# Manhattan Active® **Transportation Management**

Orchestrate every aspect of your transportation network with a solution engineered for modern logistics challenges and designed to adapt and grow with your business needs.

# **Manhattan**



## **Our Goals**

Manhattan Active<sup>®</sup> Transportation Management empowers businesses to deliver on the following goals, let's talk about how.

Ship less air & drive less miles

Improve visibility & service levels

Reduce cost

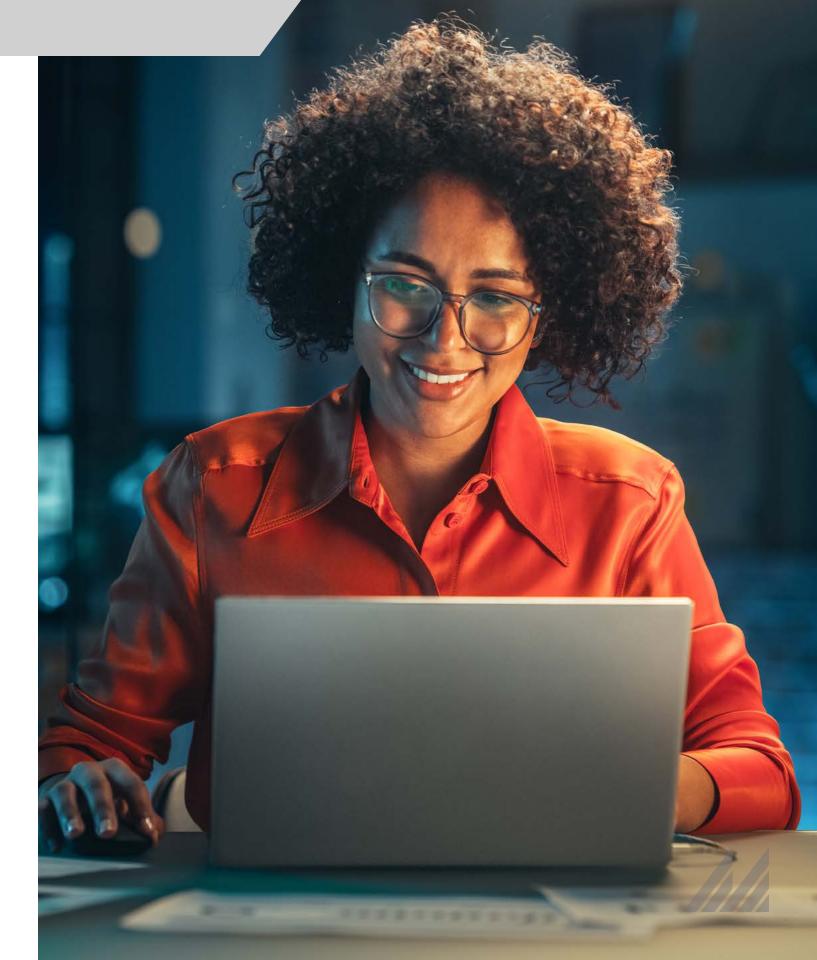


## How Does Manhattan Help Our Customers Achieve Their Goals?

Technology

**Features & Capabilities** 

Network & Partner Ecosystem



# Manhattan Active® **Transportation Management**

Built entirely on a modern microservices architecture, Manhattan Active Transportation Management (TM) empowers logistics operations with the most intelligent optimization engine ever created. It is versionless and fully extensible, so introducing new innovations and network partners is quick and easy. Through a centralized user experience, planners can orchestrate global delivery like never before.

#### More adaptive technology

- > The most adaptable, configurable, scalable solution in the industry
- > Planning & execution, appointment scheduling and freight audit & claims in one app
- > Extensible at every level data, user interface (UI), services and network - quickly and easily add additional carriers, partners, and more. New features and capabilities introduced every 90 days

#### More intelligent optimization

- > Multi-modal, self-configuring and selftuning to always achieve the ideal solve
- > Considers all options at once, including private fleet, multi-modal and common carrier
- > Adaptive routing, including traffic and weather, means faster, smarter planning
- > Automatic recognition and resolution of order, network and mode constraints based on fulfillment offerings

#### More intuitive experiences

- > Total visibility means unmatched responsiveness and efficiency
- > All new configuration wizards make extensibility easier at every level
- > Intuitive UI enables collaboration between co-workers, carriers, partners and vendors
- > A simple, intuitive experience for all users, with in-app messaging

#### **Better agility and** faster innovation

**Better outcomes and** faster solves

**Better engagement and** faster collaboration





# The benefits of modern, cloud-native technology

Manhattan Active TM is cloud native and built entirely with a microservices architecture. In other words, it is engineered specifically for the logistics obstacles you face each day. The technology offers benefits that include:

**Scalability:** The solution has the elasticity to automatically scale up or down to meet the demands of your network.

**Zero Downtime Upgrades:** Because it is based in the cloud, the technology is always current, upgrading with no downtime or interruption to end users.

**Extensibility:** Manhattan Active TM allows customers to adapt the application, and develop custom extensions, without modifying the base code. This capability enables a truly unique customer experience and user interface specific to your business needs, data and services.

**Access to Innovation:** Manhattan adds new innovations to the software every 90 days, ensuring customers have the capabilities they need to function as effectively as possible.



"No upgrades were a huge benefit... With Manhattan Active Transportation Management, it's quarterly updates, no downtime and you get the new functionality a lot faster."

Manhattan Transportation Customer

## **How Manhattan Active TM** transforms transportation

Powered by the benefits of a cloud-native application – and armed with the fastest, most intelligent optimization engine ever created - Manhattan Active TM delivers essential capabilities for today's challenges. They include:

#### Unified Control and Optimization: The

architecture in Manhattan Active TM gives operations the ability to move beyond the typical "control tower" visibility. Instead, it provides realtime visibility, as well as actionable, transactional capabilities to respond to issues, improve on-time deliveries and manage customer expectations.

**Unified Execution:** We enable customers to collaborate and adapt in real time, across operations. In-app messaging, notifications and integration accelerate decision-making, reduce with the Manhattan TM Carrier mobile app ensures communication and collaboration are maximized.

**Unmatched Agility:** Manhattan's software is designed to overcome disruption. Real-time visibility, along with a streamlined the exception management process, allows customers to respond quickly to issues, find solutions and keep shipments on track.

**Enhanced Process Automation:** Legacy TMS solutions require many manual processes. Manhattan Active TM automates much of your transportation operation. This helps costs and improve overall efficiency.

In addition, Manhattan Active TM offers a range of features that enable better operations, including: automated carrier selection, optimization of transportation routes, real-time reporting and analytics and transportation modeling. Altogether, these features help you improve operations and stay competitive in an increasingly complex landscape.

#### **CUSTOMER INSIGHT**

"Manhattan Active TM is definitely a 21<sup>st</sup>-century application. You gain productivity because there are steps that are happening automatically."



# Manhattan Active® Transportation Management

Notable Features & Capabilities

#### **Global Multi-Modal Support**

The system supports all modes of transportation globally, providing flexibility and scalability for businesses expanding their operations or diversifying their logistics strategies. Users can track shipments throughout the entire transportation lifecycle, which is crucial for maintaining timely deliveries and high service levels.

#### **Network Modeling**

Our Modeling solution offers advanced tools and capabilities which support complex logistical analysis, which in turn, enables organizations to transcend the traditional, reactive emphasis on mere execution, shifting the planners' role to a proactive stance based on data-driven insights. This powerful tool facilitates the ongoing quest for operational enhancement, enabling companies to swiftly adapt to supply chain fluctuations on the fly, no matter how many variables, improving the efficiency of shipment planning and execution.

#### **Capacity Sourcing & Procurement**

The solution automates contract management and reduces transportation costs for all modes of transportation. With features like 'what if' scenario management and the ability to execute incremental bids, Manhattan's TMS ensures spend visibility and accountability, standardizing and simplifying the bid collection and optimization process.

#### **Dispatch & Fleet Management**

Manhattan Active Transportation Management provides the ability to send dispatch documents or instructions to and from drivers; simplifies the coordination of routes and deliveries by automating routing and scheduling processes between the TMS and mobile applications.

#### **Unified Shipment Planning & Execution**

Unified Shipment Planning & Execution represents a holistic approach to managing the end-to-end process of shipping goods within the supply chain. It unifies various components of the shipment planning process, to order placement, to final delivery, ensuring that each step is synchronized to optimize efficiency and service levels.

Continuous optimization maximizes efficiency automatically, in real time. Get solves up to 10x times faster with the industry's most advanced optimization engines which help lower costs and improve overall delivery performance, ensuring that businesses can select the best shipping options available quickly.

### **Unified Logistics Control**

Manhattan Active Transportation Management is a single application and experience to see, plan, optimize and execute, offering complete command and control of your logistics. Our shipment planning engine is used to create, edit, or cancel shipments and can be set up to execute shipments automatically or by directed planning through the Unified Logistics Control.

#### **Freight Settlement**

## **Continuous Optimization**

Our solution helps facilitate the auditing of shipping invoices, protecting against undue charges and errors. It aligns payments with services received, streamlining financial reconciliations. By automating the freight auditing process, you mitigate the risk of overcharges and reconciles payments efficiently, streamlining administrative tasks, and bolster profitability.



## **Continuous Optimization**

#### The fastest, multi-modal transportation optimization planning in the industry

Shipment planning has gotten a lot harder in the past two decades. Vast increases in shipments, shrinking delivery windows and fluctuating capacity have exponentially increased the complexity of feasibility and routing assessments.

#### **Buying time**

All that complexity, exacerbated by the accelerating shifts in volume toward digital commerce, creates a volatile environment that makes planning shipments increasingly difficult, even when using a traditional transportation management system (TMS). The number of parameters that must be tweaked to get it just right and the sheer time required to compute the plan, can sometimes take hours. And while the distribution facility is waiting for the plan to complete, there are continuous order and capacity changes, meaning suboptimal workarounds are an increasing part of everyday life for transportation planners.

#### A new beginning

Manhattan Active TM was purposefully engineered from the ground up to make planning simpler. It was designed by dedicated data science and engineering teams with nearly two decades of learning and experience working alongside some of the world's most complex supply chains.

The result is a cloud-native TMS built entirely from microservices, providing an autoscaling future system that provides the foundation for continuous innovation and blistering performance.

#### **Blindingly fast**

The key to any type of optimization performance is ensuring immediate access to high volumes of data. The more data considered, the better the solve. And the faster that data can be interpreted and planned, the more time organizations have to refine and execute that plan.

At the heart of Manhattan Active TM is an all-new, multi-modal optimization core that is the fastest in the industry. It utilizes in-memory computing technology that keeps data cached instead of having to recreate a hierarchical data structure each time new parameters need to be planned.

Manhattan Active TM also understands when its memory cache needs to be refreshed to maintain optimum performance. So, every time you hit the "go" button, you can be sure the system is always planning with the most current data available. The result is a quantum leap forward in processing speed, with up to 80% faster solve times that reduce some compute times from 15 minutes to just 3 minutes while also delivering better plan quality. Time feasibility is an analysis function to determine if an order could ship in a certain way based upon its location, destination and mode. Manhattan Active TM analyzes 18 million feasibility options

every second. Now, that is fast.



## ON THE MICROSERVICES ARCHITECTURE:

completely."

ON EXTENSIBILITY: advantage."

#### ON NO LONGER NEEDING UPGRADES:

"I can honestly say that I was excited about the fact that I would never have to test for another upgrade ever again."

"Manhattan can actually make changes, minor changes throughout the application, without it having to be redone

"The fact that I can customize the base product is definitely an



#### Load optimization

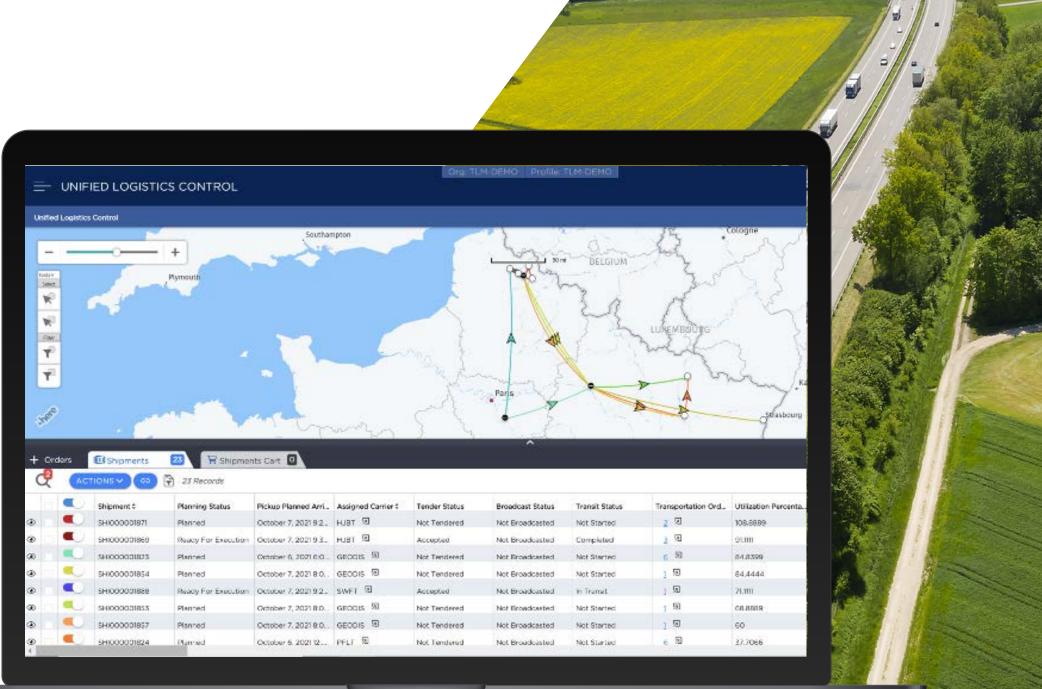
In the context of TMS vocabulary, an empty space isn't merely wasted space; it's an environmental oversight. Continuous optimization drastically reduces wasted space while also allowing for lastminute order changes on orders or shipments. Ensuring maximum load capacity reduces not just the number of trips but also the accompanying emissions.

#### **Route optimization**

With its fingers on the pulse of real-time data, the Manhattan's TMS picks routes that are not only shorter but also devoid of congestion and potential delays, ensuring maximum fuel efficiency. Route optimization can be used to combine inbound, outbound, interfacility, and backhauls to reduce the number of miles spent on the road.

#### **Consolidation opportunities**

Recognizing that fewer vehicles on the road translate to reduced emissions, Manhattan's TMS masterfully merges shipments, reducing the carbon footprint of logistics. Multi-compartment shipment planning and dynamic cross-docking helps to increase consolidation opportunities and reduce the number of shipments.





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## **Unified Logistics Control**

#### One experience for command and control of the entire transportation network

To be most effective, planners need real-time visibility into their entire transportation network – combined with the ability to immediately take action – within a single solution, whether in the office or on the road.

#### **One experience**

Unified Logistics Control within Manhattan Active TM is a single-user experience for command and control of every rate, route, mode, node and load.

Explore a network-wide view of real-time insights across all orders and shipments, as well as invoices for all links and nodes in the organizational supply chain. Quickly drill into details for selected orders and shipments to understand history, cost, current status and performance.

Unified Logistics Control is the heart of task planning and execution with the ability to search, identify and act upon real-time details across the network. Create user-specific searches and easily view critical data across workflows. Multiple experiences have now been integrated into a common-user interface, with the ability to take control of any situation:

- > Manually plan shipments for truckload, less-than-truckload, rail, air, ocean and more
- > Easily add or remove orders from shipments, combine shipments or re-sequence shipment stops
- > Quickly locate matching shipments for unplanned orders and modify carrier assignments or transportation resources
- > Perform quick rate lookups, create appointments and manage exceptions > Broadcast tenders to core carriers and digital freight brokers, for both contract and
- spot activity
- > Initiate waves without ever leaving the comforts of Unified Logistics Control within Manhattan Active TM

A simple tap on the console reveals an order or shipment-level view with details on what the issue may be, all the way down to the underlying tasks. With another quick tap, it's easy to see status, ETA and any exceptions that need to be addressed.

Communication with peers across the transportation network is simple, as well. Real-time, instant-messaging capabilities are included within all Manhattan Active Supply Chain solutions, so no need to leave the application to collaborate.





#### **More immersive**

These days, transportation planners need to move fast! And that means having everything you need at your fingertips, no more than a click or a tap away. Information about orders, shipments, carriers, facilities, rates and more — all all readily available. Unified Logistics Control provides that and much more.

Notifications proactively alert users to exception areas, such as scheduled appointments that may be at risk because an appointment time is in danger of being missed. Planners can gain visibility when shipments are due, whether they are running on time or late and adjust plans accordingly to eliminate bottlenecks before they happen.

#### **CUSTOMER INSIGHT**

"Learning the new system wasn't difficult, and once you get in the groove, you'll never want to go back."

#### **More unified**

Manhattan Active TM is part of Manhattan Active Supply Chain, a single, cloudnative application for distribution, labor, automation and transportation. The user experiences across Unified Logistics Control and Unified Distribution Control are shared, intuitive and extensible, enabling a singular, actionable view of the unified supply chain. Unlike traditional "control towers" that present information gathered from legacy supply chain systems in a dashboard – but have no real control over that data – Manhattan Active Supply Chain solutions empower users to solve problems and take advantage of opportunities. For the first time, real-time insights regarding the health and performance of inbound- and outbound-logistics functions have been unified, with the ability to immediately execute upon those findings. That's right: Insight and execution are included in one app, with no integration and no delay. Unified Logistics Control within Manhattan Active TM means unprecedented command and control of the distribution network from the office or on the road, with detailed views from the entire network down to the smallest shipment and everything in-between.

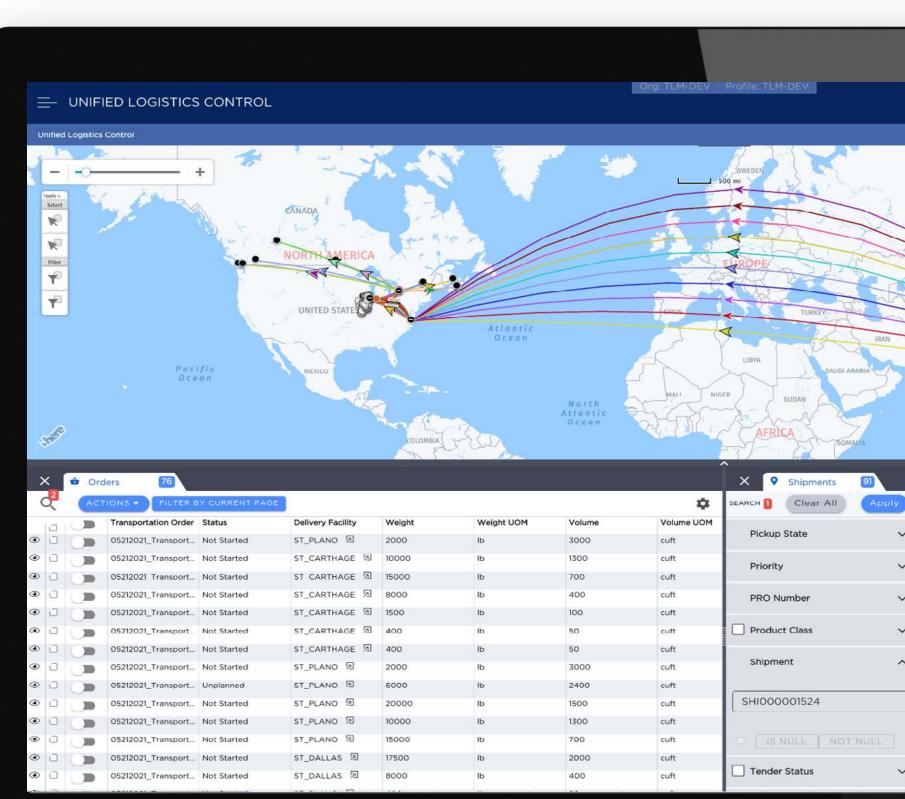


## **Global Multi-Modal** Support

Whether it's by sea, land, air, or rail—Manhattan optimizes the movement of goods through the supply chain on a global scale.

"Fast and cost-effective supply chains are not differentiators – agility, adaptability and alignment are the competitive advantage."

Hau Lee, Stanford Business SchoolDirector, Value Chain Innovation Initiative



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## **Transportation** Modeling

**Global supply chains are in constant flux. An** optimally configured transportation solution today isn't necessarily the optimal solution tomorrow.

To stay ahead, transportation professionals need a solution that can "think" strategically, as well as execute optimally, to ensure the entire network is always operating at the lowest cost and highest service levels.

#### With Transportation Modeling, you can:

- > Find innovative savings opportunities proactively
- > Make the best transportation policy decisions
- > Measure the service and cost impact of various options
- Reduce costs
- > Improve service levels
- > Optimize the network continuously

Transportation Modeling lets you challenge assumptions and test new ideas on transportation policies, while simultaneously seeing the impact on operations. Logistics professionals can run what-if scenarios, propose network configuration changes, test different routing options and see the effect that different constraints and paths will have on operations. Our technology utilizes proprietary algorithms and scenario-planning tools that remove complexity while providing great flexibility. With sophisticated simulations that use historic and forecasted data, the solution validates and optimizes a multitude of scenarios.

Responding to volatility and implementing change becomes a task as common as tendering freight, with easily justified decisions and minimal impact to the business. With Transportation Modeling, planners can leave the day-to-day mayhem of troubleshooting and move into the realm of strategic and tactical planning. The result is optimal execution, today and tomorrow.

**Transportation Modeling enables organizations** to step outside the typical, reactionary focus of execution and empowers planners to be proactive. It allows companies to search for ways to improve operations, quickly react to changes in the supply chain, make more optimal decisions, find hidden savings opportunities and implement changes that positively impact profitability.

Changes and fluctuations in customer locations, carrier and driver capacity restrictions, erratic fuel costs, hours of service changes and shifting thirdparty transportation rates all impact the bottom line. Using "averages" alone for modeling falls short in projecting the effects that changing a policy has on complex transportation networks. When you start to reach network capacity, how should you align resources? Where should you add a distribution center to get the most benefit? Transportation Modeling provides scenario-based optimization capabilities that analyze specific supply chain and network design options.

#### Features + Functions

#### Make better business decisions

> Create an unlimited number of scenarios for alternative network configurations and transportation policies

> Analyze your real-world, historical data and quantify the overall impact of change with the help of realistic simulations

> Compare scenarios side by side

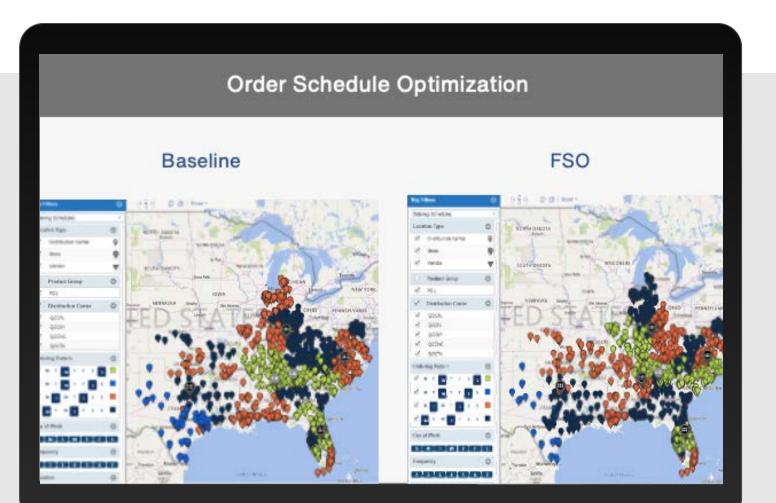
> Adjust a range of variables so you can arrive at the best outcome

> Consider plans for opening and closing distribution centers and store locations and for disruptions, demand surges and holiday seasons while fine-tuning service policies

## **Transportation Modeling**

Manhattan's TMS doesn't merely select routes; it curates an ecofriendly journey. By prioritizing efficient and sustainable transportation channels, our system embeds green choices in logistics:

- on the road:
- Increase consolidation opportunities
- Find the best fulfillment location that's closest to your customer





> Run multiple scenarios at a time for evaluating multiple forecast trends > Get analytics insights and scenario simulation analysis to make the best decision > Evaluate different strategic policies to reduce the number of shipments and miles

## Fleet Management and Dispatch

Manage dedicated and private fleet resources, including driver, tractor and trailer planning and execution. Minimize your company's miles while optimizing hours of service, availability, compliance, seniority and service needs.

#### **Features + Functions**

- Optimize use of all assets, including drivers, tractors and trailers
- Balance loads across shifts and resources
- Provide driver support with dispatch and kiosk support
- Support long-haul and store-delivery routing needs
- Ensure compliance with federal regulations
- Enable real-time visibility of inventory in motion
- > Provide proof-of-delivery visibility
- > Execute more efficiently and quickly adapt to changes

- Enable driver-centric workday view for managing dispatch tasks
- > Provide visibility into empty moves
- Support non-trip-based driver activities to assist with schedulingand payment requirements
- Provide ability to allocate and assign team drivers
- > Manage relays efficiently
- Provide an activity audit trail for better compliance
- > Manage driver debriefs
- > Integrate to OBC and ELD

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## **Transportation Procurement**

Selecting the right carriers for your business has a direct impact on profitability and customer satisfaction.

With the dynamic nature of supply chains, however, the best combination of carriers today may be different tomorrow. Transportation Procurement allows you to determine the ideal combination of carriers and balance price against other factors such as capacity, service and quality.

#### **Features + Functions**

- > Automate contract management and reduce transportation costs for all modes of transportation
- > Allow alternative pricing, using ad hoc or prescribed bundles
- > Evaluate bid responses, using benchmark data
- > Optimize contract award combinations with what-if scenario management

Dynamic supply chains require a powerful and reliable solution that streamlines sourcing and strategic procurement processes and responds to changes in such aspects as:

- > New vendors, distribution centers, stores and customers
- > Customer demands and service requirements
- > Varying shipment volumes
- > Carrier mergers and acquisitions
- > New regulations
- > Contract expiration
- > Fuel prices

The ability to evaluate costs, services and other factors when selecting carriers is vital – especially since the best carrier isn't always the least expensive one. And shippers simply can't afford to run operations with stale rates. Transportation Procurement provides the power to respond quickly to changes while minimizing costs.

- carriers for bidding
- > Leverage historic and forecast data to better prepare
- > Benchmark, track rates and service over time
- > Determine multiple awarding scenarios based on cost, service and other rules

- Improve spend visibility

#### **Better visibility, optimal results**

Widely recognized as one of the most powerful logistics procurement systems for managing transportation bids and contract sourcing, our procurement solution automates best practices and standardizes the entire bid process, from request for proposal to final contract. With Transportation Procurement, your team can:

- > Standardize and simplify the bid collection and optimization process
- > Improve carrier communication and collaboration

- > Understand the true cost impact of sourcing
- Increase accountability
- > Create an automated bid and award process



## Freight Settlement Procurement

#### Accuracy

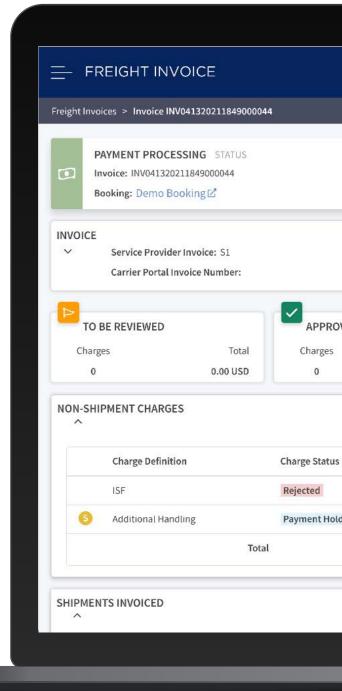
In the realm of freight settlement, achieving high accuracy in billing and invoicing is paramount. Manhattan Active<sup>®</sup> TM ensures precision by thoroughly verifying freight invoices against shipment details, contractual rates, and service provider agreements. This meticulous approach prevents costly errors, ensuring that only legitimate charges are approved and facilitating smoother financial operations.

#### Automation

Manhattan Active<sup>®</sup> TM revolutionizes freight settlement with its advanced automation capabilities. By automating the freight audit process, the system significantly reduces the need for manual input, streamlines operations, and accelerates the billing cycle. Automation ensures that invoices are processed swiftly and accurately, enhancing overall efficiency and allowing businesses to reallocate resources to more strategic tasks.

#### **Audit Quality**

Audit quality in freight settlement is enhanced through Manhattan Active<sup>®</sup> TM's robust auditing tools that enable both two-way and three-way matching of invoices. These tools scrutinize the compatibility of invoice charges with planned shipment costs and contracted rates, ensuring rigorous compliance and financial integrity. With configurable tolerance limits, the system adeptly handles discrepancies, ensuring that only charges within predefined thresholds are approved automatically.



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## **Unified Shipment Planning & Execution**

Manhattan Active<sup>®</sup> Transportation Management offerings a modern, unified solution that adapts to the everevolving demands of transportation logistics, ensuring seamless operations and superior service delivery.

#### Leveraging Advanced Technology for Optimal Performance

Manhattan Active<sup>®</sup> TM employs cutting-edge technology to enhance every facet of shipment planning and execution. With its robust Transportation Management System (TMS), Manhattan Active<sup>®</sup> TM allows businesses to handle complex logistical challenges by providing tools for detailed planning, route optimization, and execution monitoring. This system ensures that companies can efficiently manage their transportation needs while adapting to disruptions and maintaining high service levels.

**Unified Shipment Planning:** Manhattan Active<sup>®</sup> TM integrates various logistical components into a cohesive platform, simplifying the process of shipment planning. It enables the creation of cost-effective transportation strategies by considering factors like carrier performance, cost, and service requirements, ensuring that the most efficient and economical routes and modes are selected.

**Dynamic Execution:** Once plans are set, Manhattan Active® TM 's execution capabilities come into play. The system provides real-time updates and adjustments, allowing companies to respond promptly to any changes or disruptions in the supply chain. This agility is crucial in maintaining on-time deliveries and high service levels.your business needs, data and services.

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**Global Multi-Modal Orchestration:** Manhattan Active<sup>®</sup> TM excels in coordinating different transportation modes across various geographies. Whether it's road, air, sea, or rail, the system ensures that all elements are synchronized, reducing transit times and costs while improving reliability and efficiency.

**End-to-End Visibility:** A standout feature of Manhattan Active<sup>®</sup> TM is its ability to offer comprehensive visibility throughout the shipment process. From initial planning to final delivery, stakeholders have access to real-time data, enabling proactive management and decision-making.

**Scalability and Flexibility:** Manhattan Active<sup>®</sup> TM is designed to grow with your business. It accommodates changes in volume and complexity without sacrificing performance, making it a reliable tool for businesses of all sizes.

#### **Business Benefits**

Implementing Manhattan Active<sup>®</sup> TM translates into tangible benefits for businesses:

- Cost Reduction: By optimizing routes and modes, Manhattan Active<sup>®</sup> TM cuts transportation costs significantly.
- Improved Service Levels: Enhanced planning and execution capabilities ensure that shipments are delivered on time, boosting customer satisfaction.
- Increased Efficiency: Automation and real-time data reduce manual efforts and streamline operations.
- Better Decision-Making: With access to comprehensive analytics and reporting, businesses can make informed decisions quickly.

## **Network & Partner Ecosystem**

Multiple partners pre-integrated for tracking across modes & adding new partners is quick & easy.

Standardized adapter-based connections reduces time to market for additional partners.

Configurable rules framework allows the use any shipment attribute to determine which shipments to track.



## **Network of Pre-connected Cloud Partners**



TL, LTL, ocean, rail visibility



Tolls, traffic, hazmat, address validation web services, distance & time

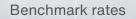


Distance & time, tolls, traffic, hazmat, map (desktop & mobile)

#### DESCARTES MacroPoint

TL, LTL visibility







Spot rates, capacity benchmark rates

## RAND M?NALLY

Distance & time, web services

Transit days, calendar days, delivery dates (Carrier Connect 3.0), RatewareXL 2.0



TL, LTL visibility



TL, LTL visibility







# **Manhattan Active® Transportation Management in action**

Once the application is up and running, you can expect to see improvement across your operation.

## VISIBILITY

TRANSPORTATION KPI	INSIGHT PROVIDED	HOW A UNIFIED TMS CAN HELP YOU ACT	MA
<ul> <li>&gt; Planned versus actual transportation costs</li> <li>&gt; Number of days from vendor pickup to delivery at store/customer (on-time pickup/delivery)</li> <li>&gt; Carrier sustainability rating transportation cost per unit</li> <li>&gt; Loading and unloading times</li> </ul>	<ul> <li>&gt; View how your operations are performing (relative to budget)</li> <li>&gt; Assess how transportation costs impact margin</li> <li>&gt; Provide shippers with an insight into the delivery process to help them understand the effects of late delivery on customer satisfaction</li> <li>&gt; Identify operations or labor inefficiencies</li> </ul>	<ul> <li>Allows you to optimize and manage the full range of transportation events—domestically or internationally; inbound or outbound; single carrier or multi-modal; common carrier or private or dedicated fleet. Our Transportation Planning &amp; Execution solution drives results in these critical areas.</li> <li>Enables you to make more informed decisions: real-time, unified visibility, insight and control across the entire network. Users can orchestrate global delivery like never before through a single, easy-to-use, intuitive user interface.</li> <li>Improves traceability and transparency to support supply chain resiliency</li> <li>Enhances service levels</li> </ul>	> M > U > F > ( > F > 3 > 1

#### ANHATTAN FEATURES THAT HELP IMPROVE KPI

- Manhattan Active Platform
- Unified Logistics Control (Control Tower 2.0)
- Partner/Network extensible app
- Operational planning factors
- Route optimization
- Sustainable carrier selection
- In-app messaging and notifications





# **Manhattan Active® Transportation Management in action**

Once the application is up and running, you can expect to see improvement across your operation.

## CAPACITY

TRANSPORTATION KPI	INSIGHT PROVIDED	HOW A UNIFIED TMS CAN HELP YOU ACT	MA
<ul> <li>&gt; Fleet sizing</li> <li>&gt; In-transit average temperature by carrier</li> <li>&gt; Truckload capacity utilization rate (cube)</li> <li>&gt; Fuel economy</li> <li>&gt; Tender acceptance rate</li> <li>&gt; Distribution cost</li> </ul>	<ul> <li>Measure truckload utilization</li> <li>Identify load optimization problems</li> <li>Assess fuel utilization over period of time</li> <li>Measure of tendering accepted versus rejected</li> </ul>	<ul> <li>Provides techniques and capabilities to optimize carrier relationships to control costs and maintain/ improve service levels. Includes using bid management as a strategic tool.</li> <li>Find the best rates and options</li> <li>Unify and synchronize transportation operations with distribution operations (including demand forecasting) to improve overall supply chain performance</li> <li>Manage increasing sustainability demands</li> <li>Manage margin risk</li> <li>Utilize actionable insights to make optimal transportation decisions</li> <li>Meet rapid fulfillment expectations</li> <li>Gain access to better reporting and measurement data</li> <li>Utilize multiple strategies and techniques to optimize shipping</li> </ul>	> F > F > L > C > 7

#### ANHATTAN FEATURES THAT HELP IMPROVE KPI

- Fleet management
- Procurement
- Manhattan Carrier Network management
- Load optimization
- Dock optimization
- Trips in Unified Logistics Control





# **Manhattan Active® Transportation Management in action**

Once the application is up and running, you can expect to see improvement across your operation.

## AGILITY

TRANSPORTATION KPI IN	NSIGHT PROVIDED	HOW A UNIFIED TMS CAN HELP YOU ACT
<ul> <li>Percentage of missed appointments by facility</li> <li>Percentage of claims by facility and by carrier</li> <li>On-time pickup/vendor on- time performance</li> <li>Driver satisfaction</li> <li>Labor utilization rate</li> </ul>		<ul> <li>Enable agility in transportation operations to shift gears in an instant and make impactful decisions in support of rapidly changing supply chain structures and requirements</li> <li>Mitigate supply chain volatility</li> <li>Obtain instant capacity at real-time market rates with built-in load-board and planning partners</li> <li>Adopt direct-to-consumer models</li> <li>Adapt to meet new supply chain demands</li> <li>Utilize optimization engines and complex business rules to simplify timely decision-making</li> <li>Apply dynamic traffic and weather data for use in planning optimization</li> <li>Gain faster access to innovation while avoiding upgrade issues</li> <li>Benefit from the ability to manage customization</li> <li>An intelligent TMS optimizes load selection, trip planning, driver selection and more to maximize productivity while improving the driver experience.</li> </ul>

#### MANHATTAN FEATURES THAT HELP IMPROVE KPI

- > Strategic modeling
- > Dynamic planning
- > Multi-compartment shipment planning
- > Continuous optimization
- > Always current
- > Unified cross dock

## Manhattan Active® **Supply Chain**



#### **VISIBILITY & CONTROL**

Unified Control / In-App Messaging / Actionable Insights / Reporting & Analytics / Responsive UX



#### WAREHOUSE MANAGEMENT

Order Streaming / Employee Engagement / Labor Management Slotting Optimization / Warehouse Execution / Work Release Receiving / Putaway / Packing & Loading



#### **TRANSPORTATION MANAGEMENT**

Optimization / Tendering / Global Visibility Audit & Pay / Fleet Management / Procurement Modeling / TMS Mobile / Rating & Feasibility



#### YARD MANAGEMENT & APPOINTMENT SCHEDULING

Yard Task Control / Appointment Creation / Trailer Scheduling / Self-Schedule Shipments / Time Tracking / Shift Load Balancing



#### **CONNECTED CLOUD**

Shipment Visibility / Automation Network / Carrier Network / Vendor Network / Loadboards / Rates



#### **CLOUD-NATIVE MICROSERVICES ARCHITECTURE**

ProActive / Always Current / Extensible / Scalable / Stateless / High Availability







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