



Going Lean

A practical guide to combatting
waste in planning and execution

- If a company isn't continuously improving then it is slowly dying.

DAVE WATERS

Adapting Lean principles to planning and execution

In today's competitive business landscape, excess inventory, wasted movement, excessive transportation costs, and a lack of agility are challenges that can significantly impact a company's bottom line. With costs continually rising, it is imperative for businesses to mitigate these inefficiencies to remain profitable and continue serving their markets effectively. Lean principles, though introduced in the 1980's, remain a standard practice in many leading industrial manufacturers and continue to offer valuable insights into reducing waste and increasing efficiency.

While Lean Manufacturing principles, such as waste reduction, have long been recognized for maintaining efficiency on the production floor, their application is far reaching. The principle of reducing waste can be effectively adapted to areas such as planning, execution, and beyond. For instance, wasted movement due to poor warehouse picking, production delays from miscalculated supply, and transportation issues can all benefit from Lean methodologies. By integrating Lean into planning and execution processes, businesses can streamline operations and reduce inefficiencies across their global networks.

Reducing waste addresses several critical challenges: enhancing workforce efficiency without increasing workload, managing materials lead time and disruptions, balancing cost with service and quality, and meeting the growing demands for environmental, social, and governance (ESG) considerations. As products, production, distribution, and their associated networks become more complex, there is a pressing need for responsive software solutions that can effectively handle disruptions and support sustainable growth.

This ebook explores how Lean principles can be adapted beyond the manufacturing floor to optimize planning, execution, and global operations, providing a roadmap for businesses seeking to enhance efficiency and resilience in an ever-evolving market.

83%

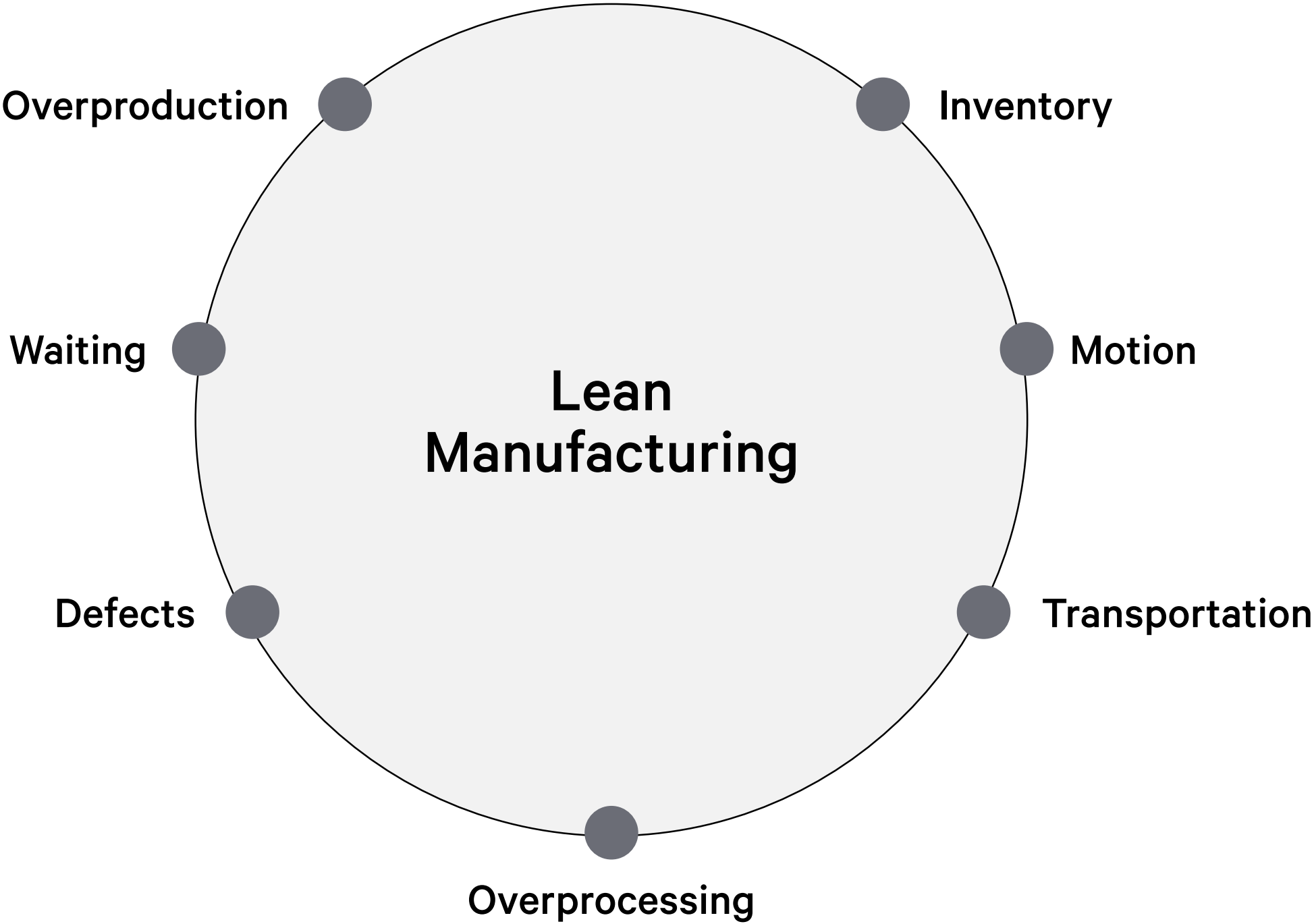
of [senior supply chain leaders](#) agree that outdated technology will hold back their supply chain from achieving what they want



Lean Manufacturing

A set of management practices to improve efficiency and effectiveness by eliminating waste. The core principle of lean is to reduce and eliminate non-value adding activities and waste.

[American Society for Quality](#)

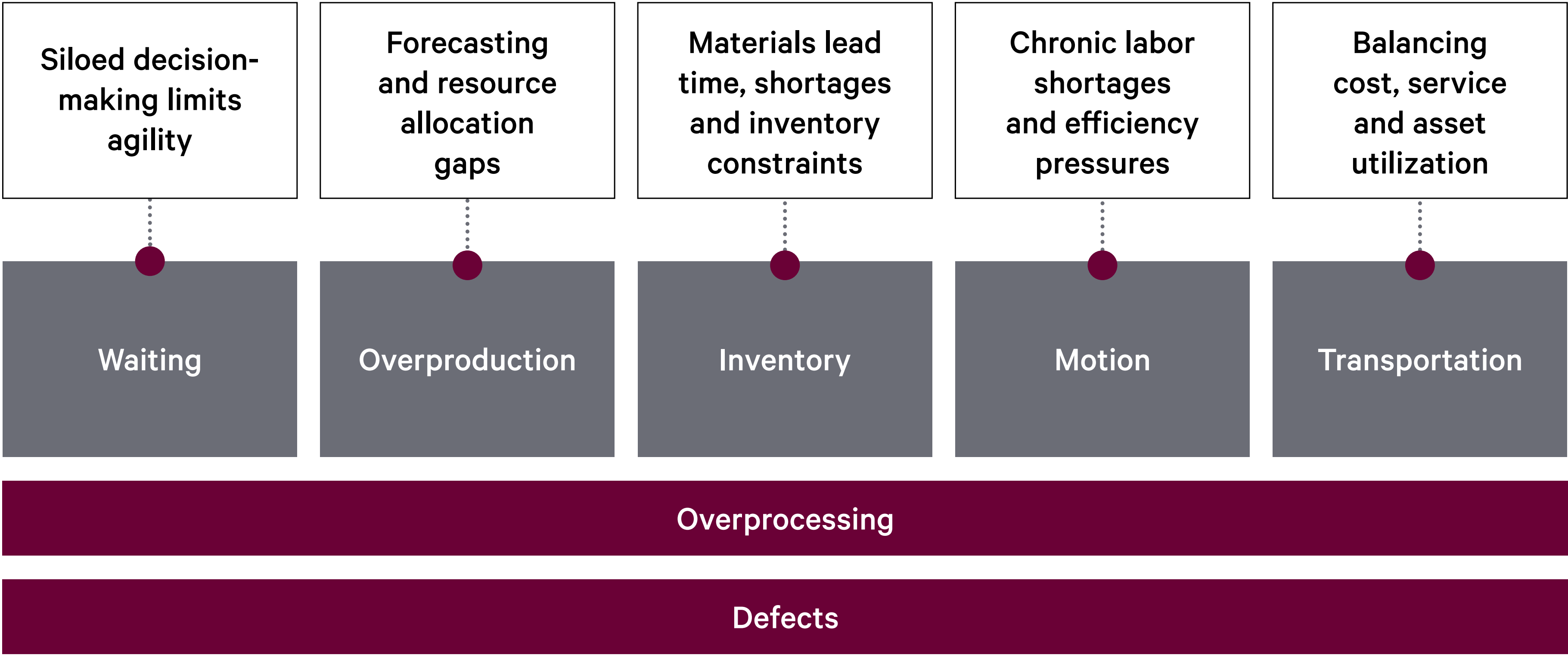


7 principles of reducing waste with Lean Manufacturing

Waiting Downtime for workers or other resources caused by bottlenecks, lack of supplies, inadequate capacity or other delays	Overproduction Producing more product or goods than is needed or producing those earlier than needed	Inventory Holding more inventory, including finished goods and work-in-progress, than is needed to meet current demand	Motion Unnecessary movement of people or equipment	Transportation Unnecessary movement of supplies or products where the transport itself causes potential risk	Overprocessing Performing unnecessary or redundant steps	Defects Creating products (or outcomes) that don't meet quality standards
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Connecting wastes to common industrial challenges

Common challenges within industrial manufacturing result in critical wastes discussed in Lean Manufacturing. By tackling these wastes head on, manufacturers can streamline their operations and improve profitability.



Overprocessing and Defects, when applied to the outcome of duplicate data entry and related errors exacerbates each of these challenges.

Lean meets planning and execution



Overproduction and excess inventory are minimized by assessing supply and demand pressures, enhancing collaboration across multi-enterprise networks and relying on accurate forecasts to produce the right volume of goods for customers.



Waiting and motion, as-well-as related production, staffing and service concerns, are improved through accurate supply planning, workforce management, and near real-time supplier and carrier visibility and collaboration for accurate visibility and responsiveness.



Transportation is minimized through route and load optimization, efficient warehouse picking and labor management, enhanced outbound visibility, advanced order and returns management, and connected execution for reliable on-time, in-full deliveries.

Waiting

Downtime for workers or other resources caused by bottlenecks, lack of supplies, inadequate capacity or other delays

Much like waiting on a factory floor, challenges from managing bottlenecks and available resources cause delays, underutilized teams and capacity, and slow movement of materials. This often occurs due to disconnected systems, such as when supply is misaligned with demand, resulting in insufficient resources, or when warehouses lack coordination with transportation, leading to staffing and capacity shortages or excesses.

Agility, or the ability to respond quickly to change, stands in contrast to waiting. Also impacted by silos, a lack of agility in responding to disruption causes decisions to be delayed to a point of being ineffective.

Reducing wastes in waiting requires moving beyond decision silos and related losses through:

- End-to-end solutions that closely connect planning (business, supply, demand and production planning)
- Execution tools (transportation, warehouse, orders and returns)

- Global enterprise network collaboration and monitoring
- Automation and advanced task management and prioritization
- Services designed to improve staff understanding, speed and adaptably

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Over the next five years, supply chain budgets will invest

67% in technology to overcome siloed decision-making

53% to make complex changes to business models

49% to speed up decision-making



Overproduction

Producing more product or goods than is needed or producing those earlier than needed

Overproduction often stems from gaps in forecasting and resource allocation within the supply chain. When these errors arise, manufacturers can find themselves with surplus products that exceed demand, improper inventory distribution, and unmet customer demand.

This issue extends beyond overproduction to the misallocation of capacity. Ineffective cross-functional forecasting can result in inefficient staffing and underutilized assets. To address these challenges, robust demand and supply planning, along with integrated business planning, is essential.

Reducing wastes in overproduction comes when forecasting and capacity gaps are managed by:

- Connecting demand and supply planning for shorter, more accurate planning cycles
- Utilizing long-term business planning with AI-enabled decision-making
- Ensuring accurate, near-real-time visibility across the network through enterprise connections

[Demand forecasting ranks](#)
4th among concerns
for supply chain
leaders



Inventory

Holding more inventory, including finished goods and work-in-progress, than is needed to meet current demand

While safety stock is crucial for mitigating lead times and shortages, excessive inventory—whether in raw materials, work-in-progress, or finished goods—often leads to high storage costs, inventory damage and additional fees. Going further, there is the risk and cost of storing inventory that may become obsolete and require disposal.

Optimizing inventory requires clear visibility into supply and demand, as-well-as potential disruptions in the global supplier network. Manufacturers also need the ability to assess the near-term impact of materials shortages and delays and adjust production plans with intelligent, what-if scenario testing.

Reducing wastes in inventory risk requires:

- Integrating demand and supply planning for cohesive decision-making
- Optimizing inventory to ensure production and service with the right mix and placement
- Ensuring connected orders, transportation, and warehouses for faster responses and accurate resource planning

11%

of [manufacturing plants in the U.S.](#) cite shortages of raw materials as a key impediment affecting their capacity utilization



Motion

Unnecessary movement of
people or equipment

Like the factory floor, unnecessary motion in the warehouse—such as excessive picking routes or repetitive manual tasks—is often visible. However, excessive office team motions, like manually searching for information or copying data between systems, are less obvious, but no less wasteful.

In both the warehouse and office, with chronic labor shortages and efficiency pressures, manufacturers can't afford wasted movement. They need to optimize operations to make the most of existing potential, augment a shrinking workforce and manage increasing supply chain complexity.

Reducing wastes in motion requires:

- Harmonious flows of information between systems, processes and people
- Reductions in manual steps and delays found in batch processes and gray work
- Automation integration and task optimization that limits mundane repetitive tasks and maximizes team potential

59%

of working professionals
[spend 11+ hours per week](#)
chasing information from
different people and systems

Gray Work refers to the unproductive, manual, and often ad-hoc tasks that employees do to compensate for outdated technology and processes. This includes reliance on outdated integrations, spreadsheets, and manual processes that require duplicate or even triplicate data entry. Grey work arises when technology doesn't effectively support business needs, forcing employees to create makeshift solutions. This leads to inefficiencies, collaboration barriers, and frustration, ultimately hindering productivity and performance.



Transportation

Unnecessary movement of supplies or products where the transport itself causes potential risk

Transporting goods unnecessarily heightens the risk of product and inventory damage, which in turn impacts costs, service, and asset utilization, as-well-as the availability of those materials for production.

This often stems from limited visibility, network failures and excessive transportation and occurs when loads or routes aren't optimized, inventory shortages prompt expedited shipments, and orders are mismanaged.

Reducing wastes in transportation requires:

- Advanced execution tools that ensure fuller loads and optimized routes, limiting the higher costs and risks of expedited and partial loads, as-well-as additional miles
- Increased communication and collaboration across multiple enterprises enabling manufacturers to catch and react to delays while there's time to fix the problem

Potential risks of in-transit damage

- Higher costs
- Lost or damaged inventory
- Production delays
- Customer service
- Asset and resource utilization
- Materials availability



Overprocessing and defects in planning and execution

Overprocessing: Performing unnecessary or redundant steps and processes

Defects: Creating products or outcomes that don't meet quality standards

The last two principles—overprocessing and defects—are not forgotten. Rather they are overarching issues that affect all other areas.

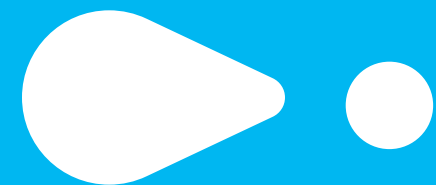
- Overprocessing, akin to wasted motion, often involves redundant work and time lost to replanning due to errors and changing conditions.
- Defects in planning and execution manifest as inaccurate data, flawed plans from exhausted planners, or poorly optimized routes from inadequate solutions.

Both overprocessing and defects in planning and execution often arise from siloed work and can be mitigated through task automation, AI monitoring, and interoperable solutions and data clouds.

Reducing wastes from overprocessing and defects requires:

- AI for rapid issue detection and resolution
- Unified data clouds as single sources of truth
- Seamlessly connected software that ensures true harmony
- Facilitating smooth information flow by avoiding batch operations, which create bottlenecks, delayed decision making and outdated responses.





Without platform level connectivity, supply chains suffer.

Disconnected systems in procurement, inventory, logistics and finance give rise to siloed data and poor visibility. Individual teams are forced to work in silos to manually consolidate data, delaying decisions and reducing accuracy. For example, a manufacturing organization can face frequent shipment delays and missed inventory targets due to siloed data and systems. Procurement teams that aren't integrated with the logistics team's tracking system could be unaware of potential supplier delays, leading to production delays and customer dissatisfaction.

SUPPLY CHAIN BRAIN, SEPT 2025

Empowering Lean with Cognitive Solutions from Blue Yonder

	Unified Decisioning Integrates supply chain processes for improved forecasting and synchronized operations, replacing siloed decisions with global trade-offs.	Intelligent & Agentic Employs scalable ML and AI agents for fast, precise predictions and enhanced decision-making.	Multi-Enterprise Network Connects partners in real-time for better visibility, collaboration, and risk response.	Interoperable Solutions Provides a unified platform for agile decisions and cross-department collaboration.	Reimagined Experiences Offers a user-friendly platform for AI and human collaboration, ensuring measurable ROI.	Cloud Native Ensures scalability, seamless updates, and reduced costs, fostering innovation and growth.	AI Data Cloud Acts as a unified data platform, reducing integration debt and IT costs, and improving decision efficiency.
Waiting	●	●	●	●	●	●	●
Overproduction	●	●	●	●			●
Inventory	●	●	●	●			●
Motion	●	●	●	●	●	●	●
Transportation	●	●	●	●			●

Moving toward leaner planning and execution

Eliminating waste through time-honored Lean methods is not just a strategy but a vital pathway to thriving in industrial manufacturing. When these principles are applied to planning and execution using cutting-edge cognitive tools and solutions, companies transform into agile and highly efficient entities.

Blue Yonder emerges as the ideal partner, offering industry-proven solutions specifically designed to tackle the unique challenges of industrial manufacturing supply chains. By optimizing complex loads and production, fostering seamless collaboration with global partners, and proactively anticipating disruptions, Blue Yonder empowers manufacturers to masterfully manage planning, execution, and extensive supplier and carrier networks, effectively eradicating waste.

Investing in a connected system of forecasting, visibility, planning, and execution technology with Blue Yonder is a strategic move that can pay off through cost savings across all seven categories of waste. This investment enables manufacturers to pursue lower costs and enhanced sustainability, driven by efficient execution and advanced data modeling. Customer satisfaction can reach new heights with on-time, in-full shipments, made possible by a globally integrated network and precise planning. Moreover, AI-driven, strategic supply and demand planning ensures consistent production lines.

Blue Yonder equips manufacturers to achieve their business goals while maintaining a competitive edge in an ever-evolving market landscape.

Isn't it time to consider going Lean in your planning and execution?

Learn how Blue Yonder can help you achieve your supply chain priorities at blueyonder.com

Blue Yonder is the world leader in end-to-end digital supply chain transformation. With a unified, AI-driven platform and multi-tier network, Blue Yonder empowers businesses to operate sustainably, scale profitably, and delight their customers — all at machine speed. A pioneer in applying AI solutions to the most complicated supply chain challenges, Blue Yonder's modern innovations and unmatched industry expertise help more than 3,000 retailers, manufacturers, and logistics service providers confidently navigate supply chain complexity and disruption.