



Supply Chain Performance & Risk Management

Presented by Alan G. Dunn... President, GDI Consulting & Training Company

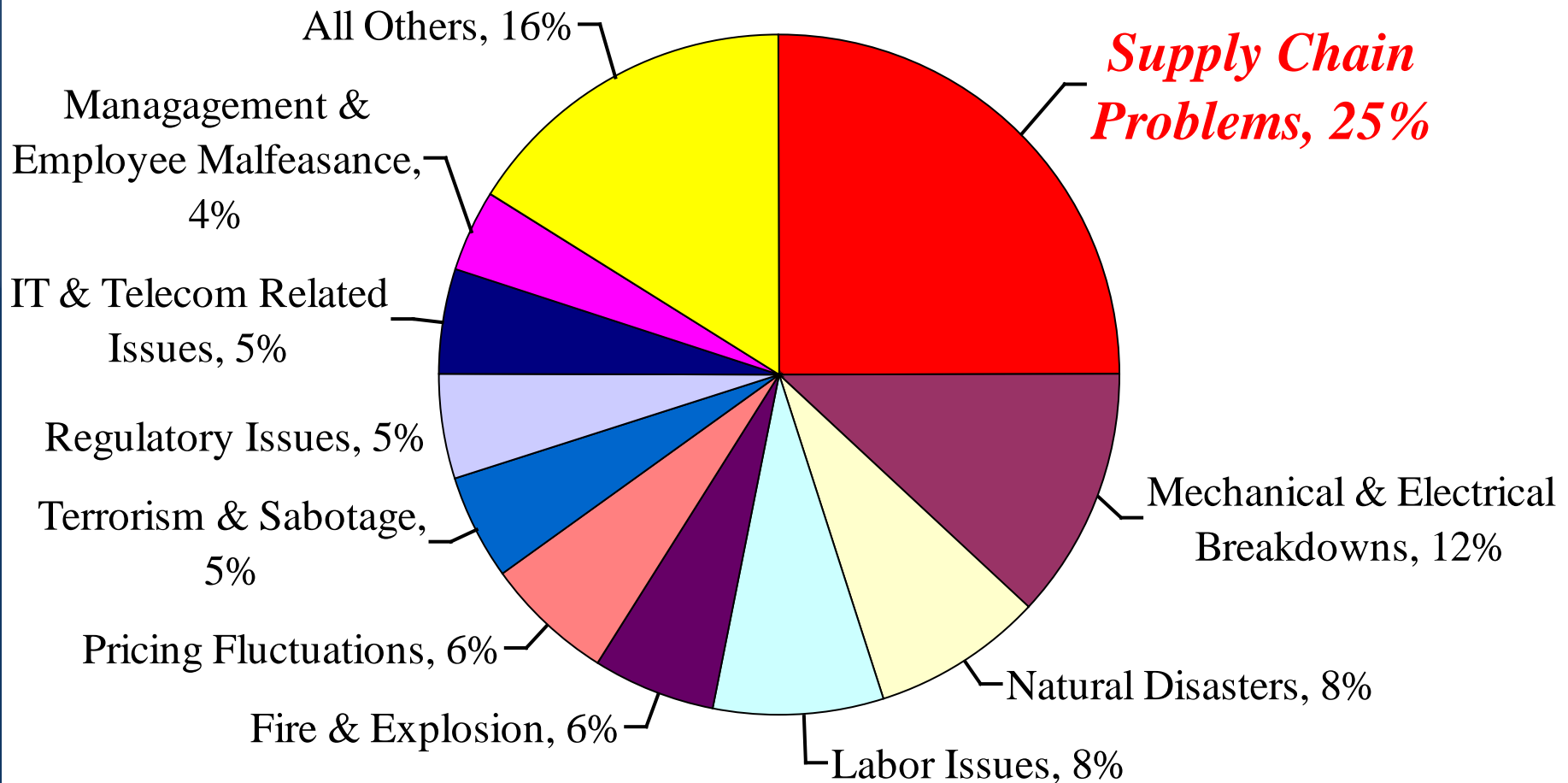


MOSS ADAMS LLP
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The Growing Threat of Supply-Chain Disruptions Is a Top Concern for Many Business Leaders





Does Your Company Have an “*Excellent*” Supply Chain?

- 1. Does your company appropriately manage global supply chain risks?**
- 2. Does your company understand how supply chain dysfunctions ALWAYS result in increased inventories?**
- 3. Does your supply chain support your manufacturing strategies?**



Does Your Company Have an “*Excellent*” Supply Chain?

- 4. Are your supply chain processes consistent with the globalization of supply sources?**
- 5. Is your supply chain measured on a total-cost basis?**
- 6. Are supply chain dysfunctions at the heart of delivery reliability, product quality and factory efficiency problems?**



Why Most Companies Need To a Better Job of Supplier Evaluation... *5 BIG Reasons*

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

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.



What Is Mandated From Suppliers



- **Material Delivery Reliability**
- **Total Material Cost Reductions**
- **Received Material Quality**



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

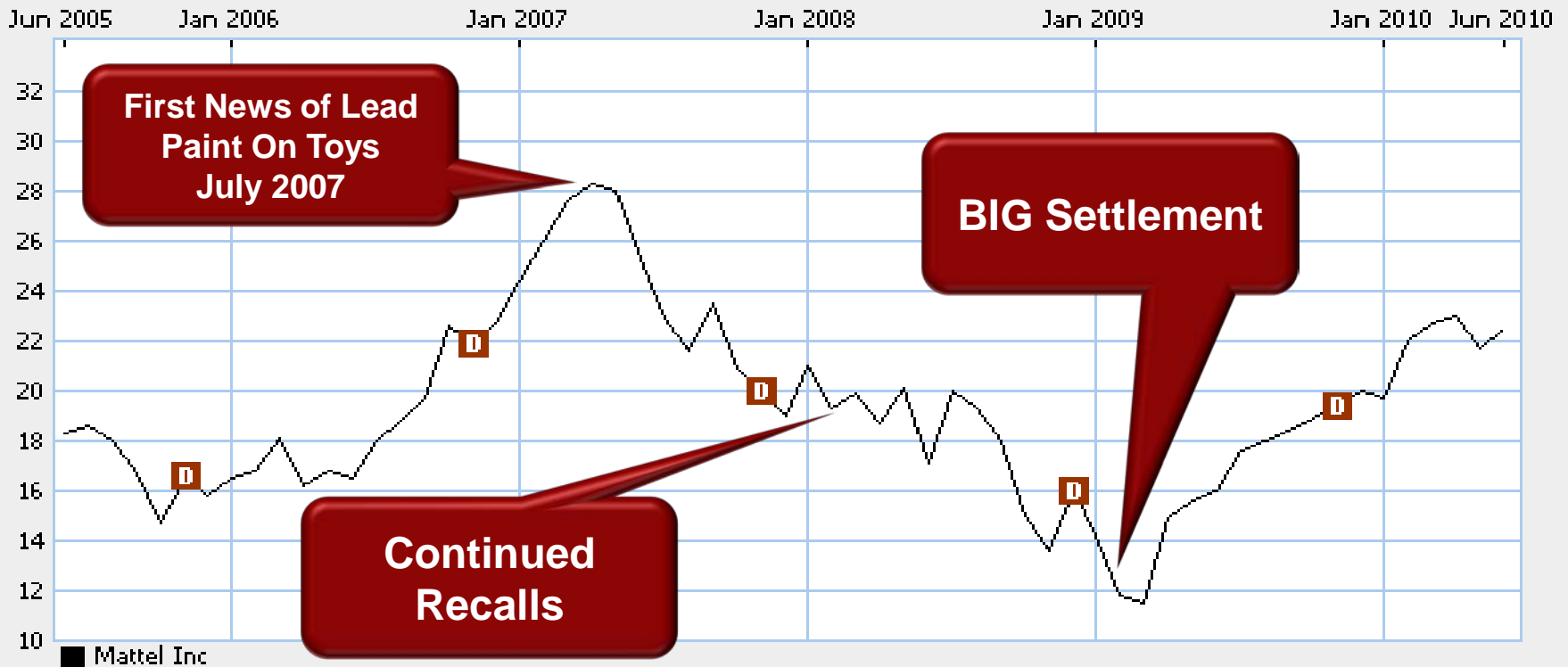
- ✓ 7% lower sales growth, probably the result of poor customer delivery performance that was ultimately caused by the raw material supply disruption
- ✓ 11% higher costs-of-goods
- ✓ 14% higher inventory
- ✓ 10.5% decrease in stock value in the year following the disruption with a lingering 1.77% decrease 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



The Most Recently Famous Case of All... One Supplier's Impact On Mattel's Stock Price

Price history - US:MAT (6/19/2005 - 6/18/2010)



Lead paint prompts Mattel to recall 967,000 toys, losing TWO Christmas seasons!



How We Address Supplier Imposed Risks: Comprehensive Supplier Performance & Risk Assessment

- **Fact-Based, Proven & Tested Methodology**
- **Executed in 3 Weeks With Up To 3 Trained Assessors**
- **Execute Any Where In the World**
- **Quantifies 19 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**





The “*Risk Continuum*”

- Serves as a risk indicator, or scoring mechanism.
- Scale is calculated for each of 19 areas of capabilities & risks.
- An “*aggregate*” 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 not delivering materials on-time.
 - Risk of not delivering quality material.
 - Risks associated with the Supplier’s inability to consistently reduce supplied material costs.



19 Distinct *“Origins of Risk”* That Can Impact Your Supply Chain

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 Catastrophe Planning & Management**
12. **Supplier’s Delivered Cost Information, including “Should-Cost” & “Could-Cost” Insights**

13. **Supplier’s Product & Process Engineering Capabilities Supplier’s Data**
14. **Integrity & Information Sharing Capabilities**
15. **Supplier’s Suppliers Capabilities**
16. **Supplier’s Impacting Supplier Legal Issues**

17. **Supplier’s Human Resource Issues**
18. **Supplier’s Corporate Citizenship**
19. **Supplier’s Corporate Governance & Ownership**



Each Capability Is Evaluated With Numerous Data-Centric Diagnostic Instruments

1. **Supplier's Economic Viability**
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3. **Supplier's Management of Product Quality**
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5. **Supplier's Inventory Management Capabilities**
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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**



These Individual Assessments “Group” Into 3 Levels

- Minimum Assessment (*Level-1*)
- Comprehensive Assessment (*Level-2*)
- Comprehensive & Progressive Assessment (*Level-3*)

Comprehensive Supplier Performance & Risk Assessment

Assessment Performed On:
MetalTech Corporation
Owatonna, Minnesota Plant

Assessment Performed For:
Bigfoot Tractor Company, Inc.
Pamela Digelli
Director of Global Procurement



Assessment Performed By:
Aaron Nephew, Associate Consultant & James Cook, Associate Consultant
GDI Consulting & Training Company
October 3, 2006 through October 24, 2006

Assessment Reviewed & Approved By:
Alan G. Dunn, President
GDI Consulting & Training Company

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Utilized GDI Methodology, Last Revised on October 1, 2006

For over 15 years, GDI Consulting & Training Company professionals have provided practical fact-based solutions to complex business and managerial problems. Focusing mainly on the manufacturing and distribution industries, GDI has developed a reputation as one of the most innovative and hardest working professional services firms in these industries.

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Some Decisions Can Exacerbate Natural Disasters

Disruptions	Direct Causes of Supply-Chain Disruptions	How Risks Could Have Been Managed
<p>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.</p>	<p>Toyota trimmed its brake-shoe supply-chain to <u>one</u> Supplier without fully understanding the risks.</p>	<p>Toyota failed to understand the Supplier's catastrophe management capabilities. This should have been assessed BEFORE a supply agreement was negotiated.</p>





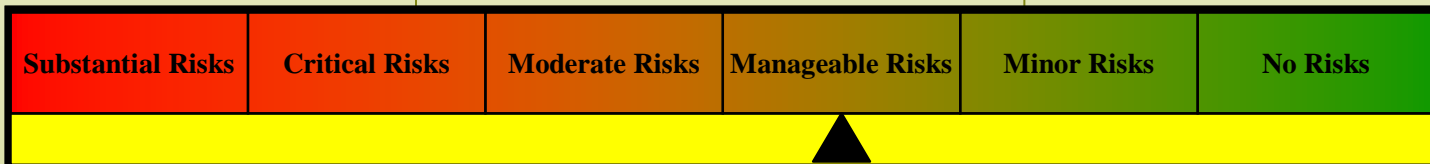
2nd-Suppliers Need To Be Exercised In Order To Prove Viability

Disruptions	Direct Causes of Supply-Chain Disruptions	How Risks Could Have Been Managed						
<p>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 led to a shortage of critical components to their factory and missed deliveries to their customers.</p>	<p>Siemens reduced its power supply Vendor base to only two Suppliers. The largest of the Suppliers had economic viability issues. The smaller had ramp-up difficulties. The result was a significant and lingering shortage of parts, which ultimately resulted in market share loss.</p>	<p>Siemens 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 given the smaller Supplier more business in order to provide them with an incentive to scale-up their production capabilities.</p>						
<table border="1"> <tr> <td style="background-color: red; color: white;">Substantial Risks</td> <td style="background-color: orange;">Critical Risks</td> <td style="background-color: yellow;">Moderate Risks</td> <td style="background-color: lightgreen;">Manageable Risks</td> <td style="background-color: green;">Minor Risks</td> <td style="background-color: darkgreen;">No Risks</td> </tr> </table>			Substantial Risks	Critical Risks	Moderate Risks	Manageable Risks	Minor Risks	No Risks
Substantial Risks	Critical Risks	Moderate Risks	Manageable Risks	Minor Risks	No Risks			



Pay Attention To *Where* Your Suppliers' Finished Goods are Stored!

Disruptions	Direct Causes of Supply-Chain Disruptions	How Risks Could Have Been Managed
<p>In 2000, Ericsson failed to ship more than \$1 billion in cell phones because a fire at a semiconductor Supplier's plant seriously disrupted Ericsson's inbound materials and production.</p>	<p>Ericsson 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 <u>separate</u> from manufacturing.</p>	<p>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.</p>





“Wisdom” From a Seasoned Supply-Chain Veteran

Substantial Risks	Critical Risks	Moderate Risks	Manageable Risks	Minor Risks	No Risks
▲					
Substantial Risks	Critical Risks	Moderate Risks	Manageable Risks	Minor Risks	No Risks
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SHUT
DOWN.

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



Can You Afford To NOT Do Supplier Assessments In Today's Global Supply World?

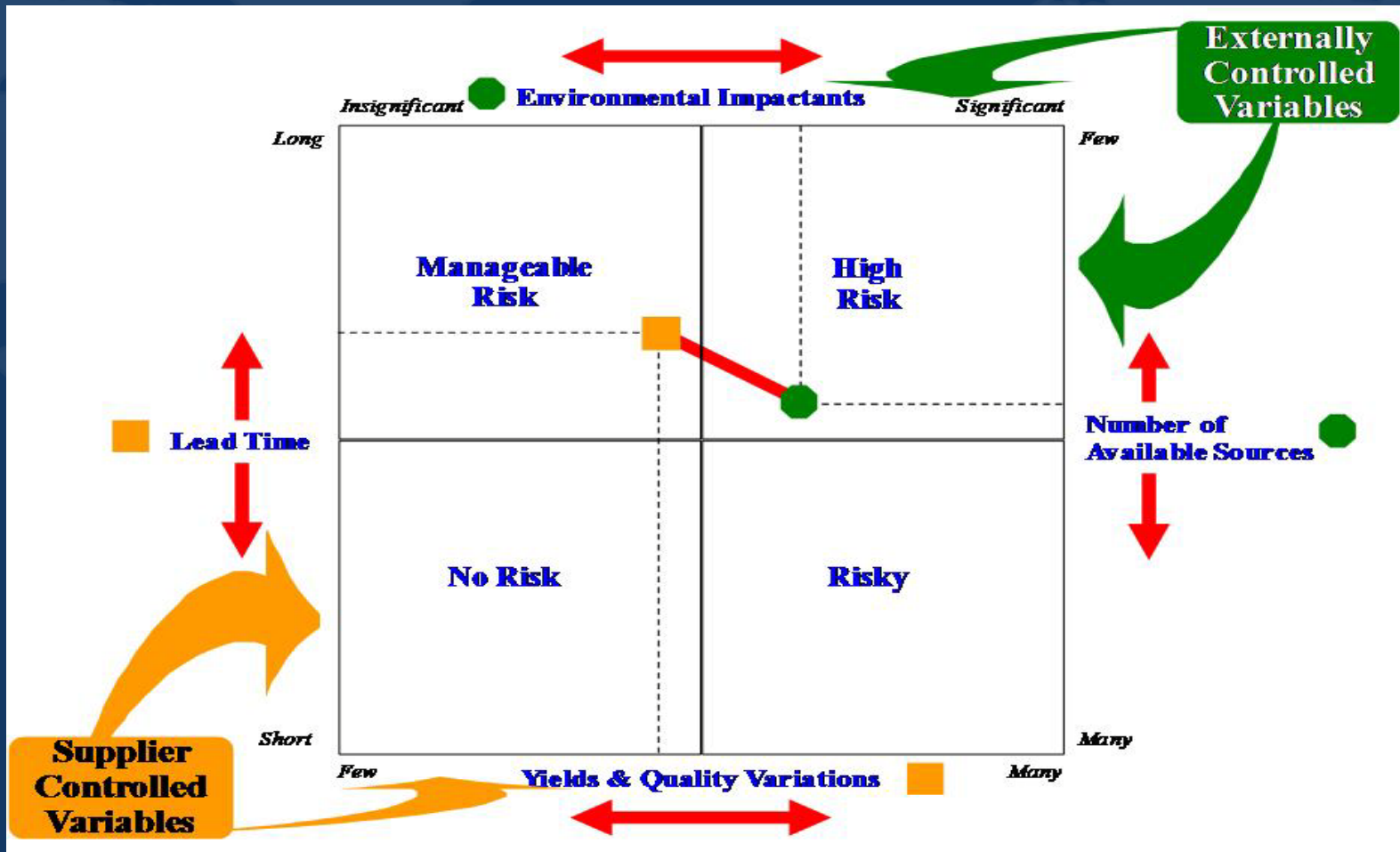


Material Delivery Reliability?
Total Material Cost?
Received Material Quality?





How To Determine Component & Supplier Risk





Time For a Few Questions

Q & A



Thank You

For more information, please contact us at:



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About Alan G. Dunn

- Founder & Chairman, Gerald E. Dunn, Inc.
- President, GDI Consulting & Training Company
- Founder, Manufacturing Executive Institute (MEI)
- **Prior: Partner at Coopers & Lybrand**
- Co-Founder, Dunkirk Governance Specialists, LLC
- Recipient of National Association of Corporate Directors (NACD) *“2007 Board Member of the Year”* Award
- Executive Workshop Leader at California Institute of Technology (Caltech). Subjects include:
 - *Implementing Activity Based Cost Accounting (ABCA) & Activity Based Leadership (ABL)*
 - *Manufacturing Cost Strategies*
 - *Business Process Innovation*
 - *Implementing Statistical Process Control*
 - *Business Performance Measurements*
 - *Successful Global Business Operations*





About GDI Consulting & Training Company

GDI Consulting & Training Company (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 30 years, having performed more than 550 projects in over 200 companies in 18 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:

- **Streamlining domestic and global supply chain planning, control and execution processes**
- **Cost management systems**
- **Efficient and effective factory and distribution systems designs**
- **Quality management systems design and implementations**
- **Core business process re-engineering**
- **Supplier Performance & Risk Assessments**
- **Information systems data integrity and reliability improvements**
- **Enterprise performance metrics and compensation systems**
- **Organization design and improvement**
- **Business strategy formulation**



For a more complete picture of GDI Consulting & Training Company, go to: www.gdiconsult.com.



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- Publications, MEI Book Store & Other Resources.



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- Manufacturing & Distribution Focused Research.
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