

Operational and Manufacturing Excellence Webinar Series



Optimizing Supply Chain to Increase the Bottom Line

American Coatings Association Webinar | September 19, 2023

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Webinar



ChemQuest

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Operational and Manufacturing Excellence American Coatings Association Webinar Series

Thursday, June 22

Process Optimization & Overall Equipment Effectiveness

Tuesday, July 25

Optimizing Plant Operations Including Design Considerations
for Growth

Tuesday, September 19

Optimizing Supply Chain to Increase the Bottom Line

Tuesday, October 17

Safety First! – Best Practices in Environmental, Health and Safety



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Deliver distinctive, thorough, actionable, confidential, and professional work and support our clients in every aspect of sustained, profitable growth, including:



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Stakeholders across the value chain trust our thought leaders:

- **Team is more than 130 minds strong**, including ~ 48 Ph.D. chemists.
- **Senior personnel** each have a minimum of 25 years of experience in specialty chemicals and materials.
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Our Mission is Enabling Our Clients to:

- **Build enterprises** that challenge established thinking and drive transformation.
- **Gain competitive advantage** through distinctive, targeted, and substantial improvements that sustain profitable growth.
- **Unlock new and hidden insights**, empowering an organization's smart risk-taking, catalyzing innovation excellence and value creation.
- **Be successful** — because our success emanates from yours.

Supply chain is more than just purchasing—it's an integral set of many moving parts, including the chain of processes, businesses, etc. by which a product is produced and distributed.

The scope of today's presentation will focus primarily on methods and practices to improve overall supply chain efficiencies impacting performance (i.e., **the bottom line**) by looking at fully integrated supply chain tools.



Supply chain commitment from the top of the organization



Enterprise resource planning (ERP) platforms



Supply chain planning components



Document management



Global supplier management, including transportation carriers and outside warehousing



Sustainability



Inventory optimization



Supply chain culture establishment



Risk mitigation

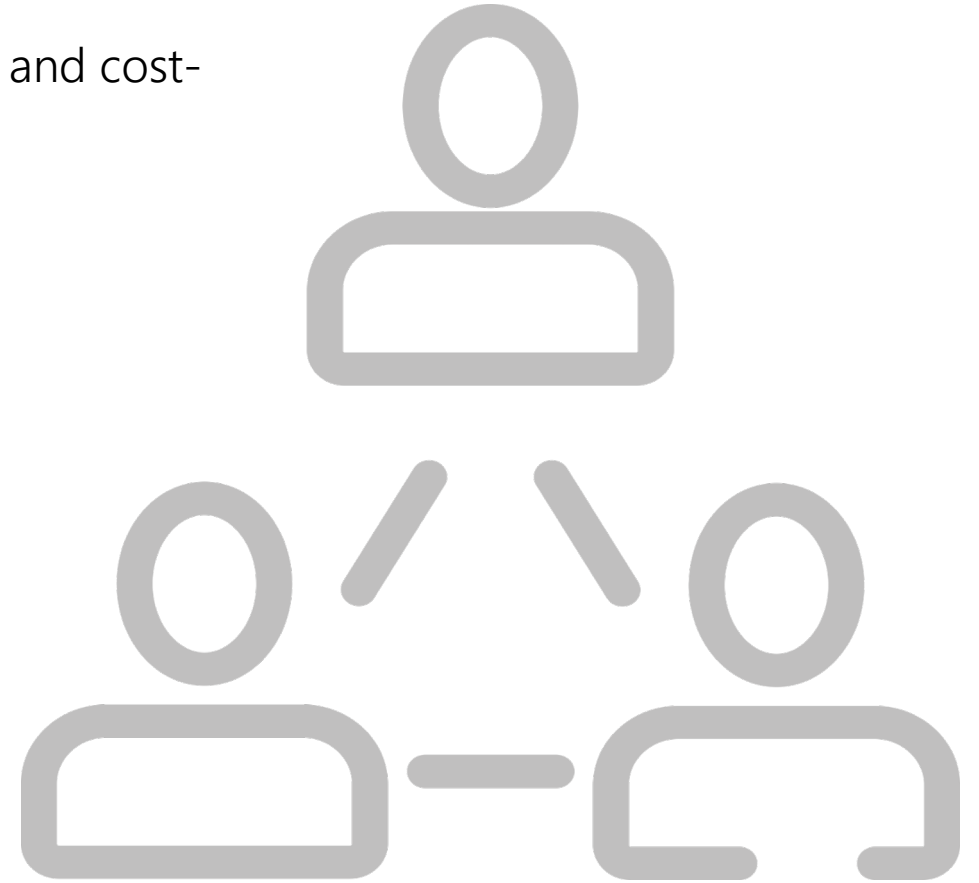


Supply chain benchmarking, including metrics to measure performance

Supply chain requires a strategic focus and commitment from senior leadership, including the development of the optimal supply chain team.

Expected outcomes include:

- Strong team with skilled workforce in place that improves reliable and cost-effective supply
 - Cross-business execution, breaking down organizational silos
 - Standardized processes
 - Voice of supply chain in organization
 - Goal alignment with company objectives
 - Innovation focus with process improvements
 - Employee training and development, with career focus (including other organizations)
- Better demand cycle performance
- Short-term cost disadvantage possibility, but result is more reliable longer-term supply
- Customer service and growth through higher level of reliability



Make the supply chain a priority with a proactive vs. reactive commitment.

- Build strategic and robust partnerships with select customers and suppliers
 - Develop pricing strategy
- Use data for consistent supply chain planning and management processes
 - Order backlogs
 - Consumer behavior information
 - Demand forecasting
 - Overproduction
 - Stock-outs
 - Production throughputs
 - Inventory control, including working capital management
- Supply sourcing and procurement
 - Freight planning both in and out
 - Contingency plans, aka “what if”



View supply chains as opportunistic rather than simply cost driven.

Make the supply chain a priority with a proactive vs. reactive commitment. *continued*

- On a routine basis, review the demand planning process for errors, or even bias
- Product lifecycles need to be a focal point
 - Reduce product obsolescence
 - Acknowledge the impact on product development...again, forward thinking
- Create an environment of continuous improvement
 - Cross-functional planning across the entire organization (sales, finance, operations, etc.)
 - Better alignments with customers
 - Improve overall productivity

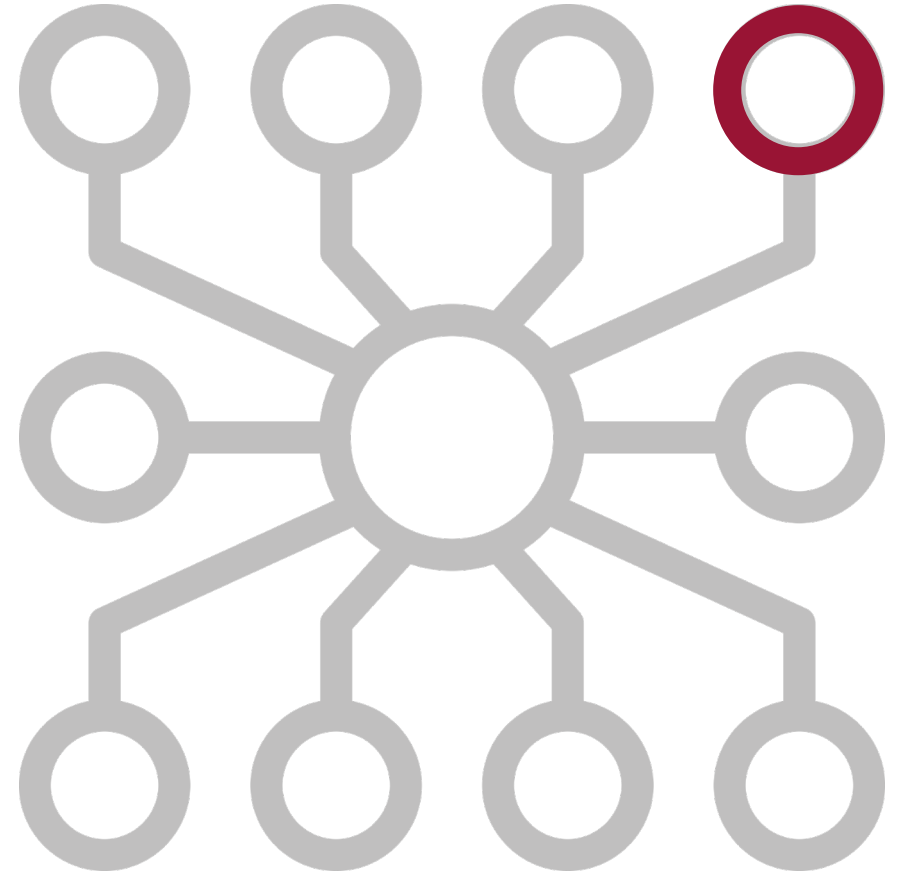


View supply chains as opportunistic rather than simply cost driven.

Explore when to use diverse procurement, multi-sourcing, and dual-sourcing to enhance supply chain reliability.

Sole sourcing considerations:

- Costs, set-ups, cross contamination, lot traceability, other
- Supplier reliability with multiple production lines and/or manufacturing facilities
- Customer-approved and qualified emergency alternate supply source (e.g., through an outside party)
- Unique supplier packaging
- Delivery performance
- Flexibility and ease of doing business with
- Distribution strategy for small or commodity supply
- Critical raw materials or services
- Price and supply guarantee



Consider sole sourcing only under specific terms and conditions.

Explore when to use diverse procurement, multi-sourcing, and dual-sourcing to enhance supply chain reliability. *continued*

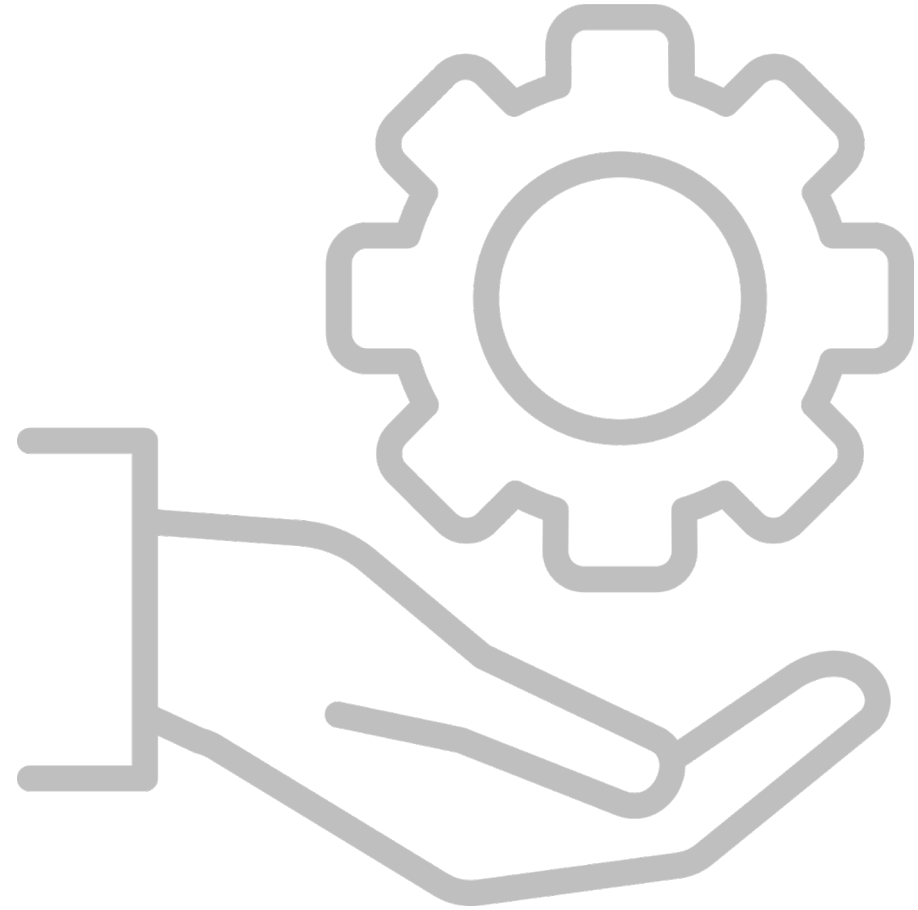
- Sole sourcing vs. multiple suppliers
 - Sole sourcing advantages
 - Fostering of long-term supply relationships
 - Favorable pricing due to volume commitments
 - Reduced administrative costs
 - Sole sourcing disadvantages, including higher risks
 - Supply disruptions
 - Less price leverage
 - Supplier complacency (lower performance)
- Most organizations take a hybrid approach that combines the best of both worlds while adapting to changing conditions



Deciding whether to sole source or use multiple sources is dependent on your specific situation, and there is no one-size-fits-all answer.

Develop standards on supply chain culture, including expectations and deliverables.

- Full supply chain visibility
 - Leverage integrated supply chain visibility
 - Promote information sharing in partnerships
- Supplier compliance in regulatory and corporate values
 - Communicate and ensure adherence to your expectations with the supplier network
 - Have regular and random audits/inspections
 - Partner with suppliers on compliance while holding them accountable



Full visibility into the supply chain for both customers and suppliers results in better decisions and supports overall risk management.

Align behaviors on corporate governance and actions with suppliers.

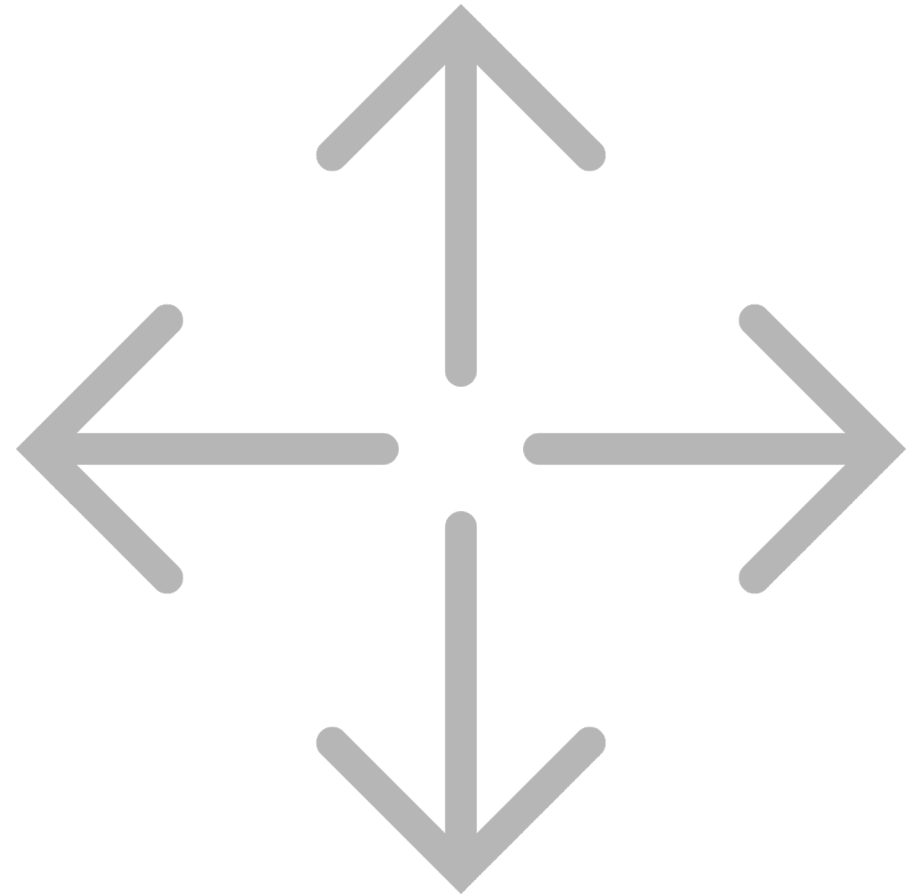
- Establish a culture across the supply chain on ethical labor practices by practicing what you preach
 - Promotion of a code of conduct and ethics toward employees
 - Transparency in brand without cover-ups or criminal behavior
- Communicate the desire for eco-friendly policies
 - Promote the 3Rs philosophy: Reduce, Reuse, and Recycle
 - Promote a culture that helps to reduce the suppliers' carbon footprint



Develop trust and accountability in the area of supplier behavior at all levels.

The strategic importance of transportation and product storage cannot be overstated.

- Develop a **transportation strategy** with both internal (if available) and external freight carriers
 - Execute key freight carrier agreements that maximize delivery, service, and cost
 - View delivery strategy longer-term, with agreements in place
 - If international, investigate and protect against high-risk geopolitical environments, as well as weather disruptions such as flooding/hurricanes
 - Consider investing in internal freight solutions and calculating an ROI for validation
- Explore a **warehousing strategy** with both internal and external warehousing
 - Consider investing in own warehouses with a potential strategic distribution plan
 - Align with outside warehouse partners when reliability is high



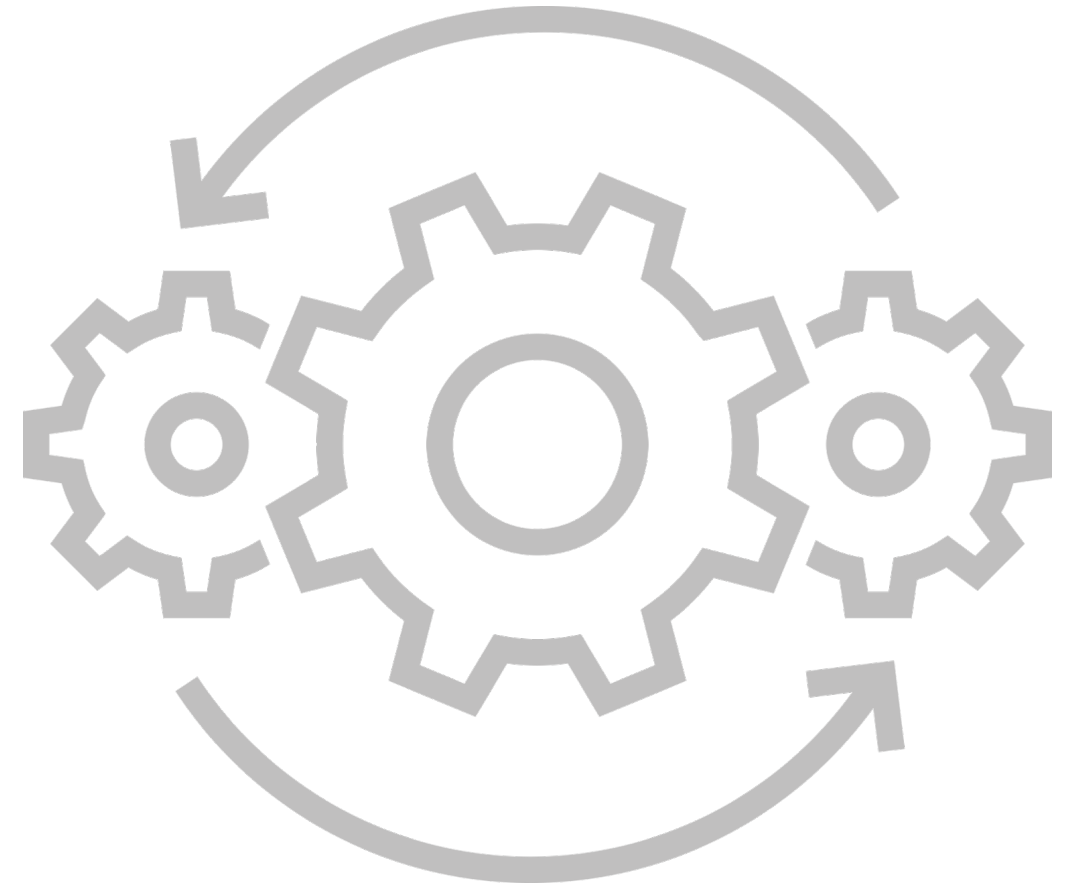
Balancing working capital requirements with high-level customer service should be the goal of managing inventory.

- Take into view order trends, including seasonal patterns in the business that can result in supply disruptions
- Inventory programs such as consignment need proper oversight and execution
- Use of blanket purchase orders helps streamline the supply process
- Customer-aligned stock plans, including take or pay
- Product obsolescence management requires timely and intense attention to avoid costly write-offs
 - Important to have frequent interaction with the inventory stakeholders



Optimizing inventory management in tandem with demand forecasting is a crucial area of supply chain efficiency.

- Production having too much scheduling power and not in alignment with supply chain
 - Production-friendly products that allow production goals to be met but are not necessarily the “right” action
 - Planning/scheduling is independent of production; target an equilibrium between inventory service levels to customer and production efficiencies
 - Ensure that over-production is addressed with proper metrics in place to monitor



Having too much or not enough of the right product in stock is costly.

The practice of risk mitigation is critical to profitability and ongoing business survival.

Supply chains are inherently full of risks and need constant attention to minimize those risks.

- Raw material shortages
- Overplaying a just-in-time (JIT) strategy
- Supplier bankruptcies
- Natural disasters
- Trade disputes
- Theft
- Port and trucking disruptions
- Cybersecurity laws and regulation nonconformance
- Pandemics such as COVID-19
- Policies such as the Inflation Reduction Act
 - Incentives for electric trucks, renewable energy, promotion of domestic sourcing, green ports



A structured risk mitigation strategy with senior management involved should be conducted on a routine basis.

Enterprise resource planning (ERP) software as a strategy, especially when experiencing rapid changes in product demand.

- Demand forecasting
- Customer delivery performance
- Purchase order documentation, including blanket and standing
- Inventory control and MRP
 - Replenishment
 - Inventory target levels
 - Product obsolescence and slow-moving inventory
- Production planning/scheduling to effectively meet customer demand
- Real-time accurate reporting on key metrics and KPIs



While fully integrated ERP systems across all company areas are desirable, supply chain ERP should be highly considered.

World-class supply chains demand critical benchmarking and the use of KPIs to reach optimum performance.

- Prioritize supply chain metrics that deliver optimum performance
 - Tracking the right metrics and the right amount?
 - Prioritize activities that drive best outcomes
 - Developing and utilizing effective reporting or scorecards to measure performance
 - Benchmarking against self and outside, possibly the competition
 - Compare costs vs. YOY, budget, or forecast



Benchmark your organization's contribution to business strategy, continuous improvement, competition, organization, and processes.

Key supply chain KPIs to consider



Perfect Order

- On-time delivery in full (OTIF)
- Defect-free product delivery as a % of orders
- Error-free documentation as a % of orders



Customer Order Cycle Time

Date PO received from customer to successful delivery date (customer service)



Cash-to-Cash Cycle Time

Number of days it takes between paying for raw materials and being paid from customer (working capital)



Fill rate

% of SKUs successfully shipped on the first pass (customer service)



Days Sales Outstanding

Time collecting payments from customers in days (financial leanness)



Inventory Turnover

Times your total inventory is sold over a specific period (working capital value to profit)



Inventory Velocity

Opening stock level/next period's sales forecast (strong indicator of mix of product sales)

Supply chain KPIs help drive the financial health of a business while also adding insights about warehousing operations. They can also be a competitive advantage or disadvantage.





Thank you!
Questions? Feel free to reach out:

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