Assessing and improving supplier performance

Benefits, barriers, and best practices

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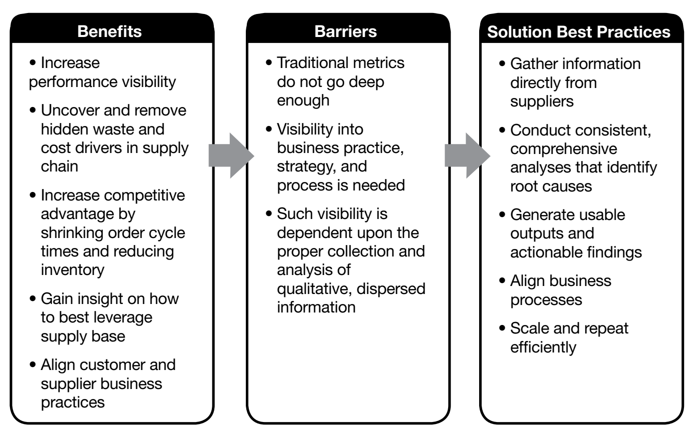
Executive summary

As companies increasingly focus on their core competencies and outsource a greater percentage of the cost of goods sold, their performance becomes increasingly dependent on that of their suppliers. With this growing dependence, the need to assess suppliers is on the rise. Companies that assess their supply base can find they have better visibility into supplier performance, uncover and remove hidden cost drivers, increase competitive advantage by reducing order cycle times and inventory, gain insight on how to best leverage their supply base, and align practices between themselves and their suppliers. Companies pursing supplier assessment can see an improvement in supplier performance metrics (for example, on-time delivery, quality, and cost).

The barriers to assessing suppliers are numerous. From a process perspective, traditional assessment approaches are costly and inefficient, requiring teams of assessors to visit suppliers at length. From an analytics perspective, most approaches are inadequate and unable to provide the insight needed to drive better decision making and performance improvement. The analyses miss qualitative input, do not identify the root cause of performance issues, and do not align customer and supplier practices.

Fortunately, leading edge companies are overcoming these obstacles. The solutions they employ gather information directly from suppliers, conduct consistent and comprehensive analyses that identify root causes, generate usable outputs and actionable findings, align customer-supplier business processes, and scale and repeat efficiently. Collectively, these best practices can enable enterprises to harness many of the benefits of conducting supplier assessments.



This white paper describes the many benefits of conducting supplier assessment and the challenges of doing so and, then, identifies key best practices a company should consider in a supplier assessment solution.

Why assess suppliers?

As reliance on suppliers has increased, companies have tried to find better ways to qualify and measure their performance as well as help them improve. The potential benefits are substantial and companies who measure suppliers:

- Improve supplier performance (for example, quality, on-time delivery, cost, overall responsiveness) by 26 percent on average[1]
- Realize a 25 percent improvement with standardized enterprise-wide measurements[2]
- Achieve 57 percent greater improvement in supplier performance with automated measurement tools[3]

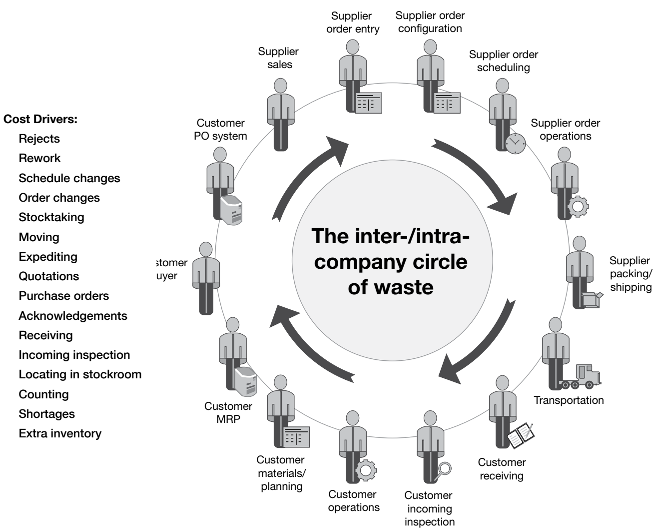
The need for an effective way to measure and improve the performance of suppliers and to capture these benefits is key to business success. Encompassing these examples, there are five fundamental benefits realized by companies that actively assess suppliers.

1. **Increase performance visibility.** Companies cannot manage what they cannot measure, and if they do not know the facts about how their suppliers are performing, supplier management will be based on guesses about supplier performance. With enterprises managing hundreds and even thousands of suppliers, the supplier management process can be hectic and difficult to handle and many suppliers may remain untouched. To better manage the multitude of suppliers, it is critical to establish consistent benchmarks and goals to which suppliers can adhere.

   Moreover, when companies measure suppliers, the simple act of monitoring them can drive performance improvement. By asking suppliers to meet specific performance goals, they not only will rise to the challenge, but more times than not, will aspire to surpass them—resulting in supplier improvement across the board.

2. **Uncover and remove hidden waste and cost drivers in the supply chain.** The enterprise supply chain tends to be full of inefficiencies. Some of these inefficiencies lie in the "white spaces" between organizations and can be improved by better communications between customers and suppliers. Others are a result of poor business practices at the supplier that can result in increased inventory, quality problems, higher costs, and slow deliveries. By more closely managing and measuring supplier performance, the enterprise can find more ways to help suppliers drive waste and inefficiency out of the business, resulting in higher-quality suppliers and lower costs. For example, rigorous measurement and verification of supplier quality can help companies eliminate incoming inspection, reduce supplier non-conformances, and remove the associated costs.

3. **Increase competitive advantage by shrinking order cycle times and reducing inventory.** Time is money, and by measuring and improving supplier performance and by reducing supplier quality problems, for example, a company eliminates wasteful steps in the process. This enables material to go straight to the point of use because it is of the highest quality to begin with. Companies can reduce such wasteful costs and activities as additional inspections, extra freight charges, overtime (to catch up), safety stocks, obsolete inventory, multiple sources (which reduce price leveraging), etc. When supplier performance gets to the level where materials are shipped more frequently and in smaller quantities straight to where they will be used, instead of stockpiled in a warehouse or on the floor "just in case," order velocity increases and inventory is reduced as a result.



4. Gain insight on how best to leverage the supply base. The better the quality of the supplier, the better the product the enterprise produces. By measuring supplier performance, an enterprise can set a certain threshold for its suppliers, thus leading to a higher-quality end product. When a company understands its suppliers' capabilities and their levels of performance, it can better plan new products and services. The capabilities of its supply chain are, in fact, a large part of its own capabilities as a company. An example of when this knowledge is important is a make-versus-buy decision. If a company does not understand its suppliers, it may not know whether or not buying a product or service is better than producing it internally. As another example take deciding whether or not to outsource offshore. Understanding one's local suppliers can help a company decide if they are capable of reducing total costs enough to outperform offshore suppliers.

5. Align customer and supplier business practices. Ideally, suppliers should run their business in alignment with their customers. They should share the same business ethics, expect similar standards of excellence, show commitment to continuous improvement, and be a cultural match. Take the lean enterprise or any high performance system, for example, and consider how requirements of those for shorter delivery times, lower prices, and higher quality could actually have an adverse impact on a supplier who is not aligned with the customer:

- In response to a requirement for just-in-time (JIT) delivery, a supplier could actually increase its cost structure by building up an inventory to meet the requirement rather than by making to order—thus the fallacious meaning of the term JIT, "jumbo inventory transfer."
- If the supplier starts inspecting quality into the product instead of building quality in, more resources are required, impacting the company's cost structure. Quality could actually deteriorate in response to a requirement to improve it. And costs will rise, as more steps and resources are required to inspect and fix problems after the fact.
- Another need for alignment is around having a culture of continuous improvement. A supplier who does not try to improve or for whom continuous improvement is not a way of life will not be able to keep up with its customers' increasing requirements for better, cheaper, faster goods and services.

The following scenarios show the type of findings, potential action steps, and end benefits a company may realize from assessing suppliers:

Finding	Action	Savings/Impact
A key supplier of a $500 electro-mechanical assembly was not reducing cycle time.	Customer conducted cycle time education sessions based on their lean methodology for the supplier. Supplier refined processes and over one year, reduced cycle time from 4 weeks to 4 days. Customer, who was producing 120 units per week, reduced electro-mechanical assembly inventory by 3 weeks.	• Eliminated $1 million of work-in-process inventory • Saved $250,000 in inventory carrying costs • Plus, improved responsiveness and flexibility

A supplier of pipe fittings, a $15 million annual contract, was using inspectors as a solution to quality problems.	Supplier reevaluated process and implemented a “quality at the source” methodology. Reduced incoming quality problems by 25 percent.	• Reduced annual costs by $850,000 by minimizing rework • Plus, improved overall quality of end product
A private label packaged food supplier, with a $25 million contract, had a production process full of bottlenecks, no preventive maintenance or total productive maintenance, and was not working on any continuous improvement projects to address delivery problems.	The customer asked the supplier to improve its processes and eliminate the bottlenecks by implementing lean practices. The supplier implemented preventive maintenance and increased machine uptime by 20 percent; it started doing setup reduction in its key processes and reduced setup on a key machine from 2 days to 2 hours. Ultimately, on-time delivery improved from 65 percent to 90 percent.	• Increased revenue by $675,000 by meeting previously unfulfilled demand • Plus, improved efficiencies by reducing time spent addressing delivery issues

What are key performance drivers in the supply chain?

Today, most businesses recognize the supply chain as a key element of their success and, as a result, are critically attuned to its key performance drivers.

These include:

- **Cost.** The average purchased material content for manufacturers in the US is now over 60 percent of total product costs. In many companies this portion reaches 85 percent-90 percent, making the supply chain the largest single source of cost, the largest opportunity for efficiencies, and a strategic source of sustainable cost competitiveness. While cost pressures are always an important concern, they are more a result or side effect of the business processes that drive them. Cost is most successfully addressed by improving the business processes that drive cost, both within the firm and within the supply chain.
- **Quality.** Companies have become aware that variability in processes in the supply chain affects the quality of their products. And, when product/service failures inevitably occur with their end customers, suppliers need to support the corrective action steps necessary to respond as a product failure may trace back through the supply chain to a supplier who is totally unaware of the end customers and their warranty requirements. A company’s response time is limited by that of its suppliers. As well, the ability of a company to design in quality during new product and process design becomes highly dependent on their capacity to involve their suppliers in a responsive and timely fashion in the design process itself; this can include involvement of key suppliers at the product definition stage with end customers.
- **Time.** With approximately 50 percent of cycle time residing in the hands of a company’s suppliers, its market responsiveness is dependent upon its ability to successfully deploy a supply chain management system. Suppliers can critically affect cycle time in purchased material lead-time and product development. Purchased material lead-time is frequently the largest single element in the total order-to-delivery lead-time quoted to customers.
- **Technology.** Focusing on core competencies has greatly increased the dependence of manufacturers on technology resources in the supply chain. A primary challenge lies in identifying suppliers who are current with existing best practices in software development, process, materials, and organization. Having outsourced significant production and service requirements, a company can quickly lose touch with the current state of the art. The challenge is to remain aware and in contact with new emerging technologies for existing materials, process, and design technology. These examples illustrate the significance of the potential insight into the supply base and resultant end-benefits of taking action on those insights. Companies that are able to implement successful supplier assessment solutions see real benefits that directly improve product quality, increase responsiveness, and reduce costs to build real competitive advantage and drive overall company success and growth.

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What are the challenges in assessing suppliers?

The challenge is to design, manage, and continually improve a supply chain system based upon delivering superior value to the customer. The concept sounds simple, but surprisingly there are still many enterprises that do not measure the performance of their suppliers. When supply chain or quality managers are asked whether they measure their suppliers, we find that only about half of them do.[4] Most know that they should be measuring supplier performance and understanding their supply chains better. But putting thought into action is the challenge, particularly in a way that is neither paper nor resource intensive and that produces results.

Overall, companies are running up against three central barriers to measuring suppliers and improving their performance:

- Traditional key performance metrics do not go deep enough to provide the right level of insight to drive sustainable performance improvement
- Business practices, strategy, and processes must be reviewed and aligned
- The information needed is typically qualitative and dispersed throughout the supplier organization

Why can't traditional key performance metrics provide the right level of insight?

Traditional supplier performance measurement may include external performance measures such as parts-per-million defect rates, on-time delivery, purchased part lead times, quality escapes to customers, purchased price variance, inventory turns, etc. These measurements are good for overall monitoring of supply base performance. However, for understanding and measuring key supplier relationships, getting at cost drivers and potential problem areas, and uncovering value in the supply chain, they are insufficient.

These sorts of measurements are external and typically are appropriate for pointing out a problem rather than the causes of the problem. External measurements can be useful for qualifying new suppliers or getting rid of non-performing suppliers. External measurements can be used in scorecards or report cards for communicating with suppliers, so long as the scores are:

- Developed from accurate, up-to-date, and credible information
- Produced easily and cost-effectively
- Actually used to drive decision-making

For many companies, these types of external measurements are a starting point for supplier development efforts. But, they just cannot reveal what really causes supplier problems. What goes wrong in the white spaces between customer and supplier? Why do some suppliers let companies down unexpectedly? And what if a supplier's lead-time is increasing and its delivery and quality are slipping? Why can the numbers sometimes look good, while the customer-supplier relationship just is not working very well?

What scorecards reveal	What the customer and supplier need to know to improve performance
Purchase part lead time = 8 weeks On time delivery = 70 percent	• The supplier is not reducing cycle time • The supplier has no plans to reduce cycle time
Purchase price variance = +10 percent	• Variance analyses are not done with sufficient frequency to allow meaningful interventions • The cost account system does not provide useful information for choosing the highest paybacks in continuous improvement
Defects = 1300* PPM (Parts Per Million) or 3 Sigma	• The supplier uses inspectors as a solution to quality problems • Employees are not empowered to initiate methods to prevent quality problems • Continuous improvement is not a way of life • The company does not use mistake-proofing techniques

Why is insight into practices, strategies, and processes needed?

Insight into the root cause of supplier performance issues typically lies deep within supplier processes and business practices, and these should be aligned with those of the customer. For example, many companies are pursuing continuous improvement programs and methodologies such as Six Sigma, Lean Enterprise, Lean Sigma, continuous improvement, operational excellence, or Total Quality Management.

Typically, these organizations are trying to get to the next level of excellence and need to have key suppliers aligned with their own organizational direction. If a company is pursuing lean and just-in-time deliveries, key suppliers need to be on a lean journey themselves, or the lack of synchronization can adversely impact cost, quality, and delivery. If a company is committed to Six Sigma and has developed a fact-based culture, then it is likely that the company will require a similar approach to performance improvement from its important suppliers. Key suppliers should be aligned with their customer's own processes and practices for the relationship to succeed and for the customer's goals in cost, quality, and responsiveness to be met.

Why has getting this information traditionally been so hard?

To get at this level of insight, qualitative metrics are required. These include other less traditional or softer areas, such as innovation, working collaboratively with the customer, problem solving, total cost reduction, responsiveness, exceptional service, etc. There are two inherent challenges when dealing with this type of qualitative information that have prevented companies from leveraging it.

- Collecting qualitative information is typically labor intensive. In companies with a supplier assessment and/or certification process in place, the challenge lies in deploying scarce company resources to visit, review, assess, qualify, and certify suppliers. Companies have typically relied upon checklists, forms, and even questionnaires that suppliers must fill out and send back. Often one person or a team is sent to the supplier site to review the current situation, report back on the findings, and give the supplier feedback and corrective actions. Scaling the process to adequately assess a significant portion of suppliers is challenging.
- Deriving business insight from qualitative findings is typically elusive. Even once the data is collected, turning intent to assess suppliers into action is challenging. How do companies develop a system to accurately and fairly assess the supply base? This takes time, resources, and expertise. Many companies have come up with assessments that are complex to deploy and even more difficult to take action on the results. Assessing all aspects of a supplier's performance takes expertise in analytics and in questionnaire development. While many people think they know how to devise a questionnaire or data-gathering instrument, most questionnaires are confusing, long, and painfully difficult to complete. Supplier compliance can become an issue, and even when it is not, the information collected may not provide sufficient insight into supplier practices.

What is needed to assess suppliers effectively at scale?

To overcome these barriers, a company can leverage best practices that have emerged from leading enterprises with successful supplier assessment solutions today. From their experiences, a company should look for a supplier assessment solution that can:

- Gather information directly from suppliers
- Conduct consistent, comprehensive analyses that identify root causes
- Generate usable outputs and actionable findings
- Align business processes
- Scale and repeat efficiently

Gather information directly from suppliers

Companies should look for solutions that go directly to the source and not just rely on external performance measures than can be tracked within and by their own systems. The root cause behind these external measures typically lies within the supplier's processes and business practices. A solution should include the supplier in a positive, proactive way to get at this deeper level of information. It should include methods to encourage supplier compliance with the assessment process, position it as an opportunity for development rather than remediation, and share findings with the suppliers. In this light, suppliers will be more open to the process and take an active role is forming and taking action upon recommended improvement opportunities.

Conduct consistent, comprehensive analyses that identify root causes

The ultimate goal of the assessment is provide business insight that enables companies to improve supplier performance. To do so, the analyses—translating the raw data collected from suppliers into business insight—should be consistent and accurate so that they may be applied across a large supply base (for example, scale and repeat efficiently), and they should be comprehensive enough to provide the level of insight needed to drive business decisions.

Every supplier within a category should be asked the same questions and their answers should be recorded accurately, so that all suppliers are evaluated fairly. Otherwise, companies could be comparing apples to oranges when comparing different suppliers' assessments. Or, worse yet, a supplier could be subject to the background or personal whim of the assessor or assessment instrument developer. Consistency in approach circumvents these pitfalls.

To be comprehensive, a solution should have the capacity to gather in-depth information about the supplier's business processes and practices as well as key performance indicators. The analyses should cover all aspects of the supplier's business that are important to its customer. Rather than reinventing the wheel when developing the survey questions, companies can leverage solutions that are based upon a high-performance business model or widely accepted best practices, such as lean enterprise, Six Sigma, quality and supply chain management or on templates that model desired business practices, processes, and performance expectations.

A solution that conducts an assessment at this level will enable customers to uncover the root causes of supplier performance problems. Here are a few examples of the types of questions that a solution should be able to answer:

- How is a supplier running its business?
- Do they use good business practices to obtain a quality, affordable product, or service?
- Does the supplier care about customer satisfaction and do its employees show commitment to it?
- Does the supplier qualify its own suppliers before doing business with them?
- Do suppliers continually try to improve their processes to further reduce costs, improve quality, and increase internal velocity?
- Does the supplier have a preventive rather than a corrective approach to quality?

Thus, the survey design becomes a critical driver of the analysis. In addition to capturing the right information to answer the questions above, it should identify who—frontline managers, engineers, executives—at the supplier should actually complete the surveys and which specific questions should be asked of which people. Questions should also be designed in such a way that subsequent analysis can identify trends, flag outliers, and look for inconsistencies across respondents. This process is complicated by the qualitative nature of the topics at hand—business practices, policies, processes, behaviors, culture—and a strong solution must leverage this information to provide insight that goes deeper than that gleaned from traditional external measurements. Doing this well will support the creation of actionable findings.

Generate usable outputs and actionable findings

To ensure that analyses are not conducted simply for the sake of measurement, a company should look for a solution that quickly and easily generates output reports that give insight into the supplier's business. These reports should ideally be available both to customers and suppliers to encourage collaboration and openness. The reports should have the ability to help customers and suppliers focus on low-scoring business practices or processes, investigate inconsistent answers and poorly deployed practices, explore improvement opportunities that are identified, and develop corrective actions and/or continuous improvement plans. The reports should help the assessment team and supplier prepare for an on-site visit, if desired, and provide data at a level and scope that previously was available only after a site visit.

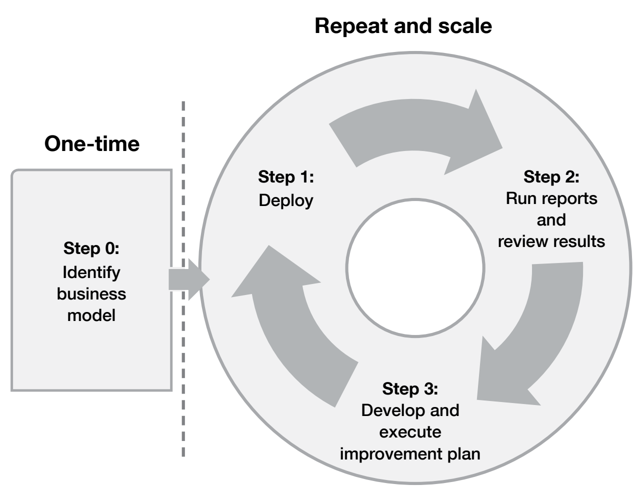
Overall, these reports should clearly identify the root causes of problems that can be acted upon and corrected. And, as the result of an assessment, a supplier should be able pursue improvements that can significantly impact not only its own performance but can, in turn, help its customers reduce their costs, improve their quality, and improve their responsiveness to their customers.

Align business processes

Ultimately, to identify paths to sustainable improvements in supplier performance, a company should look for a solution that can help it create alignment between its business operations and culture with those of the supplier. This begins to move beyond overall performance to consider the health of the customer-supplier relationship. A strong solution should measure those things that will enhance both the relationship and overall performance. And, it should help a customer identify those suppliers most likely to perform well and succeed in the relationship over time. Armed with this insight, companies will not only benefit from improved supplier performance but also will be able to make more informed business decisions to leverage their suppliers' strengths better.

Scale and repeat efficiently

To reach more suppliers without adding resources, a company should look for a solution that can scale the assessment process. While each company has unique requirements and business challenges, there are typically three steps, after some initial setup and configuration, to a scalable, repeatable supplier assessment process, and automation often plays a key role in achieving this efficiently.



Step 0: Identify business model. The first step is a one-time configuration that lays the groundwork for future assessments. In this step, companies identify the business model they will employ throughout the assessment. This includes:

- Leveraging industry best practices, such as Lean, Six Sigma, or Total Quality Management

- Reviewing standard assessment templates and customizing them, as needed

Step 1: Deploy. Once developed, the assessment can be deployed at will to targeted suppliers. The assessment should be fast, easy to use, and less obtrusive and quicker than a traditional site visit. Suppliers should be able to use the assessment without training, and questions should be easy for them to understand and buzzword free. Most companies employ a phased, cyclical approach, first assessing their most strategic suppliers and then assessing others as appropriate for their business. This step includes:

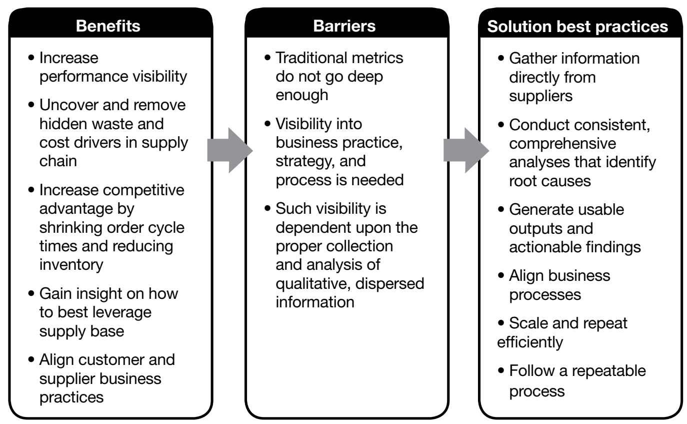
- Identifying suppliers to participate
- Letting suppliers identify multi-functional teams to complete assessment
- Distributing the assessment and monitoring compliance

Step 2: Run reports and review results. Once an assessment with an individual supplier has been completed, the analysis is conducted, often in an automated fashion by running reports that employ the necessary analytics to glean insight from the mass of data collected from the suppliers. The reports should measure deployment of supplier business practices and identify root cause performance drivers, among other things.

Step 3: Develop and execute improvement plan. The final step is then to partner with the supplier to develop a plan to improve root cause performance drivers. In some cases, this may include a focused site visit to address specific areas for improvement. Overall, during this process, the customer and supplier should seek alignment of their business practices and work together to implement and monitor the improvement plan.

Additional assessments of the same and/or different suppliers can be conducted via this systematic process, as needed. Primarily, this drives the efficiency of the solution but it also enables companies to establish supplier benchmarks and monitor progress over time. Armed with such a process, and the proper tools to drive it, companies will have a scalable, repeatable mechanism through which to assess suppliers and drive continuous performance improvements from their supply base.

Summary



The role of suppliers as a component of a company's competitive advantage is increasingly on the rise, and companies stand to realize many benefits from assessing and developing their supply base. These benefits range from measurable improvements in basic performance metrics to deeper alignment of business practices, but have typically been elusive. Some companies have invested in armies of assessors who systematically survey key suppliers; this approach, however, is neither scalable nor cost efficient. Other companies too often rely on basic external measures of supplier performance with no real insight into the root cause of performance issues. Without that insight, companies have little chance of affecting sustainable performance gains. Leading edge companies, however, are realizing these benefits at scale and seeing real improvements in their business as a result. These companies employ repeatable solutions that generate consistent, accurate, and comprehensive insight into the underlying drivers of supplier performance. Armed with this insight, these companies are better able to align their business processes with those of their suppliers and improve supplier performance.

If you have comments on this white paper or would like to discuss any of its points, please contact us at 781-993-9212 x395 or at whitepapers@emptoris.com.

If you would like to discuss how Emptoris Supplier Assessment can help you overcome your supplier performance challenges, please contact us at 781-993-9212 x196 or at info@emptoris.com.

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