NEW YORK
Manufacturing
Extension Partnership

Reshoring and Supply Chain Tools: Train the Trainer Webinar

December 4, 2020

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Supply Chain Tools

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Worksheets that our state partners can use to help manufacturers strengthen their supply chains:

- Supplier Audit Worksheet
- Supply Chain Risk Assessment Worksheet

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Supplier Audit Worksheet

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MANUFACTURING REIMAGINED PLAN | PIVOT | PREPARE	SUPPLIER AUDIT WORKSHEET			
	Rating System: 5 = Best in Class 4 = Very Good 3 = Good 2 = Average 1 = Poor 0 = Very Poor			
Reviewer:	**Review Criteria**	**Measure**	**Rating**	**Comments**
	Performance	Technical Capability		
Review Date:		Appropriate Assets		
		Technical Assistance		
Supplier:	Quality	Quality System		
		Quality Tracking		
Supplier Location:		Quality Concern		
		Failure Scrap Rates		
Supplier Contact:	Delivery Lead Time	Responsiveness		
		Delivery Time Guarantee		
Supplier Contact:		Lead Time Contingency Plan		
	Price	Price Quality		
Supplier Contact:		Price Flexibility		
		Quote Rewards/Penalties		

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Supplier Audit Worksheet

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Supplier:				
Supplier Location:				
Supplier Contact:				
Supplier Contact:				
		Plan		
	Price	Price Quality		
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= Poor 0 = Very Poor

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Supplier Audit Worksheet

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Supplier Audit Worksheet

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Review Criteria | Measure | Rating | Comments

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Supplier Audit Work

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Reviewer:

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Why Audit?

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- Gather data to help make better sourcing decisions (tracking)
- Evaluate potential suppliers using uniform criteria
- Strategic approach - Look at more than just price
- Best fit between supplier capabilities and manufacturer’s needs

- Ultimately, manufacturers should use the worksheet to identify which suppliers best align with the manufacturer’s growth plan.

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Best Practices: Manufacturers

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- Think strategically when approaching a potential supplier
- Do your research then ask the right questions, be honest about stage of development, have info and details ready (including drawings, CAD files, spec sheets, volume estimates, target costs, terms, etc.)
- Focus on establishing a strategic partnership (win-win value proposition, opportunities for future growth)
- Develop a scoring matrix (Audit worksheet) to evaluate suppliers on your most important criteria

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Best Practices: NYS Assets

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- Understand what resources the manufacturer is using to identify potential suppliers:
  - Online (Thomas Net, Global Spec)
  - Tradeshows, Expos
  - Economic Development Agencies, Chambers of Commerce
  - MEP's, FuzeHub
- Encourage manufacturers to seek back-up/redundant sources

What to Audit?

- What criteria is most important in reaching goals?
- Examples:
  - Performance
  - Quality
  - Delivery
  - Price
  - Other

Review Criteria	Measure
Performance	Technical Capability
	Appropriate Assets
	Technical Assistance
Quality	Quality System
	Quality Tracking
	Quality Concern
	Failure Scrap Rates

Performance

- Technical Capability
  - Expertise/familiarity with industry regulations and standards
  - Work with other companies in the same markets
- Appropriate Assets
  - Capacity constraints, scale-up limitations (relative to growth plans)
- Technical Assistance
  - Research, engineering, materials, quality assurance, etc.

Quality

- Quality System
  - Certifications (ISO)
- Quality Tracking
  - Internal processes (SOP), parts inspections, revision control, order accuracy/verification
- Quality Concern
  - Testing facilities, part traceability
- Failure Scrap Rates
  - What’s acceptable, how are returns/defects/rework handled

Delivery

- Responsiveness
  - How are change requests handles, response to rush orders/NDA, how quickly reply to new RFQ?
- Delivery Time Guarantee
  - Proximity, frequency of shipments
- Lead Time Contingency Plan
  - Penalties for late/incomplete deliveries?

Price

- Price Quality*
  - Accuracy/thoroughness of quote (including components, labeling, documentation, correct pack quantities)
- Price Flexibility
  - Locked for given time period, based on raw material cost?
- Quote Rewards/Penalties
  - Payment terms, incentives for on-time/accuracy, volume discounts, how are returns/defects/warranty handled?

*COGS versus TCO (Total Cost of Ownership)

Other

- IP Protection
  - NDA, cybersecurity (DoD)
- Ownership
  - Tooling, new processes
- Vendor managed inventory (safety stock)
- In-person audit of facility
  - Validate equipment and processes, general observations (working order, clean, organized, incoming goods, inventory, WIP, finished goods, etc.)

Worksheet Tips

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- Multiple sourcing options for each part/component
- Consider customizing worksheets by part/sub-assembly
- Adjust scale if needed (10 point, 100 point, yes/no)
- Update regularly to benchmark potential suppliers against existing suppliers

Supply Chain Risk Assessment Tool

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SUPPLY CHAIN RISK ASSESSMENT WORKSHEET								
	RISK TYPE			INHERENT RISK EVALUATION			CONTROL/MITIGATION PLAN	
Risk Description	Risk Type (Quality, Cost, Lead Time, etc.)	Is Risk Internal or External?	Risk Information Variables	Risk Impact Severity (Low, Medium High)	Likelihood (Low, Medium High)	Existing Ability to Mitigate (Low, Medium High)	Control Description/Action	Contingency Plan
Part 1:								
Part 2:								
Part 3:								
Part 4:								
Part 5: Packaging								
Quality Tracing								
Lead Time of Components & Materials								
Raw Materials								
Equipment (tooling)								
Facility								
Working Capital								
Safety								
Regulation								
Fulfillment								
Distribution								
Shipping & Transportation								

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INHERENT RISK EVALUATION

Risk Impact Severity (Low, Medium High)	Likelihood (Low, Medium High)	Existing Ability to Mitigate (Low, Medium High)

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CONTROL/MITIGATION PLAN

Control Description/Action

Contingency Plan

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Supply Chain Risk

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- Risk Description: Critical parts (not every item in BOM) plus other factors and activities that carry risk for your operations
  - Examples: components, equipment, working capital, regulations, distribution

- Look for synergies between Audit Worksheet and Risk Assessment Worksheet
  - They have already identified which criteria are important, so focus on how to minimize the risk inherent in those

Potential Risk Categories

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Category	Examples
Environmental	Natural disaster, pandemic
Regulatory	Trade policy, tariffs, interest rates
Supply Chain Disruption	Raw materials cost/availability
Supply Chain Performance	Quality, delivery, capacity, service
Human Resources	Turnover, union issues, salaries
Financial Health	Bankruptcies, borrowing power
Relationship	Incumbent power, competition
Others	Transportation, Mergers/Acquisitions, IP

Avoid Common Mistakes

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- Not paying attention to policy and regulations (NY, US, international)
- Ignoring the trade-off between designing highly specialized components and number of capable suppliers available
- Relying on a single supplier (not having backups)
- Allowing a supplier to own the tooling for your product
- Poor documentation and revision control
- Trying to bleed your supplier of margin

Summary

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- To get the most out of the worksheets:
  - Put in the time to customize properly
  - Be diligent and consistent about completing them
  - Remember that the Audit and Risk Assessment Worksheets can work in tandem
- Goals:
  - Select the best suppliers based on all important factors (not simply purchase price)
  - Limit negative impact on your business by identifying risks for crucial items and creating mitigation plans

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Thank you

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