

GDI Supplier Assessment Practice



Assessing Critical Supplier Performance & Risks

www.gdisupply.com

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A GDI Supplier Assessment Practice - Business Development Presentation

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Our Point-of-View Regarding Supply-Chain Risks In Today's LEAN-Centric Global Sourcing World

Since the mid 1990's, manufacturers have been aggressively outsourcing many of their significant purchased components and manufacturing operations to global Suppliers in low cost regions (China, Mexico, Philippines, Malaysia, Eastern Europe, etc.). At the same time, these manufacturers have been busy implementing LEAN manufacturing principles to further reduce costs and improve working capital. **And while there have been clear benefits in gross-margins from these initiatives, there has also been a substantial increase in the amount of enterprise risk contributed via the global supply-chain. Lower buffer inventories, greater concentration of supply from fewer Suppliers at greater distances, and increasing complex logistics have INCREASED the overall risk in the supply-chain.**

There are really only THREE ways to manage these risks in your raw materials and components supply-chain:

1. **The first way is to buy your way out of the risks with extra inventory... somewhere.** Either you own it or your Supplier owns it. In either case, the capital cost of just-in-case inventory will find its way into your product cost and onto your balance sheet. Your margins and working capital management will suffer which will cause your investors to question whether you know how to manage a supply-chain! Thus, your company's valuation *will* suffer.
2. **The second way is to proactively manage the risks,** which first requires precise knowledge of what the risks are and competent knowledge of the potential for disruptions that can manifest from the risks. Once this knowledge exists, appropriate focused actions and effective procurement Terms & Conditions can be applied to the Supplier relationship.
3. **The third way is to ignore the risks... a really BAD idea!**

Companies that don't apply performance & risk assessment rigor to their analyses of critical Suppliers are risking more than today's profits. Manufacturers and distributors are risking longer term market share and shareholder confidence simply because they believe that if they "expect" their Suppliers to perform, they will perform. Nothing could be farther from reality.

Supply-Chain Disruptions Can Seriously Impact Long-Term Shareholder Value, Profitability & Share Price Volatility

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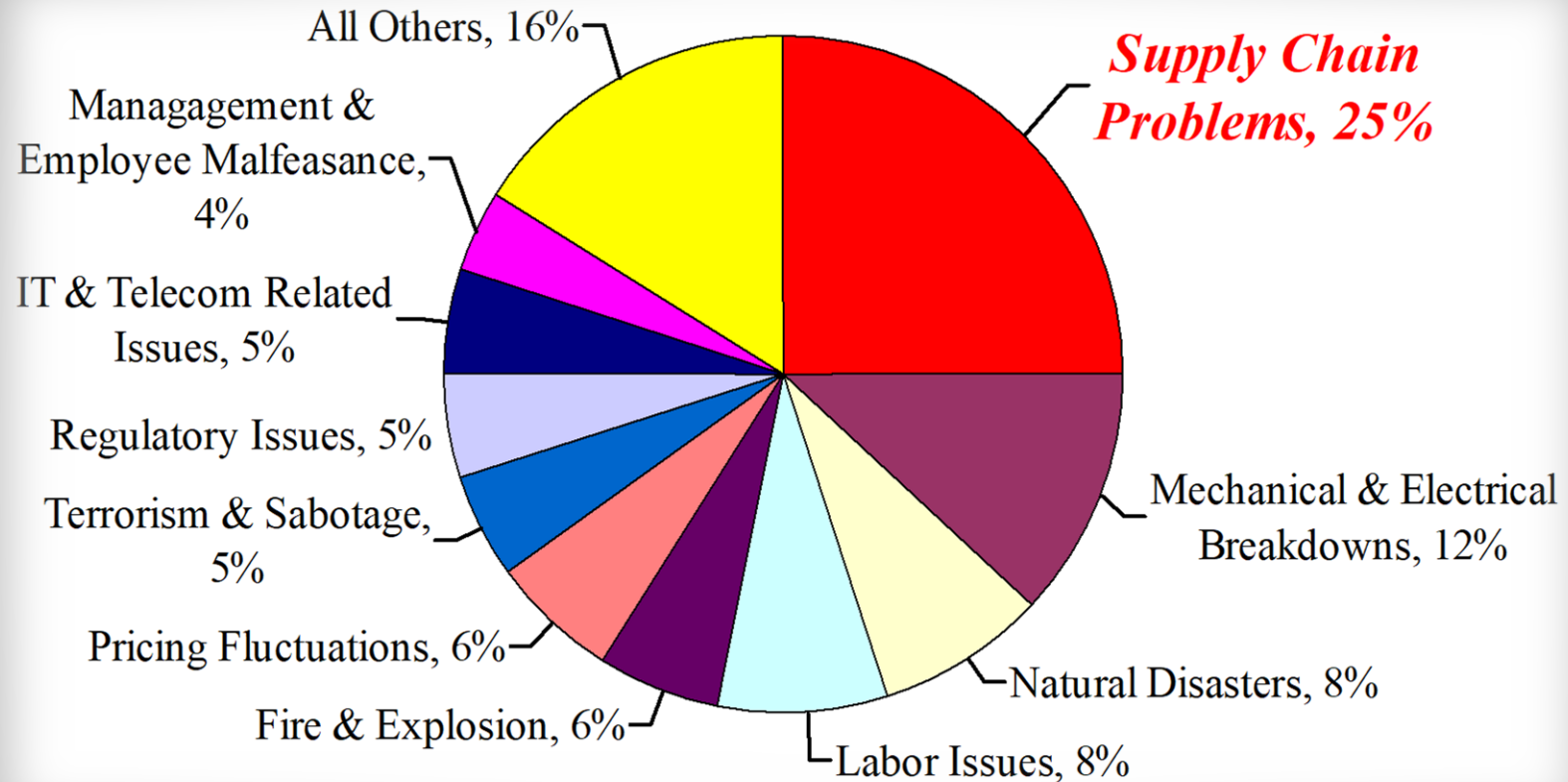
- ✓ 7% lower sales growth, probably the result of poor customer delivery performance that was ultimately caused by the raw material supply disruption
- ✓ 11% higher costs-of-goods
- ✓ 14% higher inventory
- ✓ 10.5% decrease in stock value in the year following the disruption with a lingering 1.77% decrease the second year after the disruption
- ✓ In the year after the disruption, the share price volatility is 13.5% higher when compared to the volatility in the year before the disruption

Kevin Hendricks, Associate Professor of Operations Management at University of Western Ontario & Vinod R. Singhal, Professor of Operations Management at Georgia Institute of Technology

Disruptions have a debilitating impact on performance and companies often do not quickly recover from disruptions. Companies continue to operate for AT LEAST two years at a lower performance level after experiencing significant supply-chain disruptions.

The Growing Threat of Supply-Chain Disruptions Is a Top Concern for Many Business Leaders

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When 600 finance executives were asked to identify the top risk that impacted their companies' primary revenue driver, 25% of respondents from North American companies and 19% of those based overseas, the largest proportion in both cases, chose supply-chain exposures as their top risk.

Harris Interactive survey commissioned by Johnston, R.I.-based FM Global, a commercial & industrial property insurer.

Supply-Chain Disruptions

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Could These Types of Disruptions Happen To Your Company?

Disruptions

Ace Industries (defense industry precision machining) had to accept the return of a large number of machined components because they failed certain quality standards. The failures occurred not in production, but in the quality of the incoming raw materials. The failures were significant factors in the customer awarding subsequent years contracts to Ace Industries' competitor.

Direct Causes of Supply-Chain Disruptions

While Ace Industries had an incoming inspection process, they had no way to tangibly and proactively assess their metal Supplier's manufacturing process. This resulted in batches of material being certified by their Supplier as meeting metallurgical standards, when in fact, the batches didn't meet specifications.

How Risks Could Have Been Managed

Ace Industries failed to assess the Supplier's quality management process, which if they did, they would have observed numerous process deficiencies and accordingly, would not have accepted the Supplier's certifications.

How GDI would probably have rated the Supplier

Question: How to best qualify the Supplier's Supplier?



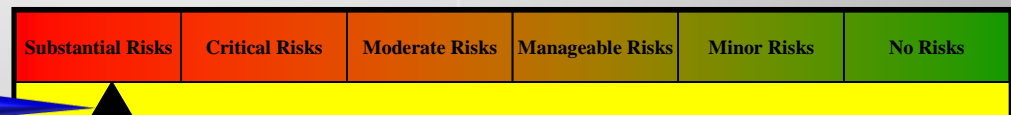
Ford's Land Star division's sole source chassis Supplier was on the verge of bankruptcy in 2001. The Supplier refused to ship chassis to Land Star without additional advanced payments, ultimately forcing Ford to buy the Supplier to resolve the problem.

The Supplier simply was not economically viable.

Land Star should have assessed the Supplier's economic viability YEARS before the problem became a problem. This would have allowed ample time to dual-source the chassis.

How GDI would probably have rated the Supplier

Question: How to quickly qualify an alternative source?



Supply-Chain Disruptions

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Could These Types of Disruptions Happen To Your Company?

Disruptions

After the 1995 Kobe, Japan earthquake, virtually all of Toyota's assembly plants in Japan had to shut down due to an inability to get brake-shoes from their sole-source Supplier.

Direct Causes of Supply-Chain Disruptions

Toyota had trimmed its brake-shoe supply-chain to one Supplier without fully understanding the risks.

How Risks Could Have Been Managed

Toyota failed to understand the Supplier's catastrophe management capabilities. This should have been assessed BEFORE a supply agreement was negotiated.

How GDI would probably have rated the Supplier

Question: How to get this Supplier to plan for the unexpected?

Substantial Risks

Critical Risks

Moderate Risks

Manageable Risks

Minor Risks

No Risks

In 2000 and 2001, the entire world-wide electronics industry experienced a shortage of tantalum capacitors because a leading PC manufacturer began hoarding these devices at the same time new applications for tantalum capacitors developed in cell phone design. Solecron was forced to shut down entire product lines in their contract manufacturing business.

Supply effectively dried up overnight because Solecron did not understand the world-wide growing need for one of its critical components. This forced Solecron to redesign the 25-cent capacitor and replace it with a \$1.25 alternate part. This resulted in a 5-fold increase in capacitor costs as well as a significant shipping shortfall in 2000 & 2001

Solecron failed to understand the tantalum capacitor industry's volume ramp-up as a result of new needs for old products. If they understood this, they could have begun their redesign efforts sooner when they had time on their side. Perhaps they could have discovered an alternate part that was less expensive than the replacement part they quickly, and unfortunately, had to settle with.

How GDI would probably have rated the Supplier

Question: How to quickly qualify an alternative component design & source?

Substantial Risks

Critical Risks

Moderate Risks

Manageable Risks

Minor Risks

No Risks

Supply-Chain Disruptions

Could These Types of Disruptions Happen To Your Company?

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Disruptions

In 2000, Ericsson failed to ship in excess of \$1 billion in cell phones because a fire at a semiconductor Supplier's plant seriously disrupted Ericsson's inbound materials and production.

Direct Causes of Supply-Chain Disruptions

Ericsson had trimmed its Supplier base and did not establish appropriate safety stocks to buffer emergencies in a buffer-less manufacturing environment. Further, Ericsson did not insist that their Supplier maintain consigned inventory stocks in a building separate from manufacturing.

How Risks Could Have Been Managed

Ericsson failed to understand the Supplier's internal manufacturing points-of-disruption. If they did, they could have rationally determined the safety stocks needed to adjust for the quantified risks. This should have been assessed BEFORE a supply agreement was negotiated.

How GDI would probably have rated the Supplier

Question: How to best deploy safety stock inventories?

Substantial Risks

Critical Risks

Moderate Risks

Manageable Risks

Minor Risks

No Risks

Siemens Automation (gas chromatographs) had to shut down an entire factory and lose over two-weeks of production because its power supply Vendor was suffering cash-flow problems and could not pay their downstream Suppliers. This in turn led to a shortage of critical components to their factory and ultimately missed deliveries to their customers

Siemens Automation reduced its power supply Vendor base to 2 Suppliers. The largest of the Supplier's had economic viability issues. The smaller of the Suppliers had ramp-up difficulties. The result was a significant and lingering shortage of parts, which ultimately resulted in market share loss.

Siemens Automation failed to understand the weaknesses of each of these Suppliers. Had they thoroughly assessed each of these Suppliers, they would have adjusted safety stocks and perhaps given the smaller Supplier more business in order to provide them with an incentive to scale-up their production capabilities.

How GDI would probably have rated the Supplier

Question: How to get these Suppliers to ramp-up sooner?

Substantial Risks

Critical Risks

Moderate Risks

Manageable Risks

Minor Risks

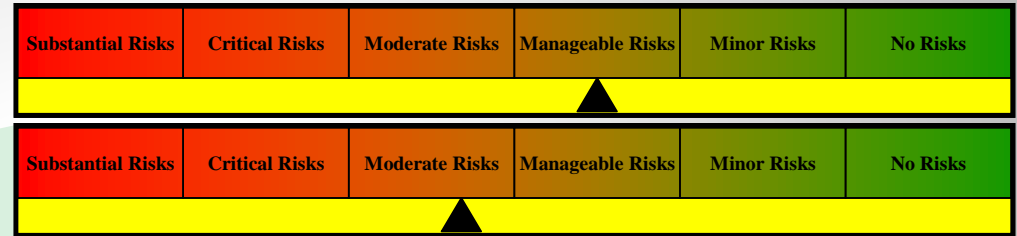
No Risks

Other Catastrophic Supply Chain Failures

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- The massive Boeing 787 Dreamliner delay & its painful supply chain impacts on airline customers in 2008 – 2011... and its \$5.5 billion cost to Boeing.
- The massive Boeing 737 Max delay & its painful supply chain impacts on airline customers... and its \$21 billion cost to Boeing.
- Target Canada's catastrophic inability to stock pink, Barbie-branded children SUVs in 2015... and its \$2 billion cost to Target.
- KFC running out of chicken in 2018 after changing 3PL's and various transportation suppliers without proper planning... and its \$500+ million cost to KFC.





**SHUT
DOWN.**

“Even moderate or manageable risks can shut you down if the risks are not identified in advance & properly managed!”

Comprehensive Supplier Performance & Risk Assessment

GDI's proven **Comprehensive Supplier Performance & Risk Assessment Practice** provides a structured fact-based methodology that clinically assesses the performance of your company's significant materials Suppliers by quantifying up to 23 categories of risks that may directly impact your company's performance.

This service offering has been in constant development for over TEN years and has been fully tested in numerous manufacturing companies. This service is available to all manufacturing businesses.



The Genesis of GDI's Comprehensive Supplier Performance & Risk Assessments

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Several years ago, we (GDI Consulting & Training Company) identified an interesting convergence never before experienced in the manufacturing sector. Since about 1999, manufacturers have been aggressively outsourcing many of their significant purchased components and manufacturing operations to global suppliers in low cost regions (China, Mexico, Philippines, Eastern Europe, etc.). At the same time, these same manufacturers have busied themselves implementing Lean manufacturing principles to further reduce costs and improve working capital. **And while there have been clear benefits in gross margins from these twin initiatives, there has also been a substantial increase in the amount of enterprise risk contributed via the supply chain. Lower buffer inventories, greater concentration of supply from fewer suppliers at greater distances, and increasing complex logistics have indeed INCREASED the overall risk in the supply chain.**

Many of our clients told us these significant trends have clearly increased risks in their supply chains to a point of being a disclosure event, especially in the post Sarbanes-Oxley world. With this said, we believe that manufacturers today need to know far more about their suppliers than they currently know. Business schools are now full of supply-chain disaster case studies, as are numerous annual reports. **Clearly, risks created by a supplier can no longer be thought of as the supplier's risks alone. In a Lean global supply chain world, a supplier's risk is now a customer's risk.**

Sarbanes-Oxley & the Supply-Chain

Bigger Issues Than You Might Think

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Sarbanes-Oxley Section 409... Timely Reporting of Material Events

Sarbanes-Oxley calls for companies to report in a timely fashion, events that will materially impact financial reporting to shareholders. Generally, Sarbanes-Oxley legislation does not provide companies with guidelines on what is or is not a material reporting event. The legislation leaves this to the discretion of the company.

Sarbanes-Oxley clearly defines any advance knowledge of an event or series of events that could cause revenue forecasts to be missed as material, and therefore a disclosure issue.

Sarbanes-Oxley further defines disruptions to the supply-chain (that lead to revenue misses) caused by an outsourcing agent or a Supplier, to be material and therefore require disclosure. This is especially true if your company relies on timely delivery of quality components from Suppliers in order to meet production and shipping schedules.

Many of our public-traded clients have told us these significant trends have clearly increased risks in their supply-chains to a point of being a disclosure event, especially in the post Sarbanes-Oxley world. We believe that manufacturers today need to know substantially more about their Suppliers than they currently know. **In a LEAN global supply-chain world, a Supplier's risk is now a customer's risk.**

***In other words...* Sarbanes-Oxley requires that risks of Supplier delivery reliability and delivered quality be assessed and understood by management. Sarbanes-Oxley requires formality in the assessment process... not management's opinion alone!**

What Is a Comprehensive Supplier Performance & Risk Assessment (CSP&RA)?

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A comprehensive audit of a supplier's organization & processing capabilities that determines a predictable level of (1) delivery reliability, (2) purchased item quality and (3) the supplier's ability to continuously reduce costs that are required to support the customer's business activities, and meet the customer's tolerance for risk.

Comprehensive Supplier Performance & Risk Assessments are performed to **ENHANCE** the customer/supplier business relationship... not end it. Executed & completed properly, these assessments will drive terms and conditions that incentivize suppliers to perform to the customer's expectations while at the same time reducing the customer's supply chain risks.

Why Your Company Needs To a Better Job of Supplier Evaluation... *5 BIG Reasons*

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1. Global Suppliers are Farther Away
2. Lead Times are Longer
3. JIT Eliminates Buffers
4. Less Inventory is In the Pipeline
5. Suppliers are Harder To Get To Know

Proactive & thorough due diligence of critical Suppliers is a new necessity in the global supply world where distances can be great, supply complexities can be even greater & consequences of poor supply can be devastating to the bottom line.

Which Suppliers Should You Target for Assessment?

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- Any global Supplier with annual spend >\$2 million, or
- Any critical Supplier with long or erratic lead-times, or
- Any significant sole-Supplier, especially one with difficult global logistics requirements, or
- Any critical Supplier with significant historical problems in delivery reliability and/or quality, or
- Any critical Supplier that *can* cause significant supply-chain disruption, for any reason, or
- Any critical *underperforming* Supplier that can or has caused significant supply-chain disruptions, or
- Any critical global Supplier that has experienced major shifts in management, governance, operating environment, customer base or Supplier base, or
- A significant Supplier that needs to drive down costs in order to remain a Supplier, or
- A significant Supplier that needs to be second-sourced.



Why Assess Supplier Performance & Risks Using a Formal, Structured & Clinical Methodology?

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Manufacturers who choose to source significant amounts of materials and components from global Suppliers are creating increasing and substantial risks within their supply-chains. With the aggressive adoption of Lean manufacturing techniques that ultimately reduce supply buffers (along with cost), these same manufacturers are discovering that sourced-material disruptions can, and often do result in dramatic and unfavorable impacts to:

1. Material delivery reliability
2. Total material cost, and
3. Received material quality

Without a periodic comprehensive analysis of Suppliers' capabilities, manufacturers are unnecessarily risking their customer service levels, customer loyalty, gross margins and shareholder value. Proactive and thorough due diligence of critical Suppliers is a new necessity in the global supply world where distances can be great, supply complexities can be even greater and consequences of poor supply can be devastating to the bottom line.



GDI's 3 Levels of Supplier Performance & Risk Assessments

Structured, Formal & Clinical

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Level-1 Minimum Assessment

1. Supplier's Economic Viability
2. Supplier's Production Processes, Methods, Tooling, Equipment & Facilities
3. Supplier's Management of Product Quality
4. Supplier's Manufacturing Planning & Scheduling Capabilities
5. Supplier's Inventory Management Capabilities
6. Supplier's Purchasing Management Capabilities
7. Supplier's Ability to Integrate with Customers
8. Supplier's Logistics Management Capabilities
9. Supplier's Customer Service Capabilities
10. Supplier's Leadership & Critical Support Teams Capabilities
11. Supplier's Talent Management Capabilities
12. Supplier's Catastrophe Planning & Management
13. Supplier's Delivered Cost Information, including "Should-Cost" & "Could-Cost" Insights

Level-2 Comprehensive Assessment (added to Level-1)

14. Supplier's innovation Sharing with Customer's Capabilities
15. Supplier's Product & Process Engineering Capabilities
16. Supplier's Data Integrity & Information Sharing Capabilities
17. Supplier's Suppliers Capabilities
18. Supplier's Project Management Capabilities
19. Supplier's Impacting Supplier Legal Issues
20. Supplier's Human Resource Issues

Level-3 Progressive Assessment (added to Levels 1 & 2)

21. Supplier's Corporate Citizenship
22. Supplier's DEI Stewardship
23. Supplier's ESG Stewardship
24. Supplier's Climate Change Stewardship
25. Supplier's Corporate Governance & Ownership

GDI Supplier Assessment Practice



The GDI Supplier Risk Continuum^{sp}

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- ❑ The “*GDI Supplier Risk Continuumsm*” serves as a risk indicator, or scoring mechanism.
- ❑ The scale (*as seen above*) is calculated for each of the 25 areas of capabilities & risks.
- ❑ An overall rating of the Supplier’s performance is also provided. It describes the risks to your supply-chain created by the Supplier, relative to the:
 - Risk of delivering materials on-time.
 - Risk of delivering quality material.
 - Risks associated with the Suppliers ability to consistently reduce supplied material costs.





GDI's *Comprehensive Supplier Performance & Risk Assessments* provide your purchasing organization with a proactive mechanism to evaluate and grade your most important Suppliers; *and* to provide your company with clear evidence of your Supplier's strengths, weaknesses and cost reduction opportunities. This in turn will help your company negotiate better prices and improved terms and conditions. The end result will be reduced total spending, improved risk profile, improved factory productivity, added efficiencies in the Supply-Chain Partnership and accelerated company profits.

The final deliverable includes clear risk-mitigating recommendations for SPECIFIC modifications to the Terms & Conditions that should be applied to the purchasing agreements between your company and the analyzed Supplier.



Specific Deliverables at the End of the Assessment

4 Volumes

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FOUR “volumes” are completed in each Comprehensive Supplier Risk & Performance Assessment. Our client receives three of the volumes. The assessed Supplier receives the 4th volume.

Volume 1... Executive Summary – Supplier Risk Profile. This volume summarizes the Supplier’s risk profile and describes how the Supplier scored in each of up to 25 risk categories. A summary of our recommendations for modifying the terms of conditions between our client and the Supplier is also provided.

Volume 2... Economic Analysis of Supplier. This volume provides an in-depth analysis of the Supplier’s economic condition and risks driven from that condition. We provide this as a separate volume due to the confidential nature of the information.

Volume 3... Comprehensive Supplier Risk & Performance Assessment. This volume provides the details behind our assessment in each of the 23 performance and risk categories. Within each category, we describe the diagnostic routines we executed, the methods of interpretation and a summary of critical risks

Volume 4... Unbiased Supplier Improvement Plan. This volume summarizes our findings in a manner that the Supplier can understand and build an improvement plan from. Since we complete a thorough analysis of the Supplier, it seems only reasonable that the Supplier should be left with a summary of their risks and some suggestions for making them a better Supplier to our client.

Each volume is professionally indexed, printed and bound.



How Much Effort Is Required To Perform Comprehensive Due-Diligence On a Large Global Supplier? *(Hint: 3 Weeks!)*

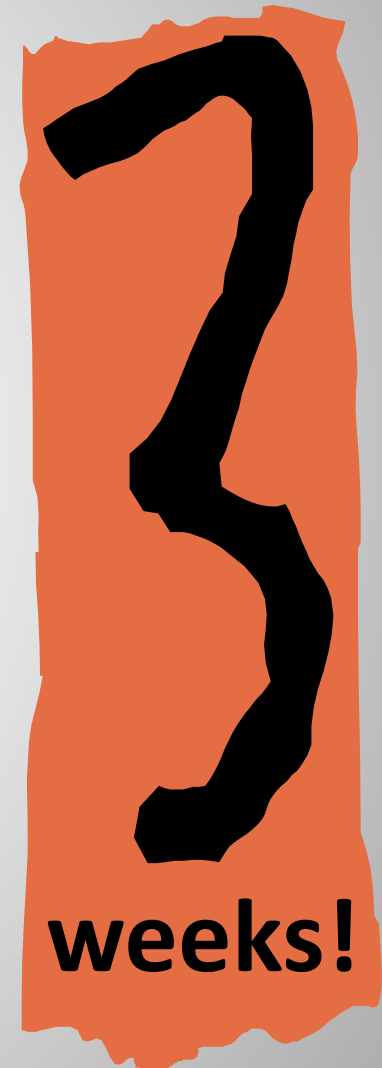
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Effective assessments of critical Suppliers are not performed in a simple visit over a couple days. Those who execute *Comprehensive Supplier Performance & Risk Assessments* must be specially trained in a broad range of specific fact-based analytic methods, techniques and protocols. Additionally, properly executed assessments must be performed quickly yet thoroughly... requirements GDI makes possible with skilled multi-disciplinary Supplier Assessment Teams, proprietary software and comprehensive methodologies.

A thorough Supplier assessment, conducted by GDI Consulting & Training Company, requires a team of up to 3 highly-skilled analysts over a 3-week period in order to execute a structured (and repeatable) process in roughly the following manner:

1. 1 week of preparation and analysis of off-site information including Suppliers financial statements, customer service data and available public data.
2. 1 week (6 days) on-site analyzing Supplier-specific performance in critical functional areas. Numerous structured observations relating to the triple risks of *Supplier Delivery Reliability, Product Delivered Quality and Supplier Economic Viability*, are developed.
3. 1 week off-site drawing conclusions from the previous 2 weeks of data gathering and analyses efforts. A final report is developed, presented and reviewed with your management.

The *GDI Comprehensive Supplier Performance & Risk Assessment* practice draws heavily from thirty years of manufacturing consulting experience, numerous formal fact-driven methodologies from our successful operational due-diligence practice and proprietary software that provides automation to our methodologies. It is this automation that provides us with breakthrough capabilities, allowing us to complete a thorough and critical assessment of any Supplier's performance and risks in just 3-weeks.



What Do We Need From the Supplier Before, During & After the Assessment?

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- ❑ Cooperation from Supplier's People & Access to Certain Supplier's Records
- ❑ Data... *when we need it & generally in the form we need it*
- ❑ Openness... *straight answers to straight-forward questions*
- ❑ Limited *Supervised* Hands-On Access to the Supplier's ERP System
- ❑ A Desire to Improve & Grow Their Supply-Chain Partnership With Their Customer
- ❑ Their People's Ideas to Continue & Grow the Supply-Chain Partnership With Our Client
- ❑ A Conference Room for 1 Week... *otherwise, we are pretty much self-contained!*



We will normally provide the Supplier with a comprehensive list of data requirements at least 1-week before we start the assessment & at least 2-weeks before we are on-site at their supplying facility.

Code of Behavior GDI Expects From It's Supply-Chain Assessment Professionals

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1. We will keep all Supplier provided information in confidence at all times. Only our Client will see this data and summaries of this data.
2. We will always remember that a *Comprehensive Supplier Performance & Risk Assessment* is an invasive process. It is normal for any Supplier to be anxious about our motives and our assessment processes. We will maintain a sincere empathy for this anxiety at all times.
3. Our Assessors will be courteous at all times and to all of the Supplier's employees.
4. We understand that we have to earn the trust of the Supplier's people and will conduct ourselves at all times in a manner that gives us the right to earn this trust.
5. We will always seek to add value to the Supplier's business, even while we are assessing their business. During the course of our assessment, if we identify clear improvement opportunities, we will appropriately recommend improvements to the appropriate employee at the Supplier's facility. We will not be shy about providing helpful information to appropriate Supplier employees during and after the assessment.
6. At every appropriate opportunity, we will share our point-of-view about the importance and need of comprehensive supplier assessments in today's global, lean-centric supply-chain world.
7. We will treat everyone we meet at a Suppliers facility as if they were our client... remember, they may be our client someday!



What Do We Need From Our Client To Quickly & Properly Execute an Assessment?

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- ☐ A Dedication to the Supplier Assessment Mission
- ☐ Cooperation from Client's People & Access to Clients Purchasing Records... *in all regards*
- ☐ Data... *when we need it & generally in the form we need it*
- ☐ Openness... *straight answers to straight-forward questions*
- ☐ Openness to New Ideas
- ☐ A Desire to Improve & Grow the Supply-Chain Partnership With the Supplier Being Assessed
- ☐ Your Ideas to Continue & Grow the Supply-Chain Partnership
- ☐ For Our Client to Wait Patiently (*only 3 weeks!*) for the Assessment to Be Completed Before Needing Comprehensive Feedback



We will normally provide our Client with a comprehensive list of data requirements at least 1-week before we start the assessment & at least 2-weeks before we are on-site at the Supplier's facility.

GDI's Unique Methodology to Comprehensive Supplier Performance & Risk Assessments... *Structure, Formal & Clinical*

Substantial Risks

Critical Risks

Moderate Risks

Manageable Risks

Minor Risks

No Risks

Level-1 Minimum Assessment

1. Supplier's Economic Viability
2. Supplier's Production Processes, Methods, Tooling, Equipment & Facilities
3. Supplier's Management of Product Quality
4. Supplier's Manufacturing Planning & Scheduling Capabilities
5. Supplier's Inventory Management Capabilities
6. Supplier's Purchasing Management Capabilities
7. Supplier's Ability to Integrate with Customers
8. Supplier's Logistics Management Capabilities
9. Supplier's Customer Service Capabilities
10. Supplier's Leadership & Critical Support Teams Capabilities
11. Supplier's Talent Management Capabilities
12. Supplier's Catastrophe Planning & Management
13. Supplier's Delivered Cost Information, including "Should-Cost" & "Could-Cost" Insights

Level-2 Comprehensive Assessment (added to Level-1)

14. Supplier's innovation Sharing with Customer's Capabilities
15. Supplier's Product & Process Engineering Capabilities
16. Supplier's Data Integrity & Information Sharing Capabilities
17. Supplier's Suppliers Capabilities
18. Supplier's Project Management Capabilities
19. Supplier's Impacting Supplier Legal Issues
20. Supplier's Human Resource Issues

Level-3 Progressive Assessment (added to Levels 1 & 2)

21. Supplier's Corporate Citizenship
22. Supplier's DEI Stewardship
23. Supplier's ESG Stewardship
24. Supplier's Climate Change Stewardship
25. Supplier's Corporate Governance & Ownership

**Completed in less than
3 weeks.**

**Call for a more detailed
understanding of our
methodology.**



Level-1 Assessment Methodology Framework

The “Minimum” Assessment

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Level-1 Assessment

- ✓ 13 unique & focused assessments.
- ✓ Assesses economic viability & Supplier's ability to meet quality, delivery reliability & cost targets. Also assesses quality of the Supplier's management & infrastructure.
- ✓ Requires site visit & full analysis of functional performance.
- ✓ Results in a "*Should Cost*" & "*Could Cost*" analysis.

1. Assessment of Supplier's Economic Viability

- Analysis of Balance Sheet
- Analysis of Profitability
- Analysis of Working Capital Management
- Analysis of Cash Management
- Analysis of Prospects for Revenue Growth
- Analysis of Revenue Sources & Concentrations
- Analysis of Capital Spending History & Future Plans
- Analysis of Supplier's Audit Reports
- Analysis of Liens & Filings
- Analysis of Debt Structure & Relationships With Lenders
- Analysis of Foreign Currency Exchange
- Analysis of Supplier's Fundamental Economic Business Model, including product costs
- Analysis of Off-Balance Sheet Liabilities & Assets

This assessment provides information to shape Terms & Conditions that will be used to mitigate risks in the supply-chain partnership.

The final report should be proprietary to our client & normally not shared with the Supplier.

Level-1 Assessment Methodology Framework

The “Minimum” Assessment, continued

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2. Assessment of Supplier's Production Processes, Methods, Equipment, Tooling & Facilities Capabilities

- ☐ Analysis of Employed Manufacturing Technologies & Equipment
- ☐ Analysis of Production Tooling & Fixtures
- ☐ Analysis of Production Processes & Methods
- ☐ Analysis of Material Flows & Improvement Opportunities
- ☐ Analysis of Factory Housekeeping
- ☐ Analysis of Equipment & Facilities Maintenance
- ☐ Analysis of Planned Improvement Initiatives

3. Assessment of Supplier's Product Quality Management Capabilities

- ☐ Analysis of Cost-of-Quality Elements
- ☐ Analysis of Finished Goods Quality Management Processes
- ☐ Analysis of In-Process Quality Management Processes
- ☐ Analysis of Quality Assurance & Control Procedures

4. Assessment of Supplier's Manufacturing Planning & Scheduling Capabilities

- ☐ Analysis of Independent Demand Unit Forecasting Capabilities
- ☐ Analysis of Master Production Scheduling Capabilities
- ☐ Analysis of Materials Planning Processes
- ☐ Analysis of Capacity Planning & Resource Allocation Capabilities
- ☐ Analysis of Production Planning, Scheduling & Resource Allocation Systems
- ☐ Analysis of Lean Practices in Planning & Scheduling

5. Assessment of Supplier's Inventory Management Capabilities

- ☐ Analysis of Warehousing Practices
- ☐ Analysis of Inventory Management Structure
- ☐ Analysis of Safety Stock, Order Points, Lot Sizes, Lead-Times & KanBan Formulas
- ☐ Analysis of Inventory Record Accuracy
- ☐ Analysis of 3-Year Segmented Inventory Performance

6. Assessment of Supplier's Purchasing Management Capabilities

- ☐ Analysis of Supplier Base
- ☐ Analysis of Raw Material Price Reduction History
- ☐ Analysis of Global Sourcing Practices
- ☐ Analysis of Inbound Materials Quality Management Processes
- ☐ Analysis of Raw Material Planning & Scheduling Capabilities
- ☐ Analysis of Supplier's Capabilities to “Entangle” Themselves With Their Customer's Lean Practices
- ☐ Analysis of Supplier's Methods of Assessing Their Suppliers' Risks

7. Assessment of Supplier's Ability to Integrate With Customers

- ☐ Analysis of Organizational Linkage & Communication Channels with Customers
- ☐ Analysis of Key Performance Indicators (KPI's)
- ☐ Analysis of Sales Force Talents
- ☐ Analysis of Customer Service Processes
- ☐ Analysis of How Supplier Adds Value To It's Customers

Level-1 Assessment Methodology Framework

The “Minimum” Assessment, continued

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8. Assessment of Supplier's Logistics Management Capabilities

- ☐ Analysis of Shipping & Receiving Capabilities
- ☐ Analysis of Transportation Methods, Capabilities & Risks

9. Assessment of Supplier's Customer Service Capabilities

- ☐ Analysis of Backorders & Customer Service Levels
- ☐ Analysis of Customer Service Management Methods & Processes

10. Assessment of Supplier's Leadership & Critical Support Teams' Capabilities

- ☐ Analysis of Organization Structure
- ☐ Analysis of Leadership Team Capabilities
- ☐ Analysis of Critical Support Team Capabilities
- ☐ Analysis of Leadership & Critical Support Teams Succession Plans

11. Assessment of Supplier's Talent Management Capabilities

- ☐ Analysis of Job Design
- ☐ Analysis of Talent Acquisition Practices
- ☐ Analysis of Talent Onboarding Processes
- ☐ Analysis of Talent Development & Retention Capabilities

12. Assessment of Supplier's Catastrophe Planning Capabilities

- ☐ Analysis of Information Systems Catastrophic Event Planning
- ☐ Analysis of Production Disruption Catastrophic Event Planning
- ☐ Analysis of Logistics Disruption Catastrophic Event Planning
- ☐ Analysis of In-Place Insurance for Catastrophic Events
- ☐ Analysis of Management of Previous Catastrophic Events

13. Assessment of Supplier's Delivered Costs

- ☐ Detailed Analysis of Annual Spend With Supplier
- ☐ Analysis of Producing Plant Capacities, Utilizations & Efficiencies
- ☐ Analysis of Non-Value-Adding Activities
- ☐ Identification & Analysis of significant Cost Drivers
- ☐ Development of “Should-Cost” values
- ☐ Development of “Could-Cost” values



Each Capability Is Evaluated With Numerous Data-Centric Diagnostic Instruments

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For Example...

1. Supplier's Economic Viability
2. Supplier's Production Processes, Methods, Tooling, Equipment & Facilities
3. Supplier's Management of Product Quality
4. Supplier's Manufacturing Planning & Scheduling Capabilities
5. Supplier's Inventory Management Capabilities
6. Supplier's Purchasing Management Capabilities
7. Supplier's Ability to Integrate with Customers
8. Supplier's Logistics Management Capabilities
9. Supplier's Customer Service Capabilities

- Analysis of Warehousing Practices
- Analysis of Inventory Management Structure
- Analysis of Planning Parameters, Including:
 - Safety Stock
 - Order Points
 - Lot Sizes
 - Lead-Times
 - KanBan Formulas
- Analysis of Inventory Record Accuracy
- Analysis of 3-Year Segmented Inventory Performance

Level-2 Assessment Methodology Framework

The “Comprehensive” Assessment

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Level-2 Assessment

- ✓ 7 ADDITIONAL focused assessments.
- ✓ Assess “adjacent” functions and issues important in a supplier relationship.
- ✓ Requires site visit. **Includes Level-1 Assessment.**
- ✓ Also assesses quality of the Supplier's infrastructure and ability to improve/transform.

14. Assessment Supplier's innovation Sharing with Customer's Capabilities

- ☐ Analysis of technical customer service processes
- ☐ Analysis of IP sharing policies and procedures
- ☐ Analysis of past innovation sharing and results
- ☐ Analysis of internal innovation methods

15. Assessment of Supplier's Product & Process Engineering Capabilities

- ☐ Analysis of Product Design, Research & Development Capabilities
- ☐ Analysis of Manufacturing Process Engineering & Industrial Engineering Capabilities
- ☐ Analysis of Project Management Capabilities
- ☐ Analysis of Product Data Management Capabilities
- ☐ Analysis of Engineering Change Management Capabilities

16. Assessment of Supplier's Data Integrity & Information Sharing Capabilities

- ☐ Analysis of Physical Inventory Reconciliations & Adjustments
- ☐ Analysis of Independent Demand Forecast Error Rates
- ☐ Analysis of Cost Accounting Systems
- ☐ Analysis of Variance Reporting & Elemental Cost Tracking
- ☐ Analysis of Monthly Production Reporting
- ☐ Analysis of Quality Defects Data
- ☐ Analysis of Bills of Materials Accuracy
- ☐ Analysis of Production Routers, Operations Flows & Throughput Times
- ☐ Analysis of Set-Up & Run Standards
- ☐ Analysis of Operational Reporting

Level-2 Assessment Methodology Framework

The “Comprehensive” Assessment, continued

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17. Assessment of Supplier's Suppliers

- ☐ Analysis of breadth of Supplier's Suppliers
- ☐ Analysis of Significant Raw Materials Used in Supplier's Production Process
- ☐ Analysis of Supplier's Alternate Sources for Critical Raw Materials
- ☐ Analysis of Real or Potential Disruptions Caused by the Supplier's Suppliers
- ☐ Analysis of the Suppliers Important Industry Economic Issues that Drive Their Supply

18. Assessment of Supplier's Project Management Capabilities

- ☐ Analysis of project management organization, including information & decision rights
- ☐ Analysis of project planning & scheduling tools
- ☐ Analysis of past projects from a PM perspective
- ☐ Analysis of project management staff and leaders
- ☐ Analysis of PM culture

19. Assessment of Supplier's Impacting Supplier Legal Issues

- ☐ Review of all significant legal filings in last 10 years, including defense, plaintiff and regulatory
- ☐ Analysis of legal spending as a % of revenue
- ☐ Analysis of legal outcomes and effectiveness

20. Assessment of Supplier's Human Resource Issues

- ☐ Analysis of People, Pay-Scales, Tenure & Skills
- ☐ Analysis of Work-Force Capabilities
- ☐ Analysis of Labor/Management Environment
- ☐ Analysis of Performance Metrics & Rewards Systems
- ☐ Analysis of Workers Compensation Insurance Issues
- ☐ Analysis of Local Employment Rates & Labor Pool Opportunities
- ☐ Analysis of Critical Local Labor Rules & Regulations
- ☐ Analysis of Important Local Labor Recruiting, Retention & Separation Issues



The most popular scope of assessment. Evaluates all parts of the Supplier's business that can impact raw material costs, delivery reliability & quality. This assessment comprehensively assesses everything from the Level 1 Assessment plus adds the “people & infrastructure” perspectives to the assessment effort.

Level-3 Assessment Methodology Framework

The “Comprehensive & Progressive” Assessment

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Level-3 Assessment

- ✓ **5 ADDITIONAL** focused Assessments that look at the Stakeholders interests as well as the Shareholders interests.
- ✓ **Assesses corporate citizenship and various areas of corporate stewardship.**
- ✓ **Requires site visit. Includes Level 1 & Level 2 Assessments.**
- ✓ **Also assesses quality of the Supplier's management, infrastructure & all components of Supplier's corporate citizenship; including environmental, social, safety & corporate governance.**

21. Assessment of Supplier's Corporate Citizenship

- ☐ Analysis of Sustainability Programs
- ☐ Analysis of Relationships Within the Local Communities
- ☐ Analysis of Community Responsibilities
- ☐ Analysis of Waste Stream Management
- ☐ Analysis of Plant Safety Record
- ☐ Analysis of Environmental Practices
- ☐ Analysis of Employment Policies

22. Assessment of Supplier's DEI Stewardship

- ☐ Analysis of DEI policies and procedures
- ☐ Analysis of past DEI successes and failures
- ☐ Analysis of DEI culture, if identifiable

23. Assessment of Supplier's ESG Stewardship

- ☐ Analysis of ESG policies and procedures
- ☐ Analysis of past ESG successes and failures
- ☐ Analysis of ESG culture, if identifiable

24. Assessment of Supplier's Climate Change Stewardship

- ☐ Analysis of climate change policies and procedures
- ☐ Analysis of past climate change successes and failures
- ☐ Analysis of climate change culture, if identifiable

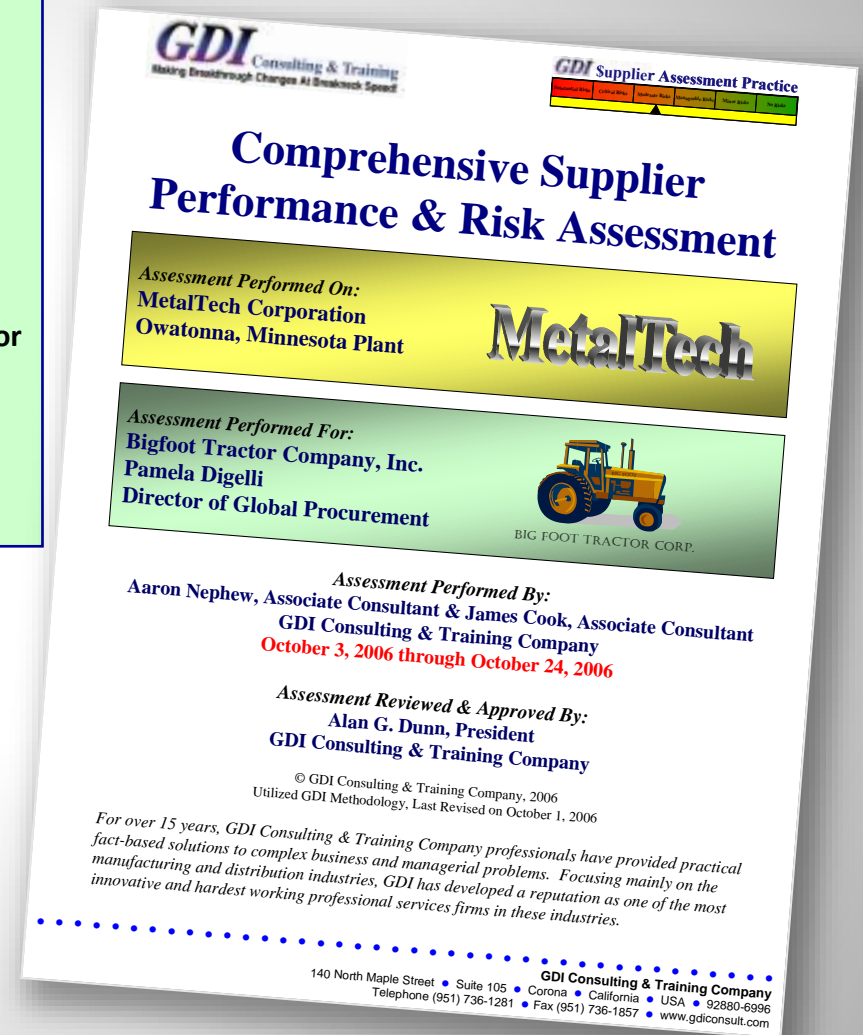
Level-3 Assessment Methodology Framework

The “Comprehensive & Progressive” Assessment, continued

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25. Assessment of Supplier's Corporate Governance & Ownership

- ☐ Analysis of Board of Directors Structure, Composition & Characteristics
- ☐ Analysis of Governance Independence
- ☐ Analysis of Ownership Structure
- ☐ Analysis of Board of Directors Committees Effectiveness
- ☐ Analysis of Annual Reports, Management Discussions & Auditor Qualifications
- ☐ Analysis of Strategic Planning Processes & Current Business Strategy
- ☐ Analysis of Important SEC & Regulatory Filings



THREE Ways to Pay for a Comprehensive Supplier Performance & Risk Assessment

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<i>Who Pays</i>	<i>Rationale & Precedent</i>	<i>Who Gets a Copy of the Final Report?</i>	<i>Other Issues</i>
GDI's Client Pays GDI	<p>This assessment provides information to shape Terms & Conditions that will mitigate risks in the supply relationship.</p> <p>If our client pays, the report will be proprietary to them.</p>	<p>GDI Client only</p> <p>GDI's Client may elect to provide a copy to the Supplier</p>	<p>Providing a copy to the Supplier may give away Client's negotiating positions.</p> <p>This payment method assumes our client is taking charge of the need to understand what "could" go wrong with the Supplier's ability to support our client's ongoing supply needs.</p>
Supplier Pays GDI	<p>Could provide a "message" to underperforming Suppliers. These types of Suppliers, who presumably want to keep the business, could submit themselves to an assessment annually until a predetermined level of performance is achieved.</p> <p>Banks do this when a loan is assigned to a Work-Out Department. So does the FDA and other government agencies. Why can't our clients do this with their Suppliers?</p>	GDI's Client & Supplier	<p>If the Supplier pays for the assessment, they will want to control the process. This cannot be allowed to happen!</p> <p>Agreements will have to be signed up-front indicating that GDI and the client control the process.</p>
GDI's Client & Supplier Share Costs	<p>In well-structured, and perhaps well-worn Supplier/Customer relationships, this type of arrangement could be useful. Each party shares the expense, though our client builds the cost into their Material Burden rate structure.</p>	GDI's Client & Supplier	<p>This report sets the tone for future-year improvement expectations. Our client and the Supplier collaborate in ways to improve supply-chain performance, using FACTS instead of suspicions and sales literature!</p> <p>This works best in established Supplier partnerships.</p>

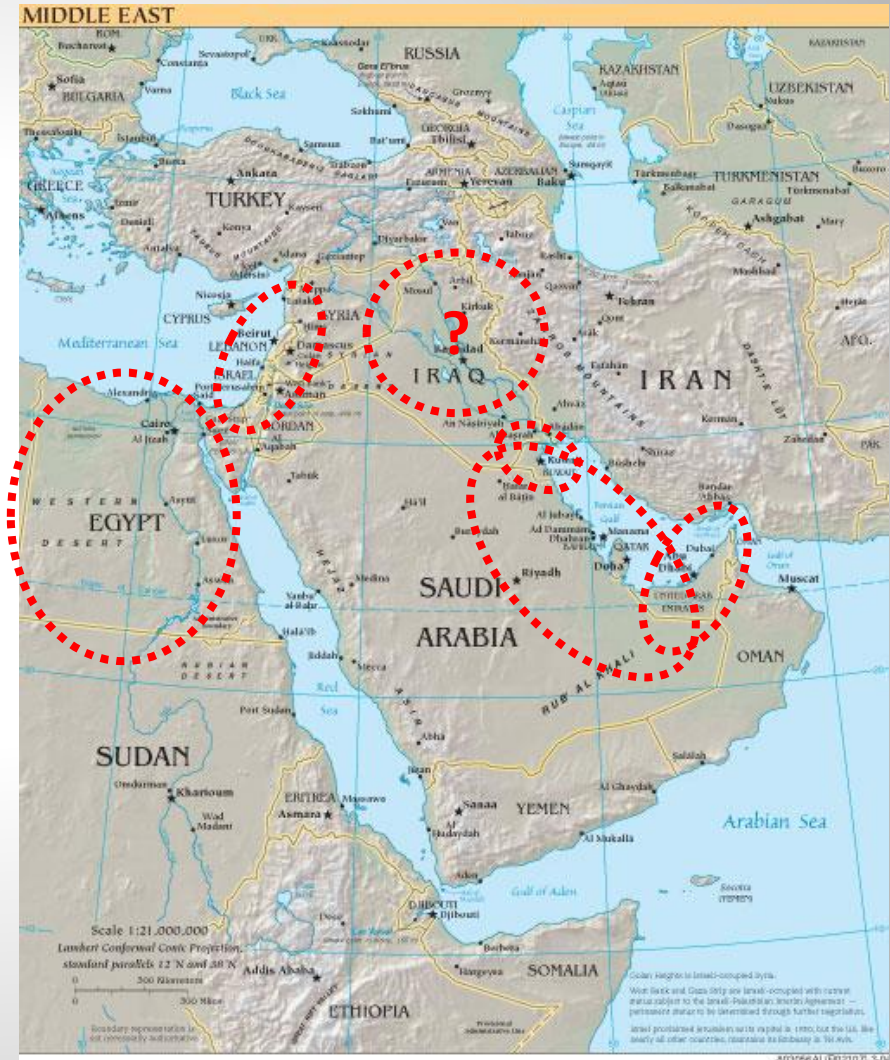
Where the Global Supplier Action Is & Where We Have Experience... *India, Asia & Southeast Asia*

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Where the Global Supplier Action Is & Where We Have Experience... *Eastern Europe, Western Europe & Middle East*

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Where the Global Supplier Action Is & Where We Have Experience... *North America, Central America & South America*

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NORTH AMERICA



SOUTH AMERICA



Where the Global Supplier Action Is & Where We Have Experience... *Oceania*

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Where the Global Supplier Action Is & Where We Have Experience... *Africa*

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GDI Consulting & Training
Making Breakthrough Changes at Breakneck Speed!

GDI Supplier Assessment Practice

Substantial Risks	Critical Risks	Moderate Risks	Manageable Risks	Minor Risks	No Risks
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GDI Talent Acquisition Practice

Specify | Source | Evaluate | Profile | Engage | Onboard

GDI Owner & Investor Services Practice

Governance | Ops Due-Diligence | Valuation Enhancement

 **MANUFACTURING
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RADIO MEI


We can bring numerous professional services to our manufacturing & distribution clients... all focused on making people more successful.



GDI Consulting & Training (GDI) provides practical solutions to complex business and managerial problems in manufacturing and related industries. Our firm has successfully assisted clients around the world for more than 35 years, having performed more than 175 projects in over 110 companies in 22 countries. GDI applies specialized and common sense solutions... *not overly-intellectualized approaches...* to numerous types of challenging client problems in manufacturing and distribution industries, including:

- **Factory & distribution center layout & design**
- **Factory & distribution information systems implementation**
- **Cost management systems**
- **Quality management systems design & implementations**
- **Core business process re-engineering**
- **Information systems data integrity & reliability improvements**
- **Enterprise performance metrics & compensation systems**
- **Organization design & improvement**
- **Business strategy formulation**
- **Complex problem solving**

GDI Supplier Assessment Practice



GDI's Comprehensive Supplier Assessment Practice utilizes a structured fact-based methodology that clinically assesses the performance of your company's significant materials Suppliers by quantifying up to 25 categories of risks that may directly impact your company's performance.



- Fact-Based, Proven & Tested Methodology
- Execute in 3 Weeks With Up To 3 Trained Assessors
- Execute Any Where In the World
- Quantifies 25 Specific Areas of Risk
- Results in Terms & Condition Mandates
- Provides an Improvement Path For the Supplier
- Modeled After Operational Due-Diligence From the M&A World

Leadership, management and technical staff requirements continually evolve, but the need for high-performing talent remains constant. Recruiting top-talent into any manufacturing or distribution company requires a rigorous methodology. It begins with a thorough understanding of the position and continues through a detailed vetting and structured evaluation process that determines each Candidate's *real* abilities and *real* potential to succeed.

Using proven assessment and evaluation processes, GDI's Talent Acquisition Practice specializes in matching the best Candidates with each position we are engaged to fill. We have 35 years of relationships with high-performing manufacturing and distribution industry talent, giving us unparalleled capabilities to fill almost any management and technical position within these industries. Our clients value our deep industry expertise, valuable insights, rigorous Candidate evaluation methodologies and commitment to the success of both clients and Candidates.

GDI Talent Acquisition
Practice

Specify | Source | Evaluate | Profile | Engage | Onboard



www.gditalent.com



Governance | Ops Due-Diligence | Valuation Enhancement

www.gdiinvest.com

Working in concert with other GDI practices, GDI's Owner & Investor Services Practice focuses on THREE specific disciplines:

Governance	Assisting public and private manufacturing and distribution companies to establish, strengthen and reconfigure Boards of Directors and various Board committees. We also sit on Boards of Directors, always bringing strong operational and economic perspectives to the governance process.
Operational Due-Diligence	Normally working for an acquirer, we often execute comprehensive operational analyses prior and post acquisition. Many of our operational due-diligence assignments have resulted in significant changes in the acquisition scope, price and terms.
Valuation Enhancement	Helping clients to understand <u>precisely</u> how to increase enterprise valuation by defining specific ways to generate more cash from a company's suite of gross assets is what we do best.

We have completed numerous projects for private equity investors, individual investors, business owners, corporations and activist shareholders.

The Manufacturing Executive Institute (MEI) is a training and publishing organization dedicated to bringing relevant knowledge to individuals who are interested in making dramatic performance improvements in their manufacturing and distribution companies.

MEI delivers knowledge to these communities in THREE distinct ways:

- **Training Workshops...** includes venue-based workshops, e-learning programs and hybrid training programs. All can be modified to speak to specific environments, and scheduled to minimize impact on business operations.
- **Publications...** includes books, white-papers, archived e-learning programs & other information of interest to the manufacturing and distribution communities. Also includes access to the “*MEI Bookstore*” containing all of the most important manufacturing & distribution industry books for sale.
- **Manufacturing & Distribution Focused Research...** MEI conducts and supports ongoing research to extend the body-of-knowledge in various manufacturing and distribution disciplines. These research projects result in valuable reports and presentations that are routinely shared with these communities.

To learn more about the Manufacturing Executive Institute, it's mission and additional programs, call (951) 736-1281 or visit us on the web at www.mfgexecutive.com.



GDI Supplier Assessment Practice

Substantial Risks	Critical Risks	Moderate Risks	Manageable Risks	Minor Risks	No Risks

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