

An aerial photograph of a lush green field. A paved road curves through the field, with a white and blue truck driving on it. A row of white-blossomed trees runs alongside the road. In the background, there are more green fields and a line of trees under a clear sky.

Manhattan Active[®] Transportation Management

A Green Movement in Emissions Reduction

 Manhattan

Introduction

As the chorus calling for sustainable business practices grows louder in the contemporary corporate arena, tools and solutions that amplify eco-friendly decisions stand out. Manhattan Active Transportation Management emerges as a luminary in this orchestration, offering businesses a tangible pathway to reduce their carbon imprint, fuel costs, and emissions while improving efficiency and profitability.

Manhattan Associates can help companies with their environmental strategy by providing technology solutions to help them track and manage sustainability performance. Manhattan offers solutions that enable transportation optimization, sustainability management, carbon accounting, and reporting. Through the Manhattan Active Platform, companies can gain real-time insights into their environmental performance and make informed decisions on how to further improve it. Additionally, Manhattan Active solutions can help companies ensure their environmental, social, and governance (ESG) strategy is aligned with their business goals and operations.





Manhattan Active[®] Transportation Management

A product not merely designed but sculpted with precision for efficiency and sustainability, Manhattan's transportation management system (TMS) is a tapestry where technology intertwines with eco-consciousness.

Manhattan supports sustainability in two major ways over legacy TMS offerings:

- 1 Better technology, industry-leading platform approach, greater visibility, advanced optimization engines, better AI and machine learning, and data science capabilities, thanks to complete unification across the platform.
- 2 Better architecture and lower power consumption while delivering superior application performance and efficiency.

For example, companies can reduce the environmental impact of computing via the introduction of a modern, microservices-based architecture. Microservices are highly coupled, reduce latency, and openly share resources and information.


- › Higher levels of utilization
- › Lower power consumption
- › More efficient operations
- › Reduction in carbon footprint





Features Fostering CO₂ Reduction

Eco-aware fulfillment options

Any transportation option that meets the sustainability criteria will have the  icon displayed under “Sustainability Criteria.”

Shipping Method

☐

2-Day Free Shipping

Get it by Mon, Aug 12




☐


Pickup at Store (Cumberland Mall) [Change](#)

Get it today


☒

Go Green with 1 Shipment

Get it by Tue, Aug 13   Your Go Green score 



Go eco-friendly and combine all your orders into a single shipment.

Contribute towards reducing the carbon footprint 

☒

Always use this option at checkout

Chrome

File Edit View History Bookmarks Profiles Tab Window Help

Quick Rate Lookup

salep.sce.manh.com/udc/ui-tlm/quick-rate-lookup/rre/qrl

New Tab Supplier Purchase... TP Work Personal

Org: AW-DEMO | Profile: AW-DEMO

QUICK RATE LOOKUP

Unified... Control Quick Rate Lookup

	Feasibility	Sustainability	Carrier	Carr...	Mode	Serv...	Serv...	Equip...	Equi...	Ship...	Rev...
<input checked="" type="radio"/>			SCNN	Carrier	INTERMO...	IML		53FT			1,000.00
<input type="radio"/>			UPS_SERVER	Carrier	PCL	LOGIS...					1,000.00
<input type="radio"/>			CNWX	Carrier	LTL	LTL					1,000.00
<input type="radio"/>			BTNB	Carrier	LTL	LTL					1,000.00
<input type="radio"/>			EXLA	Carrier	LTL	LTL					1,000.00
<input type="radio"/>			RDWY	Carrier	LTL	LTL					1,000.00
<input type="radio"/>			SWFT	Carrier	TL	TL		42R0			1,000.00
<input type="radio"/>			SWFT	Carrier	TL	TL		53FT	TRUC...		1,000.00
<input type="radio"/>			HJBT	Carrier	TL	TL		42R0			1,000.00

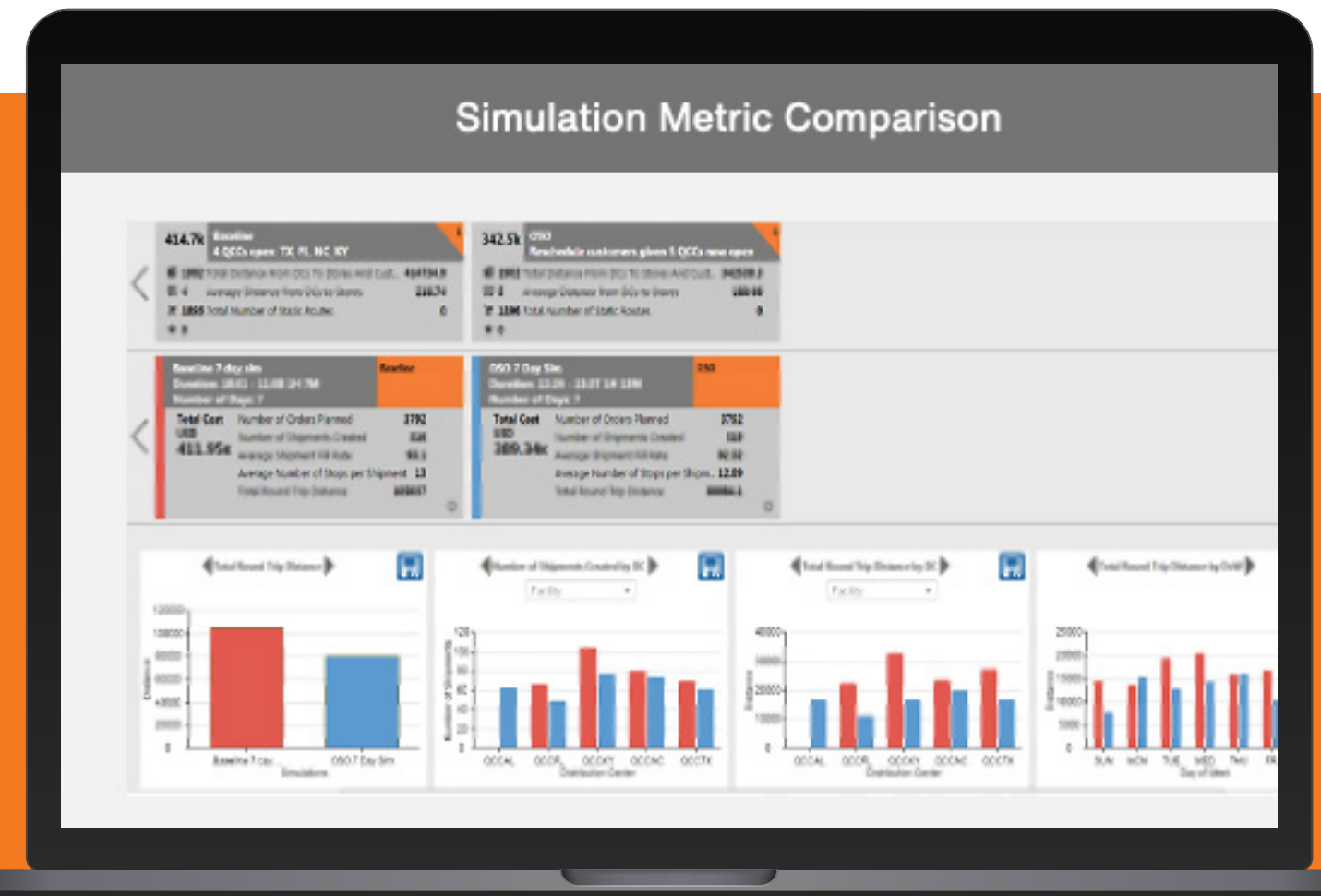
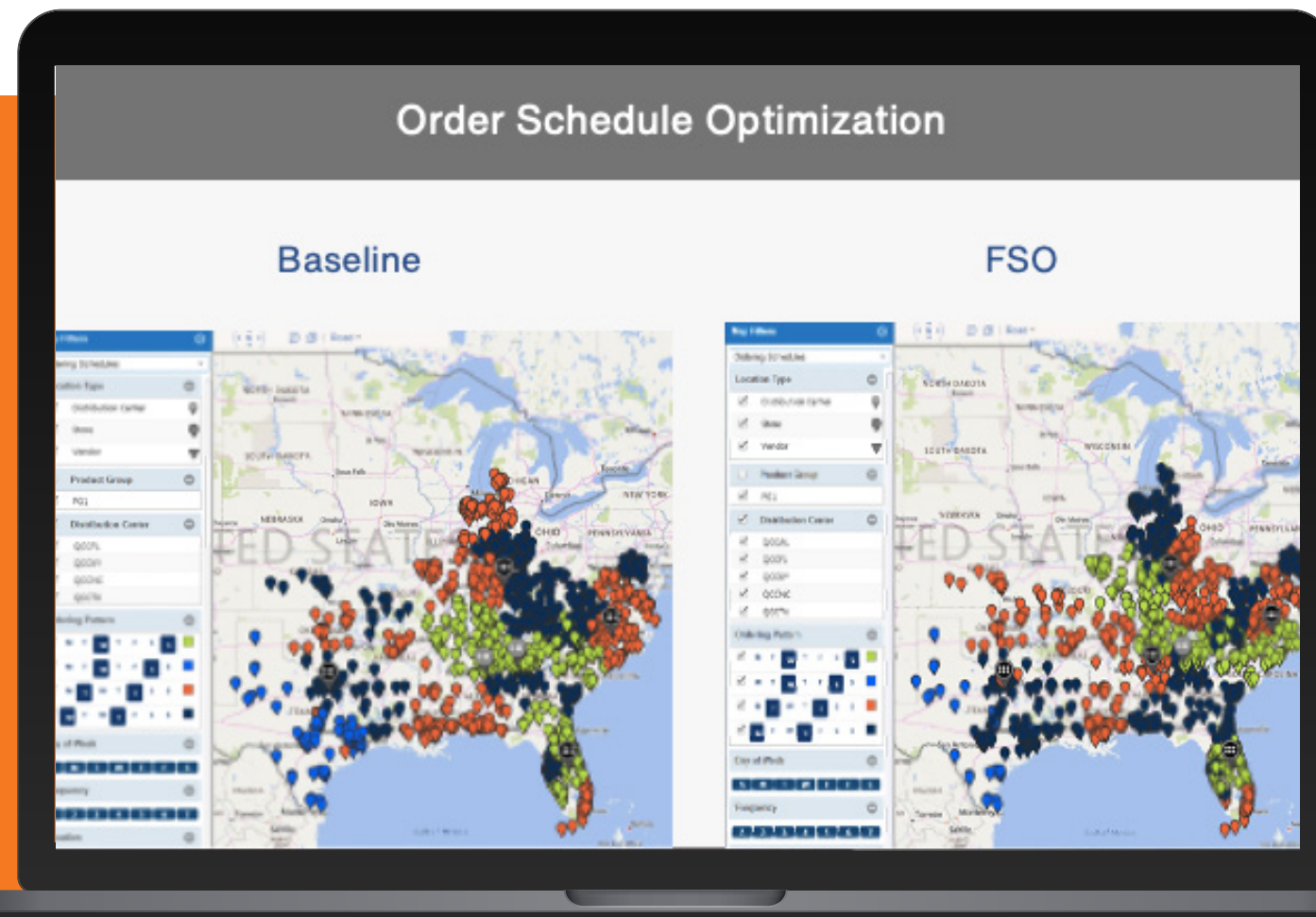
Transportation modeling

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

- › 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 on the road:

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



Load optimization

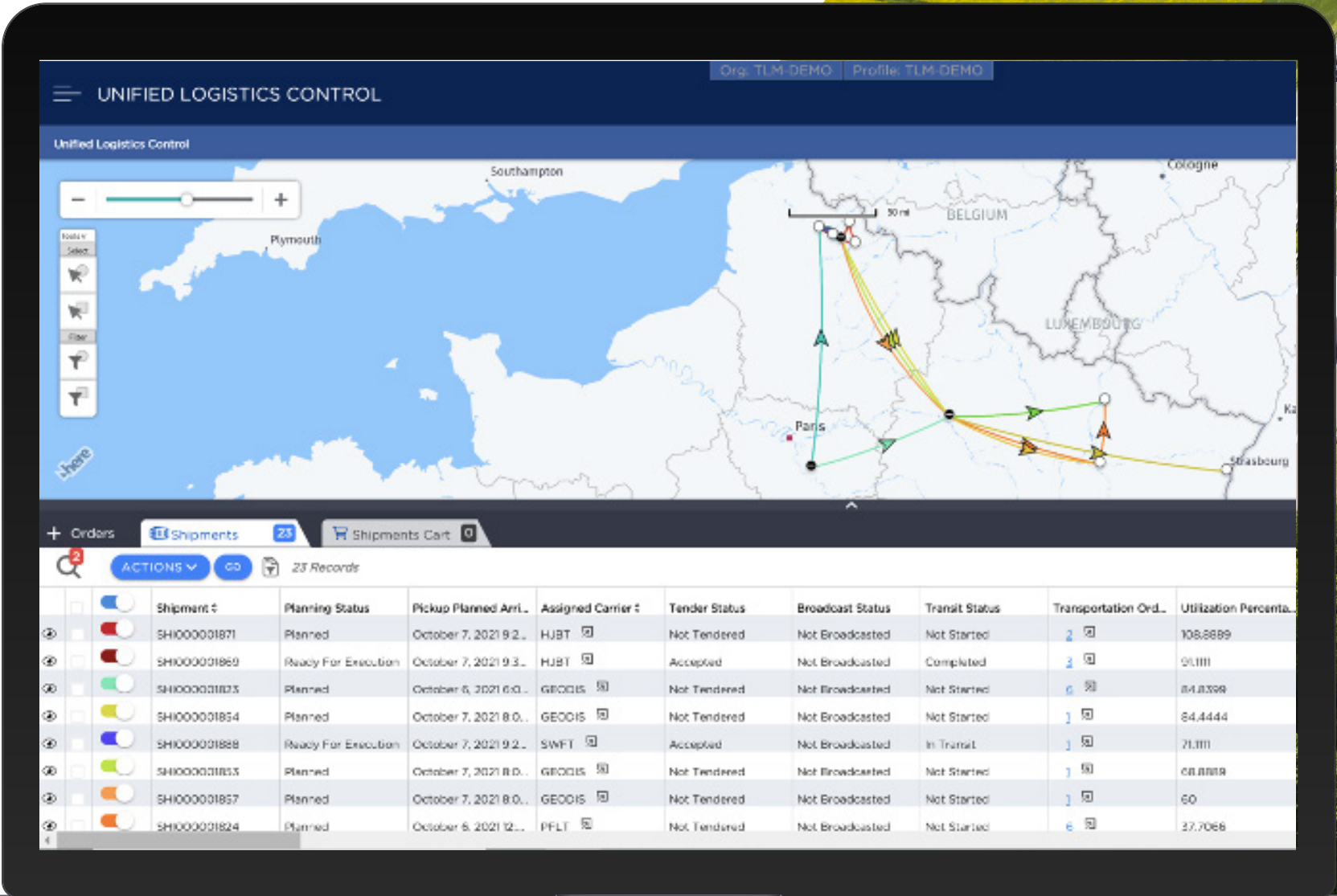
In the context of TMS vocabulary, an empty space isn't merely wasted space; it's an environmental oversight. Continuous optimization drastically reduces wasted space while also allowing for last-minute order changes on orders or shipments. Ensuring maximum load capacity reduces not just the number of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





The Echoes of Green Beyond Emissions

While CO₂ reduction is paramount, the benefits of Manhattan Active[®] Transportation Management cascade beyond it. Companies not only witness a palpable reduction in transportation overheads but also bask in the glow of an enhanced green reputation. Moreover, in a world increasingly governed by environmental regulations, compliance isn't just an option but a mandate, and Manhattan's TMS technology ensures businesses remain ahead of the curve.

Performance factors are a way to either encourage or discourage the selection of carriers and equipment based on past performance. For example, a carrier who typically arrives late may not be a favored choice for future loads. Conversely, a carrier who has relatively clean emissions may be one that a company will want to utilize more often. These types of operational decisions can be automated through the use of performance factors.

For maximum flexibility, Manhattan's TMS offers both static and dynamic performance factors. Static performance factors are those which are calculated against user-entered values. These values can be imported through an integration with the U.S. Federal Motor Carrier Safety Administration (FMCSA) or from other sources, such as the U.S. Environmental Protection Agency (EPA). See the table below for a list of key performance indicators (KPIs) available from the EPA. Dynamic performance factors are continuously updated based on system data and include both shipment-on-time ratios and tender-acceptance ratios.



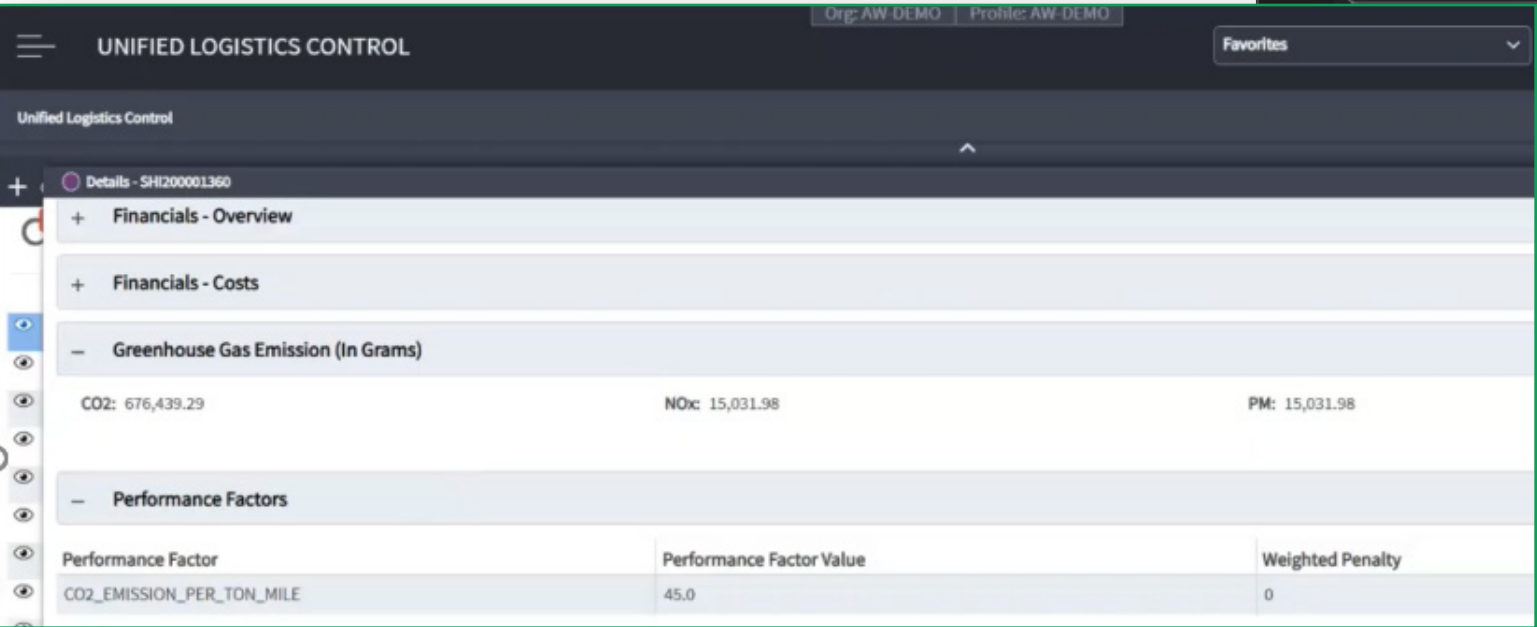
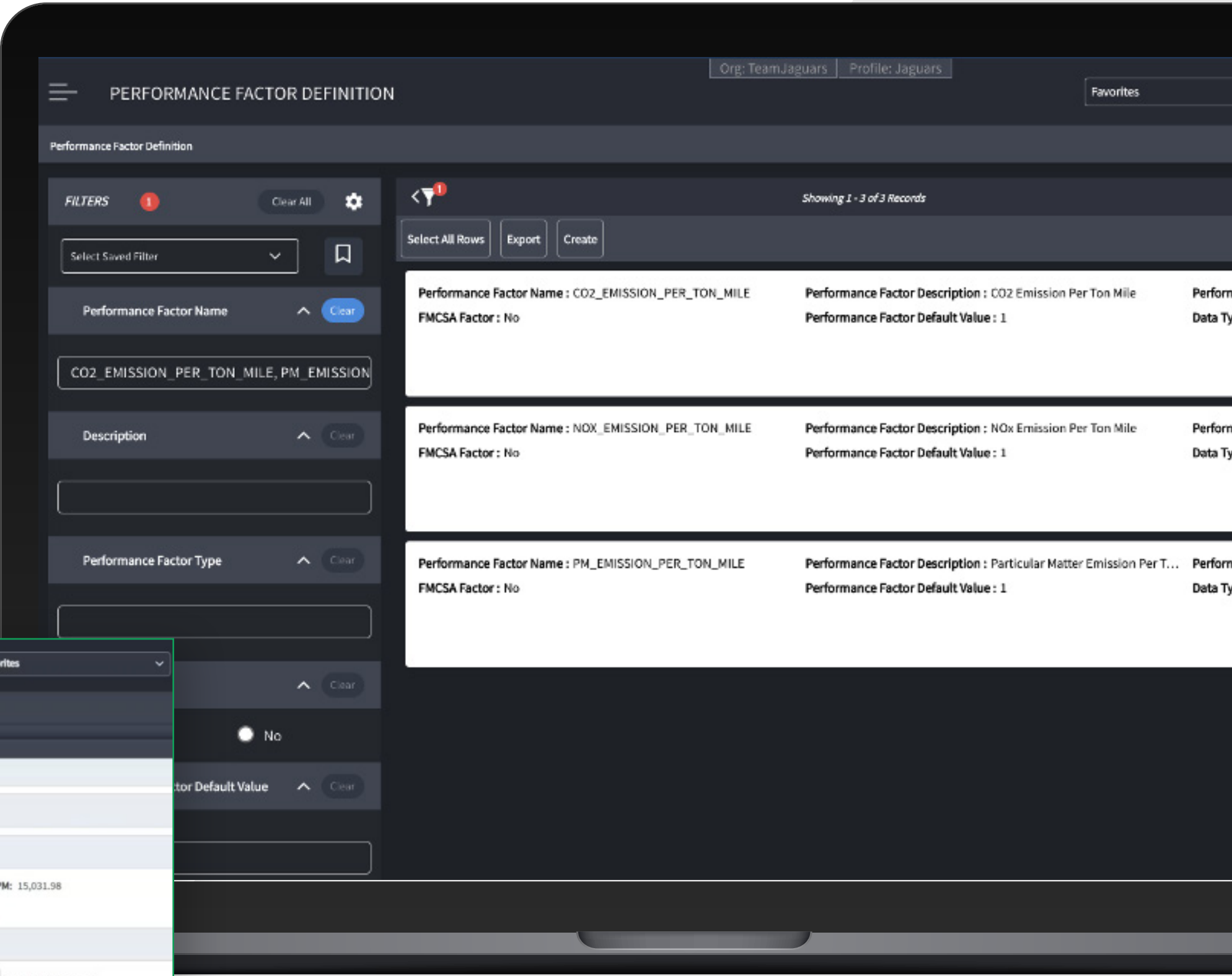
EPA publishes sustainability KPIs by carrier, mode, and equipment:

- | | |
|-----------------------------|-----------------------------|
| › RANK_FOR_CO2_EMISSION | › NOx_EMISSION_PER_TON_MILE |
| › CO2_EMISSION_PER_MILE | › RANK_FOR_PM_EMISSION |
| › CO2_EMISSION_PER_TON_MILE | › PM_EMISSION_PER_MILE |
| › RANK_FOR_NOx_EMISSION | › PM_EMISSION_PER_TON_MILE |
| › NOx_EMISSION_PER_MILE | |



Sustainability KPIs are seeded just like any other static performance factor types in Manhattan Active Transportation Management

- Once identified, customers can define performance factor scores by the combination of carrier, mode, service level, and equipment
- Optimization criteria for performance factors define the rules for how Manhattan’s TMS interprets the scores and determines which penalties to be assessed. Some of this configuration includes:
 - Weighted percentage for each performance factor
 - Penalty values for specific performance factor ranges:
 - Absolute
 - Percentage of freight cost
 - Percentage of total cost





SAFETY

Ensures freight activity is performed appropriately, and in compliance with regulations and requirements



SERVICE

Confirms that customer expectations are being met, increasing customer satisfaction



FREIGHT COSTS

Tracks trends and issues in freight rates, ensuring your spend is competitive with others in your market



EFFICIENCY & PRODUCTIVITY

Delays in loading and unloading, last minute order changes, and sub-optimal shipment size are just a few areas of focus



ROUTE GUIDE COMPLIANCE

Confirms that what you expect to happen with your shipments is actually happening; lack of compliance impacts cost and service



SUSTAINABILITY

More and more of your customers are becoming aware of environment impacts and expect you to be aware of your own footprint

The optimization tool in Manhattan's TMS reads performance factor penalties and weights defined under optimization criteria.

Performance factors for assigned transportation options are then displayed on the shipment with the information below:

- › Performance factor name
- › Performance factor value
- › Weighted penalty

Weighted penalties (penalty-weighted percentage) are added to the optimization cost (planning cost).

Through user input data when evaluating carriers to be used for shipment transportation, the expected emissions can be used to heavily favor "green" carriers over cheaper, less "environmentally friendly" carriers.

With Manhattan Active Transportation Management, users can collaborate with their transportation partners to find the right balance between factors such as sustainability, cost, safety issues, on-time arrivals, and many more. The following capabilities can help redefine the way that you conduct your business with product features such as:

- › Sustainable carrier selection
- › Green-carrier identification and recommendations
- › Emission calculations on shipment
- › Finding the right balance between your impact to the planet and your profitability



The significance of transportation in the emissions equation

Transportation, a mainstay of global commerce, undeniably occupies a significant share of global CO₂ emissions. As business leaders and environmental stewards, eliminating unnecessary waste and reducing costs are a responsibility that we all share.

In the words of Peter Drucker, renowned management consultant, “You can’t improve what you don’t measure.” To that end, Manhattan Active Transportation Management computes the amount of CO₂, nitrogen oxides (NOx), and particulate matter (PM) emissions on each shipment.

While businesses inadvertently contribute to this environmental quagmire, they also have the power to mitigate and transform how much or how little their own business operations contribute. Manhattan’s TMS helps companies measure, track, and manage their environmental impact throughout their supply chain by providing visibility into fleet, partner, and supplier operations and performance. The Manhattan Active Transportation Management solution isn’t just a product; it’s a beacon, illuminating the path to a more sustainable future.



“Manhattan TMS helped Giant Eagle reduce empty miles by 8% and total miles by 7.7% through optimized delivery schedules, improve cube by 7%, and filled available capacity with backhauls which improved load utilization and lowered inbound costs.”

Ann-Marie Daugherty, VP of Logistics, Giant Eagle

“You can’t improve what you don’t measure.”

Peter Drucker



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	MANHATTAN FEATURES THAT HELP IMPROVE KPI
<ul style="list-style-type: none">• Planned versus actual transportation costs• Number of days from vendor pickup to delivery at store/customer (on-time pickup/delivery)• Carrier sustainability rating transportation cost per unit• Loading and unloading times	<ul style="list-style-type: none">• View how your operations are performing (relative to budget)• Assess how transportation costs impact margin• Provide shippers with an insight into the delivery process to help them understand the effects of late delivery on customer satisfaction• Identify operations or labor inefficiencies	<ul style="list-style-type: none">• 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 & Execution solution drives results in these critical areas.• 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.• Improves traceability and transparency to support supply chain resiliency• Enhances service levels	<ul style="list-style-type: none">• 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

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CAPACITY

TRANSPORTATION KPI	INSIGHT PROVIDED	HOW A UNIFIED TMS CAN HELP YOU ACT	MANHATTAN FEATURES THAT HELP IMPROVE KPI
<ul style="list-style-type: none">• Fleet sizing• In-transit average temperature by carrier• Truckload capacity utilization rate (cube)• Fuel economy• Tender acceptance rate• Distribution cost	<ul style="list-style-type: none">• Measure truckload utilization• Identify load optimization problems• Assess fuel utilization over period of time• Measure of tendering accepted versus rejected	<ul style="list-style-type: none">• Provides techniques and capabilities to optimize carrier relationships to control costs and maintain/improve service levels. Includes using bid management as a strategic tool.• Find the best rates and options• Unify and synchronize transportation operations with distribution operations (including demand forecasting) to improve overall supply chain performance• Manage increasing sustainability demands• Manage margin risk• Utilize actionable insights to make optimal transportation decisions• Meet rapid fulfillment expectations• Gain access to better reporting and measurement data• Utilize multiple strategies and techniques to optimize shipping	<ul style="list-style-type: none">• Fleet management• Procurement• Manhattan Carrier Network management• Load optimization• Dock optimization• Trips in Unified Logistics Control



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AGILITY

TRANSPORTATION KPI	INSIGHT PROVIDED	HOW A UNIFIED TMS CAN HELP YOU ACT	MANHATTAN FEATURES THAT HELP IMPROVE KPI
<ul style="list-style-type: none">• Percentage of missed appointments by facility• Percentage of claims by facility and by carrier• On-time pickup/vendor on-time performance• Driver satisfaction• Labor utilization rate	<ul style="list-style-type: none">• Carrier performance• TMS costs compared to the costs associated with manual shipment tendering, often derived from past indicators of per-unit shipping cost• Workforce health and performance	<ul style="list-style-type: none">• 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• Mitigate supply chain volatility• Obtain instant capacity at real-time market rates with built-in load-board and planning partners• Adopt direct-to-consumer models• Adapt to meet new supply chain demands• Utilize optimization engines and complex business rules to simplify timely decision-making• Apply dynamic traffic and weather data for use in planning optimization• Gain faster access to innovation while avoiding upgrade issues• Benefit from the ability to manage customization• An intelligent TMS optimizes load selection, trip planning, driver selection and more to maximize productivity while improving the driver experience.	<ul style="list-style-type: none">• Strategic modeling• Dynamic planning• Multi-compartment shipment planning• Continuous optimization• Always current• Unified cross dock

Reach out to our experts to learn more
information@manh.com

Or visit us online
manh.com