

Should Supplier Evaluations be a Strategic Global Supply Management Process?

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Abstract. A critical supply management problem is how to increase supply chain performance. Traditionally, supplier evaluations generated a score that may or may not have led to corrective actions. This presentation introduces a supplier evaluation and process improvement program (SE&PIP) that can weld a supply chain into a cohesive, competitive, and cost effective strategic system that maximizes value. The SE&PIP is a ten-step journey that begins with a variety of supplier evaluations, moves to the selection and use of the appropriate problem solving tools and ends with continuous process improvement programs. Supply chains with Zero Defect Culture are more feasible when SE&PIP is applied.

Global Forces Motivating Supplier Evaluation and Development.

1. Expanding and increasing global competition
2. Increasing global risk
3. Higher energy costs
4. Increasing market demand for productivity, quality and higher value
5. Increasing pressure to reduce total cost

Together, and in combination, these globally driven forces require supply management leaders to seek and develop meaningful methods and tools that improve supply chain operations and deliver long-term results that are valued by customers.

Traditional Supplier Evaluation Processes. The National Association of Purchasing Agents, now the Institute of Supply Management™ (ISM™), commissioned a national team to address the question of supplier evaluation in the early 1950s. The team's report identified three models ranging from simple to very complex. The original three models were 1) the categorical 2) the weighted-point and 3) the cost-ratio. The three models were accepted and modified in many ways, but for various reasons they were never widely-used.

Moreover, these models focused only on supplier evaluation; they did not include the critical element of corrective action or follow up, which are required to drive supplier response and/or behavioral change. The traditional models required significant amounts of face-to-face and time-consuming work for purchasing teams to obtain and evaluate the data, which many GSM leaders considered extremely burdensome.

Now computer and Internet-based communication techniques make it relatively efficient to create and use significantly more complex models for the supplier evaluation and corrective action process. For example current evaluation processes can be used to 1) monitor supplier operations – financial, quality, etc. 2) evaluate capabilities and 3) develop and track corrective actions and improvement processes implemented by suppliers.

While Web-Based sources of Supplier Evaluation Programs are now available, only a few provide dedicated supplier evaluation programs. This table introduces five such companies. Each of the web pages introduces the company, its product lines, organization, and typically it includes recent news releases and selected customer comments.

Web-Based Sources of Supplier Evaluation Programs	
CAPGEMINI	www.capgemini.com
IBMGlobal Systems	www.ibmglobalsolutions.com
Open Ratings	www.openratings.com
Supplier Insight	www.supplierinsight.com
Valuedge	www.valuedge.com

These suppliers were selected only as examples and are listed alphabetically. This list offers a quick way to get started. Many other websites or suppliers and their programs are identified in ISM and other publications.

Since many of today's supplier evaluation processes do not provide the ability to develop corrective action plans and monitor follow up requirements, a solution is needed. An accepted supplier evaluation process that directly ties to and drives supplier improvement processes is the answer. The next section introduces a concept designed to ensure that supply chain leaders are able to identify suppliers with performance problems and take the appropriate corrective actions to ensure the long-term success of the company and the suppliers.

Supplier Evaluation and Process Improvement Program (SE&PIP). Significant improvements in supply chain operations are imperative to ensure strategic organizational success. The significant question is "how?" CAPGEMINI Consulting Services recently published a research report which looked at the priorities for Chief Purchasing Officers (CPOs) from six countries for the coming year (2007). The report stated that, on average, companies could expect to save 10-25% on purchased costs, if they institute an effective supplier evaluation and process improvement program, depending on the organization's spend complexity and maturity of procurement.

Three additional key research findings were:

- CPOs believe that the most significant business driver for 2007 is leveraging preferred supplier relationships - contract compliance and improved visibility of spend
- CPOs also report a significant increase in focus on supplier relationship management - performance measurement and supplier development
- Public sector CPOs show evidence of a governmental drive for greater value improvement

Given these research findings and personal experience, the authors believe that organizations must know and diligently apply the correct evaluation processes (organizational models) and corrective action tools and collaborative systems to eliminate supplier operational or quality problems forever, resulting in a zero defect performance. The next section identifies and briefly defines our ten-step (SE&PIP) process.

Ten Steps to a Supplier Evaluation & Process Improvement Program (SE&PIP). All effective organizational improvement processes are a series of steps. These ten steps, if effectively applied, can create significant measurable efficiencies and cost reductions. The steps must be conducted sequentially, and they are designed to apply the four elements of Plan-Do-Check-Act (PDCA).

Plan: Understand the problem and create the plan

Do: Execute the plan

Check: Verify the plan is effective

Act: Standardize lessons learned

Step 1: Decide that the organization will develop and use a fully functional SE&PIP Program. The development of the new process, including strategic supply chain improvement goals, timing, cost reductions, and supply base size, must be a corporate-wide decision. It must have the absolute and unwavering commitment and support of top leadership. Execution of the process will require investment in people, technology, structure, other functional-organizations and active leadership involvement. These foundational aspects must be established so suppliers are willing and able to participate in the improvement process.

Step 2: Identify and train the core project leadership team. This team must understand the supply chain factors in totality to develop an effective process. They must understand the required support and tools so they can lead the organizational revolution and create a Zero Defect Culture in the supply chain. Professors Giunipero and Handfield report in the CAPS PET II study that supply management skills will increase in importance in the future. (See References) For example, deeper skills are need to shift from analyzing what an item “does” cost to what an item “should” cost, and determining “how” to reach the “should” cost level. Likewise, creating and leading a SE&PIP is very complex and it requires new and mature supply management skills, including expanded capabilities in problem solving, vastly better supplier relationship skills, and improved leadership skills.

Most supply management leaders have studied some of these skills and many people have worked diligently over time to improve selected skills. But to create and lead a global SE&PIP a broader range of skills is needed. To correct problems or make major innovations in processes or operations, one must “think outside the box” and provide people the requisite functional skills and insights - strategic operations, cost management, supplier evaluation and improvement processes, and communications. This enables organizations to deliver greater value. The SE&PIP team must also understand and appropriately apply organizational change processes - value stream analysis, identification and analysis of the systemic problem (Root Problem) and the other appropriate lean or problem solving tools. The paper by Chang, et. al., cited in the references, includes a very descriptive discussion of many process improvement tools. Similarly, the ISM Glossary of Terms includes a broad list of tools that should be

understood and used appropriately to ensure long-term solutions to supplier problems. The requisite tools are available; they need to be studied and used.

Step 3: Develop the initial version of the SE&PIP and communicate the plan to the organization and core suppliers. Supplier Evaluation processes must be developed so the organization can monitor the supply base and be alerted when action is needed. The Process Improvement Plan is then designed to address the issue(s) identified through the Supplier Evaluation analysis. Supplier Evaluations can be created to monitor financial performance, launch risk, quality metrics, or other aspects the organization decides are needed. The evaluation process must be visible to the organization and to the supplier so decisions can be timely and easily made, based on data.

Step 4: Launch the program by selecting and evaluating the initial small group of suppliers. The SE&PIP is an expensive process, so it is important that key suppliers, those critical to the organization's current and future supply chain operations, are selected. The supplier identification process should include on-going analysis of supplier operational data to identify suppliers with problems that can be detrimental to a company's operations. The data analyzed might include quality problems or rates, financial issues, cost issues, new model launch issues, leadership issues or other operational issues such as delivery problems, disruptions of supply, repeated issues, customer impacts or other problems. The SE&PIP rollout must communicate to suppliers and other concerned groups the performance improvement process, sources of information, tools and objectives as well as administrative procedures.

Step 5. Develop proposed improvement plan for each selected supplier. Once a supplier's problems are identified by the Supplier Evaluation process, a specific plan must be built to address the problem, requisite corrective actions, timelines and metrics to be used to assess progress. The plan must identify the owners and the dates for leadership reviews.

Step 6. Gain supplier commitment to the plan. In this step, a meeting is held with the supplier to gain their acceptance and commitment to execute the plan. Each supplier must see the SE&PIP, the individual plans and anticipated results as beneficial or the process will fail. After supplier agreement is attained, the SE&PIP team begins its work with the supplier and at the supplier's site, as needed.

Step 7. Implement the plan and follow up meetings. This step is the very heart of the SE&PIP – going to Gemba (the place), and working with the supplier to identify key problem elements, executing the needed changes to ensure that supplier operations meet mutual objectives. The supplier evaluation identified an area or areas that triggered the initial action, however, by being onsite and working through the PIP, the root cause is identified and can be resolved. The objective is to identify, isolate and eliminate the problem now and forever.

Step 8. Conduct leadership reviews to ensure progress and involvement. Leadership reviews are held to ensure that progress is made according to the schedule. Key questions include progress rate, unexpected obstacles and delays. If progress is being delayed, leadership must understand this problem and forge a solution. Completion of the project is recognized and the supplier is urged to expand the SE&PIP across their organization because no one ever graduates from the Zero Defect Culture. Once a supplier reaches this level,

constant vigilance, effort and analysis are required to ensure that operations do not deteriorate. This is accomplished through continuous monitoring and analysis of the operational data in the supplier evaluation process.

Step 9. Expand the program to more key suppliers. As the first suppliers complete their SE&PIP and begin to operate with Zero Defect Culture, the organization should expand the SE&PIP by selecting additional suppliers to enter the process. The newly selected suppliers enter the process as described in the steps outlined above, and the SE&PIP team repeats the process as applicable to the newly selected supplier and their problems.

Step 10. Expand the SE&PIP and build supply chain ownership. Expansion of the SE&PIP beyond key suppliers requires additional investment in training, technology and tools, and complete dedication by both the organization and its suppliers to improve the overall supply chain performance. Resistance cannot be tolerated and the corrective action(s) must be successfully completed.

Example of SE&PIP Application: Supplier Scorecard. Delphi uses a weighted, point based, red/yellow/green scorecard to evaluate the overall performance of suppliers on a monthly basis. The scorecard identifies and analyzes issues for a supplier that has caused disruptions at Delphi or at Delphi's customers. The scorecard is used internally by Delphi supplier quality to monitor supplier performance trends and to identify suppliers with growth and new business potential as well as those suppliers with performance problems that need developmental assistance. A supplier with a declining scorecard rating may suggest a supplier with financial trouble.

Supplier A is a supplier of a metallic component to several Delphi divisions. They were considered a strategic partner for future growth and recognized with a favorable quality certified status. In early 2006, Supplier A's scorecard changed suddenly to red and indicated a rapidly declining quality performance. The scorecard also showed that Supplier A was not currently engaged in Delphi's Performance Improvement Plan, Quality Focused Supplier process (QFS). (Chang, et.al.) The Delphi supplier quality engineer met with the supplier leadership to gain commitment and start improvement activities. Supplier A has improved by working with the QFS process. Their scorecard is now yellow, and they are no longer considered a high risk supplier.

The scorecard enables Delphi to monitor supplier performance and apply resources as needed as well as reward suppliers that have demonstrated that they have achieved and sustained zero defects.

Example of SE&PIP Application: Financially Troubled Suppliers. DNBSupply Manager (a software product of Open Ratings) identified that Supplier B was possibly a financially troubled supplier (FTS). An on-site visit by a Delphi supplier management team found that Supplier B was in serious financial trouble. A FTS case was opened with a request for full financial disclosure, etc. Early results from the FTS suggested that Delphi needed a new source quickly. In conjunction with the decision to resource the production from Supplier B, the buyer used the DNBSupply Manager to screen potential new suppliers. However, the financial trigger also identified Supplier C, who was being considered to take over the business, as a high risk financially troubled supplier.

The FTS team opened an investigation into Supplier C, including onsite visits. They found that Supplier C was a good supplier, but suffering due to volume reductions. This finding prompted the FTS to design a specific transition plan for the new business and support for the supplier throughout the critical ramp up period. The support program was successful, and Supplier C was stabilized in the process.

Example of SE&PIP Application: Risk Evaluation/Prevention Process for Flawless Launch. Delphi developed a New Model Launch (NML) process in response to Toyota's numerous inquiries about how Delphi protects its customers during launch. The NML process was initially used on Delphi's biggest global customer program in history, the GMT900 (SUV), which launched in 2006. The GMT900 program launched successfully and was recognized by General Motors as Delphi's best customer launch yet.

Using a Risk Reduction Matrix (RRM), the NML process identifies, assesses, prioritizes, eliminates and prevents risk associated with the supply of parts. The goal is to achieve flawless launches for customers. The (RRM) uses standardized, objective criteria for each program to identify the level of risk for all part/supplier combinations. There are 22 risk categories in the RRM including - part quality history, part validation, delivery, supply chain, financial stability, design critical, sourcing, PPAP on time, Run @ Rate on time, manufacturing capacity and business case financial, etc.

After initial risk assessment, countermeasures are developed and implemented on all high risk areas. The RRM is updated regularly to reflect the on-going changes in the bill of material and the subsequent potential risks associated with the part / supplier combinations; a Risk Reduction Tracker is also used to measure the risk mitigation progress. Due to the success of this process, Delphi has expanded this to include all high risk new model programs.

Conclusions and Recommendations.

1. Flawless launches and a zero defect culture are possible and within reach.
2. All supply management organizations should have and use a Supplier Scorecard system to evaluate supplier performance and ensure early identification of supplier problems.
3. Supply management organizations should have and use a supplier evaluation and process improvement program (SE&PIP).

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