Supply Chain Sustainability

Better for business.
Better for the planet.

Manhattan

What is supply chain sustainability?

Supply chain sustainability refers to the management of social, environmental and economic impacts throughout the life cycle of goods and services. It requires taking a holistic approach, from the sourcing of raw materials to products' end of life. It also involves working with suppliers to ensure they meet sustainability standards and address any issues that arise.

99% of companies
surveyed either have an environmental, social, governance (ESG) team or are implementing one.

The importance of supply chain sustainability

There are several reasons why companies have a vested interest in supply chain sustainability:

Consumer Demand: In a recent study, 78% of U.S. consumers said a sustainable lifestyle was important to them. If you can demonstrate your commitment to sustainability, you are more likely to attract and retain customers.

ESG Objectives: Environmental sustainability, social responsibility, and corporate governance have become increasingly important to both organizations and the executives that run them.

Environmental Impact: Supply chain activities generate greenhouse gas emissions, energy consumption, waste and water use. Sustainable practices can reduce their impacts.

Social Responsibility: Organizations that implement corporate social responsibility (CSR) initiatives work to reduce the negative impacts of their activities and hold suppliers and partners accountable to a global standard. Sustainability is part of those efforts.

Risk Management: Sustainability issues can create pitfalls to a company's operations, reputation and financial performance. By proactively addressing them, you can mitigate those risks.

Regulatory Compliance: Governments are increasingly implementing sustainability regulations and standards, such as carbon emissions and human rights. Compliance helps companies avoid legal issues and protect their standing.

Reducing Waste = Reducing Costs: Green solutions are also good for the bottom line. Reducing energy consumption and waste in supply chains usually correlates to greater profitability.

Best practices for better operations

Achieving supply chain sustainability requires a concerted effort by companies and their suppliers. Here are some proven steps toward success:

Set Sustainability Goals: Establish targets that align with your values and business strategy. They should be measurable, with progress towards them regularly monitored and reported.

Evaluate Suppliers and Partners: Third-party entities are an extension of your organization. Assess suppliers based on their sustainability practices, including environmental impact, labor practices and human rights. Those that do not meet your standards should be held accountable and given an opportunity to improve.

Implement Sustainable Practices: Integrate processes throughout the supply chain that reduce waste and emissions, promote renewable energy, and ensure that workers are treated fairly.

Engage Stakeholders: You should connect with key parties – customers, employees, suppliers and communities – to understand their sustainability concerns and incorporate their feedback into your initiatives.

Measure and Report Progress: Regularly evaluate and report on your sustainability performance, including the progress towards the goals your organization set.

Technology engineered for sustainability

It makes logical sense that a more efficient supply chain is also more sustainable. However, achieving that goal – in the face of global commerce trends – requires technology that is intelligent, agile, adaptable and modern.

Manhattan's supply chain solutions are designed to help you to improve your sustainability ratings. They do this by:

- Reducing energy usage
- Decreasing waste
- Streamlining processes

Our solutions also provide the tools companies need to design, build and manage sustainability programs – and evaluate the success of their efforts – while at the same time, lowering costs and driving greater operational efficiency.

Sustainability in distribution

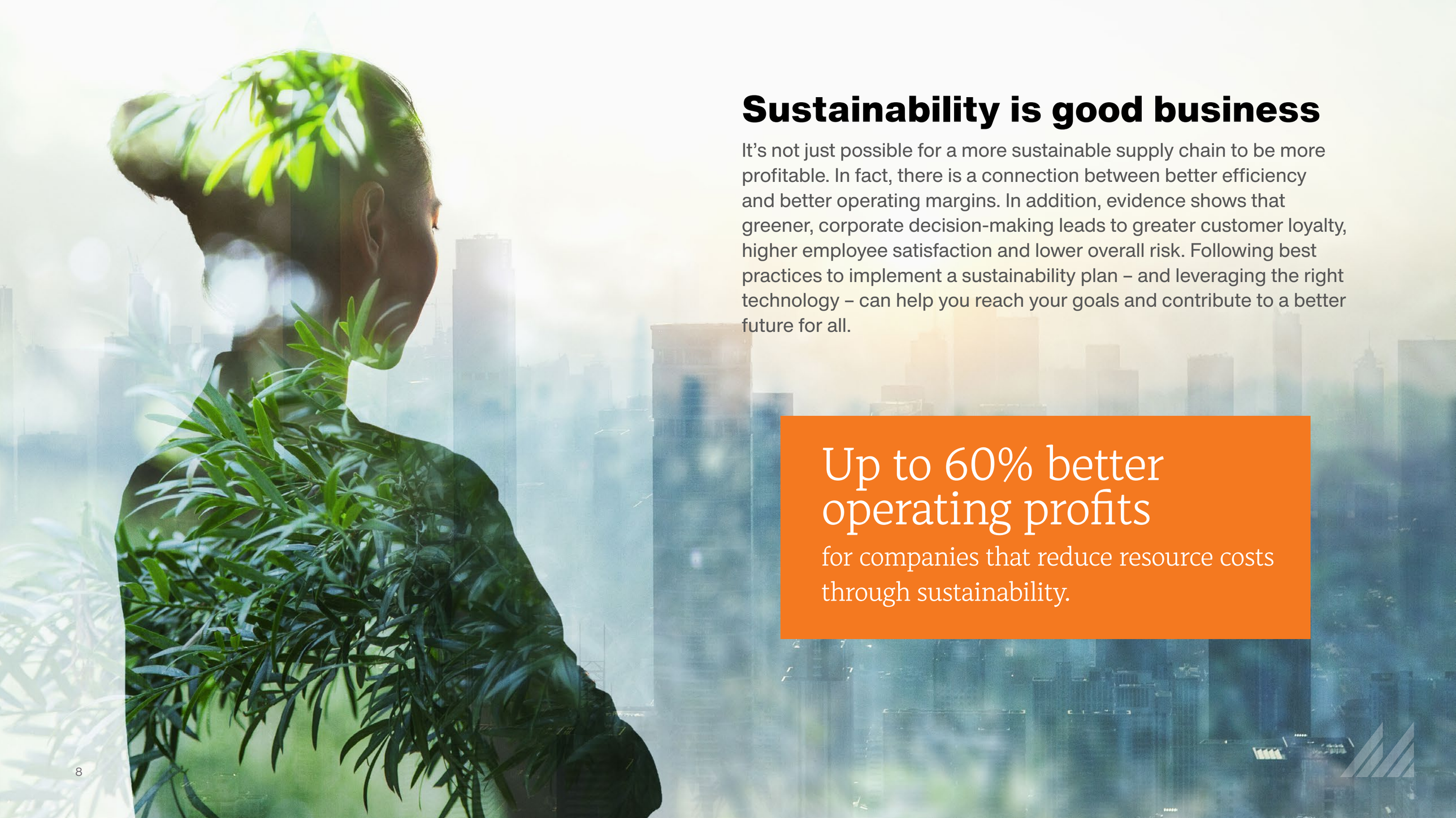
In the distribution center (DC), Manhattan's intelligent warehouse management systems can accelerate workflows and reduce the need to expedite shipping. Our solutions optimize carton sizing to maximize vehicle holding capacity and reduce the number of vehicles on the road. They also orchestrate inbound and outbound trailer flow to minimize idling time, backlogs – and in the process – carbon emissions.

Other features of Manhattan Active® Warehouse Management such as order streaming, slotting, dock door optimization, yard management and warehouse execution systems all drive further improvements in throughput and operational performance while reducing the DC's overall carbon footprint.

Sustainability in transportation

Across the logistics network, Manhattan transportation management systems are powered by machine learning to load vehicles more efficiently, optimize routing to reduce miles, and maximize consolidation and backhaul opportunities to reduce the number of vehicles traveling.

Manhattan Active® Transportation Management includes features such as “green” metrics which can measure efficiency, fuel consumption, trailer utilization, and carbon footprint. Our sustainable carrier selection feature gives you the option to weigh sustainability performance in choosing logistics partners.



Sustainability is good business

It’s not just possible for a more sustainable supply chain to be more profitable. In fact, there is a connection between better efficiency and better operating margins. In addition, evidence shows that greener, corporate decision-making leads to greater customer loyalty, higher employee satisfaction and lower overall risk. Following best practices to implement a sustainability plan – and leveraging the right technology – can help you reach your goals and contribute to a better future for all.

Up to 60% better operating profits

for companies that reduce resource costs through sustainability.

Manhattan Active®
Warehouse Management

SUSTAINABILITY-SUPPORTING FEATURES

Slotting Optimization

- Evaluate item demand to optimize the size of the picking locations
- Work on the item-location assignment to reduce picking path
- Minimize replenishment travel
- Seamlessly integrate slotting into putaway and picking workflow
- Consolidate products via flexible putaway strategies.

Cubing Optimization/3D Load Builder

- Early-stage cubing simulation plans more accurate transportation needs
- Ensure that every cubic foot of the trailer is maximized, reducing the number of trucks needed to transport goods
- Minimize shipped volume or number of shipped LPNs

Dynamic Task Optimization

- Create tasks that minimize distance and time required to complete the task
- Assigns tasks based on priority that minimizes distance and time required to complete multiple tasks
- Simultaneously pick retail, wholesale and ecommerce orders to reduce pick paths with different drop locations
- Improve equipment utilization and significantly reduce deadhead travel

Late-Stage Order Changes

- Reduce additional shipping requirements by consolidating shipments
- Reduce carbon emissions from unnecessary shipments
- Empower customers to make changes later in the post-purchase process, cutting down on costly returns shipping and handling
- Increase customer satisfaction

Unified Planning

- Maximize asset utilization and reduce unnecessary equipment usage

Order Streaming

- Optimize order fulfillment, reducing the time and energy required to process orders and decreasing the environmental impact
- Reduce the need for unnecessary storage space and minimize energy consumed by warehouse lighting and equipment
- Enable efficient use of transportation modes, reducing the associated carbon emissions
- Improve order accuracy and reduce the need for returns, minimizing the waste and associated environmental impacts

Unified Execution

- Eliminate redundant flows and cuts downtime drastically
- Optimize the use of labor resources, reducing energy consumed by lighting and equipment
- Optimize use of space and resources, minimizing the environmental impact of warehouse expansion

WES & Automation

- Maximize throughput in the warehouse by coordinating automation, robotics and people together
- Combination of native WES and order streaming capabilities, enables total visibility across the DC, complete flexibility for automation growth, and maximum utilization of all resources

Manhattan Active®

Transportation Management

SUSTAINABILITY-SUPPORTING FEATURES

Transportation Modeling or Strategic Modeling

- Identify ‘linkable’ lanes for backhauls and ideal fleet usage, reducing deadhead miles, increasing utilization, and reducing shipment numbers
- Measure route performance, order sizing and changes to demand patterns
- Evaluate different strategic policies to reduce number of shipments and miles on the road
- Increase consolidation opportunities
- Find the best fulfillment location for customer needs
- Run multiple scenarios at once to evaluate different forecast trends
- Get insights and scenario simulation analysis to make the best decision

Dynamic planning

Utilize automatic shipment variance detection and resolution to reduce dead space in trailer

Operational planning

Factors in sustainability/emissions cost (vs $ cost) for carrier, mode and route selection

Multi-Compartment Shipment Planning

Each compartment can support different temperature requirements, allowing orders to be consolidated

Continuous Optimization

- Consolidate orders to reduce number of shipments and miles
- Improve trailer utilization to reduce the number of shipments and trucks on the road
- Allow last-minutes changes on orders and shipments, which helps to reduce unnecessary trips
  - **Load Optimization** - Increased weight and volume utilization of transportation assets results in lowered energy consumption and emissions
  - **Trip Optimization** - Minimize empty trailer movement
  - **Route Optimization** - Increased efficiency per unit of distance traveled results in lowered energy consumption and emissions. Combine inbound, outbound, interfacility and backhauls to reduce number of miles traveled.
  - **Dock Optimization** - Find dynamic crossdocking points to reduce number of shipments.
- Increase load/unload efficiency in yard and at dock doors. Being more efficient at the dock means reducing idling time and wait time, reducing fuel costs and lowering emissions.

Sustainability performance factors

Select EPA SmartWay or other ‘green’ carriers (favor/penalize carrier)

- Sustainable Carrier selection: Performance factors used in selecting EPA SmartWay or other ‘green’ carriers (favor/penalize carrier) Green carrier identification and recommendations.
- Emission calculations: Calculations on shipments based on mode, vehicle, time, distance, etc.

Unified cross dock

Minimize the complexity of the movement of goods through multiple facilities, reducing the number of trips

To learn more visit
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