

MINNESOTA OEMS:

Improving the State's Supply Chain



Table of Contents

	<u>Page Number</u>
Executive Summary	1
Introduction	2
OEM Perspectives	2
Supplier Background	3
Supplier Selection	4
Supplier Performance and Evaluation	7
Improving Minnesota's Supplier Environment	8
Supplier Development	9
Supplier Development Consortium	11
Using the Findings: Next Steps	11
Final Thoughts	13

Executive Summary

Minnesota's economy has long relied on a strong and diverse manufacturing sector. Following employment losses in the early years of the decade, the sector is growing and it is critical that the state hosts a supply base that provides competitive products and services.

The relationship between original equipment manufacturers (OEM) and suppliers is changing as suppliers are becoming strategic supply chain partners rather than mere providers of inputs. Collaboration is a key element as OEMs and suppliers are facing increased pressure from global competition. Today, companies increasingly rely on suppliers for product development, quality, productivity and technology. Suppliers able to incorporate OEM strategies into their operations can maximize their value and ultimately be more competitive in the global marketplace.

Recognizing the changing OEM/supplier relationship and the importance of a high-performing supply chain, the Minnesota Department of Employment and Economic Development (DEED) and Minnesota Technology Inc. (MTI) recently visited with 14 major Minnesota OEMs to better understand supplier performance. The findings from these 2005 discussions will be used to fuel supplier improvement initiatives – action necessary to make Minnesota's OEMs and supplier base more globally competitive.

OEMs confirmed that Minnesota-based firms are important suppliers accounting for a minimum of \$500 million in procurement. OEMs value Minnesota companies saying that local access to suppliers often offers process cycle reductions, improved timeliness, lower freight and travel costs and better communication. Despite these benefits, Minnesota's share of inputs has fallen for most companies due to reduced supplier numbers, increased numbers of foreign suppliers and a growing preference to source in the geographic proximity to the OEM facility.

Although OEMs sometimes stay with higher-priced domestic suppliers to avoid potential

logistical challenges with foreign suppliers, officials emphasized that sourcing decisions are part of a global strategy where company competitiveness is the ultimate consideration. Several factors influence procurement and sourcing decisions, with cost, quality, technology, design and development resource investments and location mentioned most frequently as key considerations.

OEMs recognize that supplier selection decisions are fundamental to success and are increasingly implementing formalized supplier qualification processes. Once suppliers are selected, companies are increasingly measuring and evaluating supplier performance to ensure continuous supplier improvement.

Most OEMs utilize supplier development programs, but the coverage and application varies. Some companies have a formalized effort created for various product lines while others work with individual suppliers on a case-by-case basis. Some companies use assessment scorecards for coaching and feedback, while others invest in significant training programs on reducing costs and lead time.

Although most company officials indicated some interest in a supplier development consortium, most noted that any approach must benefit both their company and suppliers. With the support of the Blandin Foundation, Minnesota Technology is using the findings from these visits to develop supplier development initiatives involving training, direct assistance and innovation. Once specific options are in-hand, Minnesota Technology will meet with DEED and representatives from other interested organizations to discuss further actions.

A supplier development initiative can facilitate the performance improvement needed to ensure that Minnesota suppliers strategically partner with Minnesota OEMs and companies throughout the world. Improved OEM and supplier performance will result in a more globally competitive economy, and ultimately, improved job opportunities for Minnesotans.

Introduction

Manufacturers have long relied on suppliers to provide products and services. But the relationship is changing as global competition, inventory reductions and staff downsizing have caused firms to recast suppliers as strategic partners rather than as mere producers of inputs for industrial and consumer products

Collaborative goals are an essential element of this new relationship as companies rely more heavily on suppliers for product development, quality, productivity and technology. Suppliers able to incorporate customer strategies and programs can maximize its value to the customer. This is particularly important as companies work to identify preferred supplier alternatives for any given product or commodity. High performing suppliers tend also to be more competitive in the global marketplace.

Minnesota’s manufacturing strength centers on a diverse industry base including industrial machinery, metal products and resource-based industries like wood and food products. In recent decades, high-technology has propelled success in medical devices, computer and electronic products, measurement devices and transportation equipment.

Manufacturing remains an important part of the state’s economy with overall direct and indirect service sector employment impacts approaching 1 million Minnesotans. While the state offers a variety of location assets to facilitate business success, logistical and supply chain issues have quickly become among the key location factors. Improvement in the state’s supply chain performance will benefit the industrial customer, the suppliers and Minnesota economy.

OEM Perspectives

Recognizing the changing OEM/supplier relationship and the importance of a high-performing supply chain, the Minnesota Department of Employment and Economic Development (DEED) and Minnesota Technology Inc. (MTI) launched an effort in 2005 to visit with OEMs to better understand

supplier performance and expectations. Businesses, government and educational institutions may use the findings from these discussions to drive or assist supplier improvement initiatives helping make Minnesota’s OEMs and supplier base more globally competitive – good news for Minnesota’s workers and economy.

The 100 largest manufacturers operating in the state was the pool of companies from which interview targets were selected. Ultimately, 20 companies were asked to participate, with most representing one of the state’s manufacturing industries noted above. Some companies with a notable presence in Minnesota were included even if their operations weren’t classified in one of these industries.

Although nearly every company contacted was interested in participating, some were not able to meet during the interview period. Of the 20 companies, 13 were able to assist this effort.¹

Participating Companies
3M
Alliant Techsystems Inc.
Boston Scientific Corporation
Cirrus Design Corp.
Honeywell ACS
Hormel Foods Corp.
Hutchinson Technology
IBM Corp. - Rochester
Medtronic Inc.
Emerson Process Management - Rosemount Div.
Thomson West
The Toro Company

This report summarizes the findings of those interviews and presents an initiative designed to improve customer/supplier relationships and overall supplier performance.

¹ One company declined to be identified.

Supplier Background

The manufacturing sector has long been known as an engine for Minnesota's economy. While the sector employs about 350,000 workers, manufacturer supplier spending supports another 250,000 Minnesota jobs.

The companies interviewed confirm what the numbers represent – suppliers play a critical role in the success of Minnesota companies. Most of the companies interviewed reported that purchased materials and parts account for at least 40 percent of final product value with the range generally between 10 and 70 percent.

The number of suppliers is related to the size of the company and product line. Of the companies interviewed, the largest and most diversified have upwards of 50,000 suppliers and the smaller firms with fewer products have as few as 100. However, most companies reported that a small number of suppliers account for a high percentage of procurement.

Regardless of the number, nearly every company reported that they are working to consolidate groupings of preferred suppliers. Companies reported that the benefits of reduced supplier numbers include an easy way to remove weaker suppliers and an improved and more strategic relationship with key suppliers.

At the same time, many companies noted that the number of supplier inputs is increasing as companies look to focus on core competencies and outsource more production and services. This doesn't necessarily translate into higher percentage of sales as companies are attempting to increase sales while holding supplier purchase level steady to encourage supplier efficiencies.

Several thousand Minnesota-based companies are important input sources for all of these OEMs. The materials and services provided range from high-end technical products to paper. In some cases, Minnesota-sourced inputs

accounted for upwards of 40 to 50 percent of inputs while most were closer to 10 percent. The total value of purchases from Minnesota companies was at a minimum around \$500 million.² Although Minnesota represents the vast majority of products sourced in the five-state region, a few companies depend significantly on suppliers in neighboring states, especially packaging from Wisconsin and tooling from South Dakota.

Although some companies reported that purchases from Minnesota suppliers have increased in recent years, most companies noted that the number of Minnesota suppliers and total purchase value has fallen in recent years. The decline is due in part to the directed reduction in the number of suppliers, but also to increased numbers of Asian suppliers and a preference to source in the geographic proximity to the OEM global facility. One company noted that the decline has been due to relatively higher costs and the reluctance/inability of Minnesota suppliers to commit to delivery timelines and to make necessary changes/improvements.

OEM officials recognize the value of Minnesota-based suppliers saying that local access offers process cycle reductions, improved timeliness, lower freight and travel costs and better communication, with many emphasizing how close proximity facilitates relationship building with suppliers. Several companies noted that close proximity provided the convenience of suppliers being available for meetings and consultations – especially quick strategy meetings. One company was particularly interested in having satellite suppliers in close proximity to all their facilities – including those in Minnesota.

² Some companies were unable to provide the percent of suppliers and/or purchase value from Minnesota suppliers.

One official was particularly enthusiastic about the company's strong Minnesota supplier base. The company believes Minnesota suppliers have good just-in-time (lean) manufacturing values, and the location itself lends to good inventory management and control and close proximity to internal processes like etching, printing, and packaging.

On the other hand, some OEMs expressed concern about how labor costs and high taxes affect supplier competitiveness, causing them uncertainty about whether Minnesota suppliers could even be competitive. Although one stated that the work ethic of Minnesota workers might offset these costs, it was possible in many cases that local suppliers simply do not have the technical capabilities required, or the industry does not exist in the state.

Some companies were unsure about the benefits of increasing their base of Minnesota suppliers. One official did not see location as an important element of supplier selection and instead relied exclusively on price, quality, on-time delivery and lead-time. Another company suggested that location is often not an issue in a competitive world, especially when out-of-state suppliers charge equalized freight fees, comparable to those that Minnesota companies would charge.

One official summarized these views when she indicated that the company's most important criterion is getting the right supplier to provide the right product at the right price – regardless of supplier location. Nevertheless, the company recognized several benefits to a local supplier base including a likely rapid turnaround from local shops and generally closer OEM/supplier relationships due to the geographic proximity. The company was interested in new suppliers and wanted Minnesota companies that would meet company requirements.

Supplier Selection

Production and service outsourcing are increasing for most companies and the decision to outsource generally depends on whether the product or service under review is a core competency for the company. Those products and services not deemed to be core competencies or proprietary are analyzed for outsourcing potential using standard business analytic techniques that review costs, quality and service. Some companies have begun relying on suppliers for all new products and reviewing a make vs. buy comparison for existing items. One emphasized company-wide commitment to a goal that new suppliers will account for 50 percent of the supplier base.

Most businesses indicated that suppliers are chosen at the corporate (or headquarters) level, although many companies allow business units to make supplier decisions that are unique for their units or plants. Even when the supplier decision is at the business unit or plant level, several businesses indicated that corporate headquarters might initiate the discussion or become involved when the contract value is significant, the product crosses business units, or the purchase is particularly strategic for company success.

One company indicated that its corporate headquarters provides a list of approved suppliers and the plant or business unit may choose the supplier that best meets its needs, recognizing that sometimes plant needs may have to be met by a supplier not on the list. Another firm noted that the supplier selection strategy depended on the contract size and the number of divisions using the product and/or service.

Many firms reported relying on cross-functional teams to make the final outsourcing decision. A team-based corporate approach for selecting.

suppliers is typical; some businesses utilized a formal team approach while others relied on input from plants for final supplier decisions.

Most companies recognized that supplier decisions are part of a global strategy where company competitiveness is the ultimate consideration. Within that business model, a number of factors influence procurement and sourcing decisions, with cost, quality, technology, development and design resource investments and location mentioned most frequently as key considerations.

Cost

Although cost was frequently mentioned as a key element in the supplier selection process, the decision is more than just comparing unit costs. Companies agreed that cost must include all costs associated with the delivery of the product or service, not just the final price. Many other factors – tangible and intangible – must be evaluated and compared. These factors include the quality, technology and location attributes noted above, but also a myriad other factors including reliability, corporate philosophy and ethics, and supplier risk.

Quality

Companies have always demanded products and services with minimal defects. What is new is a growing expectation that vendors have the ability to maintain quality programs such as lean manufacturing or Six Sigma principles to ensure continuous performance improvement and ability to meet ISO standards. Companies recognize that supplier performance goes hand-in-hand with improved OEM performance and many partner suppliers with initiatives to improve performance including the development of quality programs.

Adherence to a quality program is essential as companies strive to reduce cycle times and, as a result, lead times for suppliers. Quality programs also demonstrate that suppliers can consistently achieve key performance thresholds for specific industries including an ability to

meet and measure extremely tight tolerances and trace components back to sources.

The most common supplier quality standard mentioned by companies was ISO compliance or certification (usually preferred). Most companies indicated that they prefer suppliers that have implemented quality programs like Six Sigma, or process improvement efforts, like lean manufacturing principles. But most will purchase from suppliers without these efforts as long as they are ISO certified.

Some companies noted that, although it is difficult to require Six Sigma for all suppliers, Six Sigma is required on critical inputs (i.e., single point of failure). They also note that it is often difficult to apply quality standards and lean principles to new technologies due to a lack of field data and limited suppliers. In some cases, government regulations and/or contracts require certain performance and process thresholds must be achieved.

For companies that don't specifically seek suppliers with quality programs or ISO designations, suppliers generally need to demonstrate some continuous improvement activities. Companies also offered that such efforts are often not necessary for low-tech commodity products.

Technology

It isn't enough to simply have the capacity to provide a given product. Suppliers must demonstrate an ability to innovate and contribute to an OEM's long-term success. Several companies noted the importance of innovation as product cycle times are rapidly growing shorter. Vendors need to demonstrate past innovation – especially in the given industry – but also show that they have the environment for continued invention including a core-engineering competency.

Specific technologies and skills noted include the use of RFID technology and the ability to make tools and dies. Companies also frequently noted a need for suppliers to use electronic

communication including electronic data interchange (EDI) capability.

Design/Development Resource Investment

Some companies noted that suppliers are increasingly being required to invest resources into design and development. For one company, this involves working with a development concept and providing all the necessary resources to do the design. The requirements may include full analysis capabilities to do specific modeling and understanding of other commodities to enable seamless design points with the other components. The investment may also include initial testing and evaluation, and active and immediate response to prototypes and samples.

Location

For many companies, vendors need to do more than simply provide innovative and quality products at competitive prices. Supplier location and the associated logistics are growing in importance for OEM companies. For example, many companies prefer suppliers that have facilities in close proximity to their facility to improve communication and reduce costs.

Broadly speaking, suppliers should have a global footprint so the companies can coordinate the geography of both supply and production with the end destination of its products. However, a good supplier relationship is not based on proximity alone – some of the best suppliers are offshore.

Other Factors

Companies mentioned a variety of other factors that influence supplier decisions, some of which were as important as the four factors noted above. For example:

- Adequacy of financial and physical capacity
- Management expertise to execute plans

- Organizational factors such as ownership issues, succession preparation and disaster planning
- Commitment to long-term relationship
- Long-term business development plan
- Ability to meet specified guidelines when federal regulations or contracts are involved, and
- Service and support levels.

Several companies noted current challenges in the supplier selection process. One company noted that its engineers sometimes drive sourcing and final product price decisions by selecting suppliers during product design. Officials are working with the engineering team to utilize supply chain principles early on in the design process.

At the same time, they are developing a new centralized strategy that will guide supplier choices by directing divisions to collaborate across the company's supplier base. Another company noted that it wants to build on current supplier leveraging across the organization by populating the existing practices with good tools and best practices used throughout the company.

Qualifying Suppliers

Companies recognize that sourcing decisions are fundamental to success and are increasingly implementing formalized supplier qualification processes. Companies noted that a more formal qualification process was needed to improve on past procurement efforts, which were more need-based, resulting in too many suppliers and inconsistent quality.

For some companies, the process varies by individual location or business unit, although the corporate offices may get involved if the supplier decision affects other businesses in the company. Other companies have, or are

<p>Formal Supplier Selection Criteria Noted by More than One Company</p> <p style="text-align: center;">Operational</p> <p>Competitive advantages Core competencies Cost Documentation and tracking systems Facility conditions (incl. redundancy) Flexible operational systems Inventory processes Technical abilities</p> <p style="text-align: center;">Management and Service</p> <p>Business philosophy Experience supplying the industry Global footprint Financial condition Management and strategic plan Quality process improvements Reliability Service and support (incl. response time)</p>

working toward, a single formalized qualification assessment tool that quantifies supplier attributes, some of which are noted on the following page.

Sometimes a team approach is used – often including purchasing, quality and commodity areas – to assess or audit suppliers. Some OEMs “qualify” suppliers on an ongoing basis with different classification levels with an eye toward ensuring that suppliers continue to meet OEM needs.

In addition, several factors were noted by only one company: automation readiness, value-added, sterilization capabilities and processes and an examination of sample parts. One company also noted the importance of vendors, when necessary to meet federal funding guidelines of small, disadvantaged, and women-owned companies.

Companies generally believed that outsourcing of the supplier qualification process is not an option. Not only is the process too valuable and strategic to outsource, face-to-face meetings are often necessary for companies to feel

comfortable doing business with the vendor. Related activities that might be candidates for outsourcing include process audits, project management assistance, ISO Audits, and possibly geometric dimension and tolerance (GD&T) audits.

Supplier Performance and Evaluation
Companies recognize the importance of measuring supplier performance and employ a variety of formal and informal evaluation tools, many similar to those used in the supplier qualification process. These systems are essential as companies recognize that it is significantly easier to work on performance issues with an existing supplier than develop a relationship with a new supplier. They emphasized a preference to build and develop a relationship that helps ensure stable supplier relationships and quality work from suppliers.

Although nearly all the OEMs have a formal standardized tool to evaluate supplier performance, the metrics vary among companies. Some of the companies focus on as few as two of these measures and some utilize several. Below is a list of some of the metrics noted by companies.

<p style="text-align: center;">Supplier Evaluation Metrics</p> <p style="text-align: center;">Noted by Most Companies</p> <p>Cost Delivery Innovation Product/service quality (incl. defect rate) Quality program Responsiveness Technology</p> <p style="text-align: center;">Noted by a Minority of Companies</p> <p>Administrative ratings Competitiveness (relationship price value) Customer service ratings Percentage of business with supplier Resolution time Response to prototypes Supplier quality audit</p>

Companies utilize evaluations, or scorecards as they are often called, in different ways. Many use the scorecards as a teaching tool, with one noting that they test staff at current and potential suppliers to identify gaps where training is necessary. Others use evaluations to assign different preference or eligibility classifications to suppliers.

The timeliness and usage of the scorecards also varies. Some companies send out the supplier report cards monthly, while others deliver the rating less frequently. And not every supplier is subject to these reporting tools as companies often limit scorecards to the largest vendors.

Some companies have different scorecards used by business units. Companies generally prefer to have a single scorecard. Those that don't are making strides toward creating a unified tool. Cross-functional teams are also important elements of scorecard development and supplier evaluation to ensure the company incorporates multiple perspectives.

Some companies evaluate suppliers without using a formal scorecard. One company meets with a group of suppliers quarterly to discuss performance and/or operations. Topics include: spending levels, quality, delivery turns (especially related to Kanban and lead-time reduction) and service levels. The overall goals include 100 percent lot acceptance and 100 percent delivery.

Another company's manufacturing procurement operations analyze and evaluate supplier performance through objective financial analysis (e.g., ability to adhere to purchase agreements, delivery dates, customer service, etc.) via the SAP system while the technology procurement side has a more subjective analysis of performance. The company is in the process of merging the two approaches into one analysis that uses both objective and subjective metrics.

Many companies believed a strong relationship with suppliers was essential to the successful use

of an evaluation tool and continuous performance improvement. Ultimately, companies recognize that the OEM-vendor relationship should be win-win resulting in profits for both companies.

Minnesota Supplier Performance

For companies that could supply data by supplier location, most indicated a general sense of satisfaction with Minnesota suppliers with some praising companies for implementing lean principles and ability to meet quality standards. Some companies noted specific Minnesota vendors as model suppliers.

The companies offered several areas of concern including cost (true for all U.S. suppliers), technology, innovation and precision demands. A few officials noted that some Minnesota suppliers need to recognize global realities before it is too late. Several companies emphasized the importance of limiting the share of a supplier's business to ensure a healthy and competitive company.

One company official was quite concerned that many Minnesota suppliers are stuck in a "job shop" mindset, with no particular desire to grow in ways that reflect a changing world. Although this trait is not universal, it is of greater concern regarding Minnesota suppliers than for the company's global suppliers. Asian suppliers hungry for business are pushing other companies, including those in Minnesota, to keep up with innovations and progressive business models or be left behind.

Although companies increasingly view offshore suppliers as viable alternatives – including those in China, Russia and India – international suppliers sometimes present logistics and transactional problems. That is one reason that companies stay with domestic suppliers if they are good performers, even at slightly higher cost.

Improving Minnesota's Supplier Environment

Companies offered a variety of perspectives on improving the Minnesota supplier environment

to facilitate increased purchases from Minnesota companies. The starting point for many OEMs is working with a financially strong supplier. Other comments centered on three factors used during supplier evaluation – cost, quality and technology – along with an improved supplier base and strong management.

Costs

Most companies suggested that suppliers need to reduce costs to remain competitive in the global marketplace. Several also noted that lower taxes and increased tax incentives will result in some cost decline and could facilitate improved performance. An important theme throughout the interviews was that while costs are important part of competitiveness, other factors like quality, technology, location, information sharing and marketing integration play key roles as well.

Quality

Globally competitive suppliers maintain quality programs, lean manufacturing principles and Six Sigma to ensure that products and services are consistently high quality. A key factor for many OEMs – especially those with federal government contracts – is ISO certification or ISO compliance.

Technology

Technology continues to be an important theme of these interviews. Companies emphasized the need for suppliers to show capacity through the use of technology to help reduce costs, improve flexibility and lead change through more innovative products and services including design and prototyping.

One challenge to this charge is that technology purchases generally require significant capital investments – investments that smaller suppliers may not be able to afford without additional work. On the administrative side, OEMs indicated that suppliers need to move toward electronic data interchange (EDI) to minimize paperwork and invoice price variances.

One company also noted that skilled workers are needed to work with the technology. They expressed a concern that the state did not offer adequate numbers of engineers and software developers for testing and design activities.

Industries

Although Minnesota has a very diverse economy, several companies noted that the state's supplier base is less than adequate in several key industries – notably chemicals, electronics, composites, glass, wet processing technologies and a variety of aerospace-related products. One company suggested that the state should actively attract suppliers that provide products needed by Minnesota businesses.

Management

Company officials recognized the value of a strong management team and philosophy. Several noted specifically that vendors need effective management teams to develop more forward thinking strategies that address competitiveness in a demanding global marketplace including plans for succession and disaster recovery. Companies also noted a need for strong, trusting relationships with their suppliers, with two insisting that vendors have management philosophies that match those of the OEM.

Supplier Development

Although most companies have a supplier development program, the coverage and application varies significantly by company. Some companies have a formalized process with different development components for various supplier product lines, while others work with individual suppliers on a case-by-case basis.

The content also varies as some companies use supplier assessment scorecards for coaching and feedback while others invest in significant training programs focused on reducing costs and lead time through process improvement tools like lean and Six Sigma quality principles.

Scorecards

A common approach employed by many firms is utilizing a scorecard or some other assessment/ measurement tool to help suppliers achieve cost, delivery, process and quality goals. Many companies target key suppliers and discuss performance issues at regularly scheduled meetings. Training follow-up differs among the OEMs with some offering training, some recommending training and others relying on the supplier to make the decision on how to improve performance.

Materials

Many companies have developed materials, guides or videos to help suppliers improve performance. Products generally discuss the specific customer (the OEM) needs as well as expected processes and procedures, and then how performance improvement programs are necessary to ensure suppliers continue to meet these requirements.

Training

Although most companies offered some level of supplier training, the delivery and content is as different as the companies themselves. The most common delivery approach is to initiate quality improvement programs with individual suppliers on a case-by-case basis. For some companies, this training often follows the scorecard assessment discussions. For others, the OEM simply initiates the improvement discussion following subpar supplier performance.

In contrast, some companies offer a more formalized training program for all major and key suppliers. One company has created a very comprehensive curriculum, with different development topics for various supplier product lines. Another company prefers to bring suppliers in early in their relationship to learn from company staff how business is done and train in any applicable quality or continuous improvement areas.

Other companies employ other approaches to training. One offers training on a major topic,

such as lean manufacturing or Six Sigma in the spring of each year. The following fall the suppliers present what they've learned in applying the spring topic to their business. The company also hosts "total cost of ownership" workshops with up to 10 suppliers each year.

Another recently developed and administered a training program for the company's largest Asian and North American suppliers. The four-month program covered such topics as lean manufacturing and value stream mapping, and is likely to be repeated in Europe. Participating companies either emerge as a better supplier or recognize that they can no longer supply the company. The company was amazed that some suppliers turned down the training opportunity.

While some companies rely on consultants to manage their supplier development program or deliver training, most indicated that they administer all development activities. One company said that it doesn't have a supplier development program, preferring established suppliers instead that don't need training or assistance. They noted that the corporate offices sometimes select suppliers for development, but those were the exception.

Related Assistance

Companies with no formal supplier development program still devote considerable resources to supplier improvements:

- Host general vendor meetings to discuss requirements, improvements and related topics to be a helpful tool.
- Offer technical resources to help suppliers resolve issues.
- Coordinate suppliers to improve shipment logistics resulting in improved product flow and reduced costs.
- Visit suppliers and brainstorm ways to decrease costs.

While supplier development varied by company and industry, companies developing high-tech, cutting-edge products were more likely to have a more comprehensive and standardized approach than other companies. These companies also tended to have higher levels of integration and joint technology arrangements. Whatever the development program, nearly every official agreed that a close OEM-supplier relationship is essential for a successful development program.

Supplier Development Consortium

Most company officials indicated interest in some form of a supplier development consortium with many noting that they could not commit until they reviewed the initiative's plans and believed the effort would be of benefit to them as an OEM. Some reluctance was due to knowledge of failed consortiums or bad experiences working with peer companies.

Some companies noted that such an effort could benefit from partnerships with supplier chain organizations and associations. One such organization mentioned was the Minnesota Minority Supplier Development Council. Companies noted several specific opportunities of a consortium as noted below:

- | |
|---|
| <p>Supplier Development Consortium
Issues and Opportunities</p> <ul style="list-style-type: none"> • Network and learn about the challenges faced by other OEMs • Support for quality programs and process improvement efforts: <ul style="list-style-type: none"> - Lean Tools (5S Workplace Organization, Cellular Flow, Set Up Reduction, Visual Controls, Kaizen, Pull/Kan-Ban, Value Stream Mapping, Lean Office) - Six Sigma (Green belt level) - GD&T Training and Certification • Share supplier training instructional materials • Discuss preferred or qualified supplier lists, and • Purchasing and shipping discounts. |
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Using the Findings: Next Steps

The interviews confirmed that although there are similarities in supplier relationships, OEMs tend to follow somewhat unique paths in their dealings with suppliers. These paths often depend on the OEM's size, corporate structure, products, and markets. While most OEMs want their suppliers to meet quality, cost, and delivery targets, many show substantial interest in establishing closer relationships with suppliers in Minnesota. Some of them are even assisting local firms in performance improvement.

Despite these practices, barriers to improve supplier performance still exist. These barriers tend to arise not only from supplier difficulties in adopting more advanced production and supply chain management practices, but also out of the OEMs business needs and their ability (or lack thereof) to assist their suppliers.

Nevertheless there is interest and an opportunity to create a supplier development program that will improve supplier performance and the competitiveness of both suppliers and OEMs.

Supplier Improvement Initiative

Any effort to develop an OEM-supplier improvement program in Minnesota must focus on the needs of both OEMs and their suppliers in creating efficient and mutually beneficial supply chain relationships.

With the support of the Blandin Foundation, Minnesota Technology is currently researching the state's OEM-supplier relationships more in-depth so as to develop possible initiatives that will improve customer/supplier relationship and overall supplier development. Work under the Blandin Grant includes a needs assessment that will look at the following questions:

- Among those companies already serving as OEM suppliers, what best practices do they demonstrate and what are the gaps between "higher" and "lower" performing suppliers?

- Among companies who are not current OEM suppliers, what do they believe to be the highest priorities for performance?
- What types of programs, products or services would most effectively address the gap between what OEMs want from their suppliers and what suppliers are currently able to deliver?
- Of the possible performance improvement options, which would be of highest priority to both OEMs and suppliers?
- Are the products and services available/acquirable or must they be developed internally?
- What types of delivery methods – training, consulting, informational – would best address those gaps?

The needs assessment process will ensure that any proposed solution will address the gaps between *what is* and *what should be* in terms of customer desired goals, results, and priorities. As a result of the assessment, Minnesota Technology will be able to prioritize the options and suggested solutions – based on the voice of the customer – giving clear guidance for which products and services are available and which should be further developed to complete an OEM-supplier development system.

With options and suggested solutions in-hand, Minnesota Technology will meet with DEED and representatives from other interested organizations to discuss options and next steps. At this time, the design team will look at participation parameters, select program

structure and content to decide on the appropriate mix of products and services, and create implementation and sustainability plans to ensure that the future program has clear and attainable goals and is financially viable.

The design of an OEM-supplier development will require up to 12 months. The Blandin Foundation has provided partial funding for the design effort. Additional funding to complete the effort will be solicited from federal, state, private sector, and foundation sources, as required.

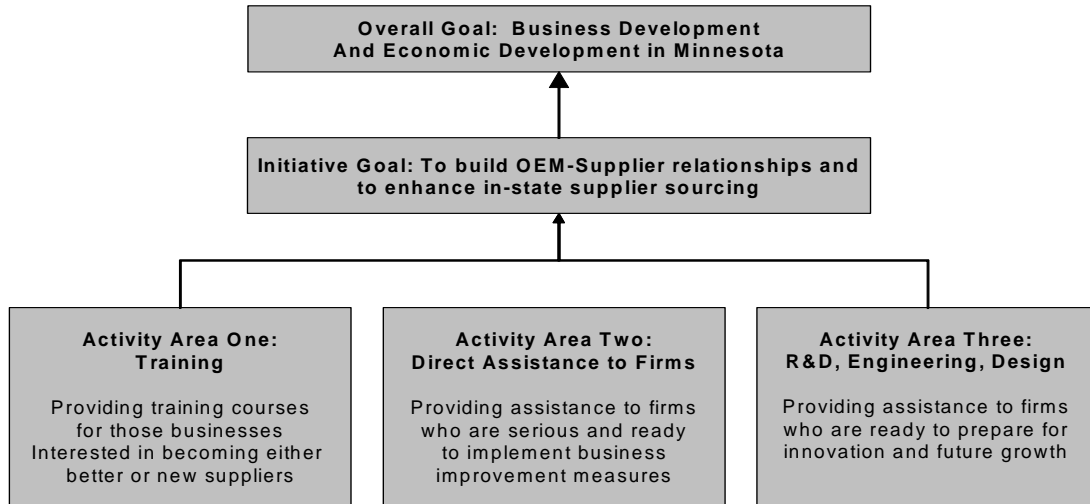
Implementing the Initiative

While specific parameters of the program have yet to be designed, implementation will consist of three distinct activity areas: Training, Direct Assistance and Innovation. Each of these areas as discussed below and shown on the following page will support the goal of building OEM-supplier relationships and enhancing in-state supplier sourcing.

The training area will provide educational services to clients who are interested in becoming better suppliers. Direct assistance to firms will be provided to businesses that are serious and ready to implement the business process improvement measures that are necessary to strengthen their existing relationships or to build new ones with OEMs.

The innovation area involves research and development (R&D), engineering, and design assistance to those firms ready to prepare for innovation and future growth. The exact mix of products and services that will be offered under each activity area will be formulated during the initial design phase.

Proposed Structure of Supplier Development Initiative



Final Thoughts

Minnesota is blessed to have a large group of strong and growing OEMs. In many cases, the state's suppliers are important contributors to the success of these Minnesota-based manufacturers. Improved performance will result in more globally competitive suppliers and

a stronger Minnesota OEM base, and ultimately improved job opportunities for Minnesotans.

A supplier development initiative can facilitate the performance improvement needed to ensure that suppliers successfully supply and strategically partner with Minnesota OEMs and companies throughout the world.

Minnesota Technology®

Minnesota Technology, Inc. (MTI) is a nonprofit 501 (c) (3) organization whose mission is to help its business customers gain innovative competitive advantages, support their growth, and contribute to Minnesota's economic vitality. MTI fulfills this work through a statewide staff of expert professionals who have tested expertise across a wide variety of business, technology, manufacturing, engineering, communications and research disciplines. Over the last three years, MTI has helped over 1,600 Minnesota companies and in the process made a significant impact on the state's economy. MTI has helped create and retain more than 2,350 jobs, added \$47.5 million to its clients' bottom lines, and helped generate \$39.5 million in new technology investments.

MTI understands:

- Technology is a key component to business growth
- Healthy businesses contribute to a strong Minnesota economy
- Quality jobs foster opportunities for a good quality of life
- Collaboration and partnerships are essential to business growth

MTI helps position Minnesota companies for growth by providing innovative technology information and strategic business and technical advisory services. For more information about service offerings, please visit www.minnesotatechnology.org or call 612-373-2900



The Minnesota Department of Employment and Economic Development (DEED) is the state's principal economic development agency, with programs promoting business recruitment, expansion, and retention; workforce development; international trade; and community development.

DEED:

- Provides financial and technical services to businesses, communities and economic development professionals
- Promotes and assists in the expansion of exports
- Works with companies to locate and expand in Minnesota

- Helps communities with capacity building and infrastructure financing
- Works to stabilize and stimulate the economy in times of downturn by helping businesses retain an available skilled workforce
- Supports the workforce needs of Minnesota's businesses, workers, and communities

In addition, DEED works with a wide range of partners on the federal, state, and local level to ensure the highest levels of program coordination and quality.

For more information, please visit www.deed.state.mn.us or call: 651-297-1291 or toll-free at 800-657-3858.