAGEMENT

ENGAGE YOUR WORKFORCE

High customer service expectations, volatile demand, SKU proliferation, and smaller order sizes driven by omnichannel commerce require greater employee productivity and efficiency than ever before. Yet, according to Gallup Research, 70 percent of U.S. workers are not engaged and or working to their full potential. In today's fast-paced economy, an engaged workforce is vital to success. It can lead to increased innovation, productivity, and bottom-line performance while reducing labor costs.

Manhattan's Labor Management solution helps close the employee engagement gap by providing a system for identifying and rewarding strong performers, while providing essential training and coaching for employees not meeting their goals. The result? Improved workforce efficiency, reduced turnover, and increased productivity in the warehouse.

Labor Management also enables managers and supervisors to forecast workforce requirements, track productivity, and calculate incentive pay. And with this intuitive mobile solution, supervisors can spend more time on the warehouse floor, where they can interact with their teams, take real-time action to eliminate bottlenecks, work with low performers, and ensure operations are running smoothly.

Features + Functions

– Measure how staff is performing against engineered labor standards
– Leverage prescriptive workflows for coaching and interacting with employees
– Provide systematic feedback to employees in a consumer grade scorecard that includes performance feedback and gamification capabilities
– Optimize overtime, regular, and temporary labor based on demand forecasts
– Use mobile capabilities to facilitate more supervisor time spent on the floor, with real-time data on employee productivity and performance
– Calculate incentive pay and feed into payroll systems
– Use "what-if" analysis to determine optimal staffing requirements
– Forecast and plan labor by day, shift, job, and zone

BOOST PERFORMANCE AT WORK

While Labor and Warehouse Management functionality have traditionally been approached separately, Manhattan's Performance at Work initiative brings them together. This tightly integrated offering uses a shared data platform that allows goals to be measured in real time based on actual performance. And with increased access to critical performance data, the Performance at Work initiative improves employee engagement and increases supervisor effectiveness.

SLOTTING OPTIMIZATION

IT'S ABOUT LOCATION, LOCATION, LOCATION

In warehouses, like real estate, location makes all the difference. Product location directly affects productivity, worker safety, and order accuracy. You want fast-moving items in the most accessible locations, heavy items placed to minimize damage, and total storage capacity optimized.

The challenges of smaller orders, SKU proliferation, volatile demand, and shorter order cycle times require nonstop optimization of warehouse space. As distribution operations adapt to requirements driven by omnichannel retail, optimizing slotting becomes more critical to controlling costs and meeting customer expectations.

AN OPTIMAL APPROACH TO OPTIMIZATION

Because Slotting Optimization determines the best locations to slot your inventory, it increases workforce efficiency, shortens order fulfillment cycles, and maximizes throughput. It also improves customer service by strategically grouping items together for fulfillment and updating placement recommendations based on trends and new product demand.

As a 100 percent, web-enabled application with an advanced math model that calculates optimal slotting, Slotting Optimization considers seasonality, sales trends, and product variations, while maintaining preferred item sequencing and family groupings. Better yet, it is designed with capabilities to handle even the most complex warehouses.

Features + Functions

– Set and re-set warehouse pick locations based on new product demand, changing consumer expectations, and operational constraints
– Group items for rapid fulfillment, and update placement based on sales trends and product variations
– Use product characteristics and velocity to calculate a relative value for each potential placement
– Aggregate values for all products, and compare millions of move combinations against user-configured strategies
– Simulate different rule sets to find optimal configurations with scenario management capabilities

RIGHT INVENTORY AT THE BEST PLACE AT THE OPTIMAL TIME

Manhattan Slotting Optimization can increase picking efficiency, reduce replenishment requirements, and maximize throughput by determining the best slot locations for all products in the DC. It's a powerful solution, with a proven track record even in the largest and most complex facilities.

BILLING MANAGEMENT

A flexible, activity-based solution for 3PLs that uses time-based rules to streamline cost calculations and the invoicing process— dynamically managing the billing process across all facilities.

Features + Functions

– Implement activity-based billing
  to optimize profits
– Assign charges for warehouse
  processes including inventory
  storage
– Generate invoice reports for
  tenants or business units