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Business-First Economic Development Benefits the Inner City:
A Partnership of the Eaton Corporation Navy Controls Division and
The Northwest Side Community Development Corporation

A Case Study

by

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Introduction

The partnership between Eaton Corporation's Navy Controls Division (NCD), producer of high-tech electronic components for ships and submarines, and the Northwest Side community of Milwaukee, represented by the Northwest Side Community Development Corporation (NWSCDC), is unique in the degree to which the success of the business is inextricably linked to the success of the neighborhood. The alliance is much more than good corporate citizenship or public relations; it is actually an essential part of doing business for the firm, and fits with the cost-cutting and efficiency-maximizing strategies it has pursued in response to a volatile defense industry. The case illustrates the way in which real, significant engagement with community-based organizations and public officials has played a critical role in helping one branch of a major employer remain competitive in the context of the declining defense industry.

The hallmarks of the Eaton–NWSCDC relationship, the things that make it remarkable among joint corporate-community endeavors, are two of the characteristics Harvard Business School professor Rosabeth Moss Kanter has identified as key to successful initiatives of this sort: a clear business agenda and long-term commitment.¹ These two principles are inextricably intertwined and mutually reinforcing in the Eaton–NWSCDC cooperation. Throughout their seventeen-year involvement, their collaborative efforts have been identified and designed to respond directly to Eaton's most significant business needs. As those needs and interests have evolved over time, so has the partnership, changing its focus and pursuing new projects to address current concerns.

At the time the strategic alliance was forged, Eaton's greatest need was to recruit and retain white-collar design engineers to the inner-city plant; consequently, efforts first focused on safety and crime prevention issues and the general image of the neighborhood. A few years later, Eaton ramped up production and needed to quickly recruit and train a large number of skilled workers. This need resulted in an innovative welfare-to-work training effort in which the recruitment, curriculum, teaching, and hiring responsibilities were shared by Eaton, NWSCDC, a local technical college, and other workforce development organizations. The most recent iteration centers on a fundamental shift in the way Eaton NCD does business. A need to become more efficient and competitive in the defense industry led the plant to adopt an approach called lean manufacturing, which emphasizes efficiency, reduced costs, and improved quality control in the production cycle. As part of this shift, Eaton sought a way to better manage its supply chain; this led to the creation of a supplier linkage program, through which NWSCDC connects the corporation with local businesses that can supply Eaton's operational and production needs.

Each of these endeavors has also been structured in a way that benefits the Northwest Side community and addresses needs for safety, employment, and economic empowerment in the neighborhood. The business agenda has driven the order in which these problems are tackled under the auspices of the private-community cooperation. This order of primacy undergirds Kanter's argument that "a corporation has a better chance of making a real difference if it knows clearly, in advance, how its business agenda relates to specific social needs."²

¹ Rosabeth Moss Kanter, "From Spare Change to Real Change: The Social Sector as Beta Site for Business Innovation," *Harvard Business Review* May-June 1995: 122-132.

² Kanter, p. 126.

Moreover, it is this willingness to allow the collaboration to evolve along with changing business needs that has allowed the relationship to remain viable through both neighborhood changes and business cycles. It is also this commitment to allowing the relationship to be a living, organic thing that is indicative of the long-term commitment of both partners. Continually reevaluating and renewing activities demonstrates a desire to see them become as successful as possible in meeting both the corporate and the community needs, and to replicate that success in applying the requisite strengths of the principals to a growing array of needs.

The end results of an engagement that exemplifies these characteristics are a more skilled workforce in a largely low-income, minority neighborhood; a more viable local business community; and a large firm positioned to grow strategically despite being in a volatile industry.

Eaton Corporation Navy Controls Division

Eaton Corporation is a global manufacturer of highly engineered products that serve industrial, vehicle, construction, commercial, aerospace, and semiconductor markets. Headquartered in Cleveland, Ohio, the company has 49,000 employees and 150 manufacturing sites in 25 countries around the world. The Milwaukee operation is one of two design and production facilities of Eaton's Navy Controls Division (NCD), which has long been a competitive supplier of military and nuclear grade components for the U.S. Navy.

Business at the Milwaukee NCD plant declined from the mid-1980s through the early 1990s, as the end of the Cold War brought 5% annual reductions in defense spending (see Sidebar 1). As spending on naval vessels declined, NCD's revenue stream became less assured and increasingly subject to discretionary government spending rather than direct appropriations or long-term contracts.

At the same time, much of NCD's skilled workforce was migrating from the Northwest Side to the Milwaukee suburbs (see Sidebar 2). This combination of industry factors and the perceived unfavorable location of the plant made it seem unlikely that significant re-capitalization would occur at the Milwaukee NCD plant.

Staying in Inner-City Milwaukee—“POET”

As a result of the declining profitability of the plant, Eaton Corporation began to consider closing the Northwest Side facility and selling off pieces of the Navy Controls Division. Then in 1994 new technology business opportunities were identified. These opportunities plus the company's recognition that significant engineering talent remained at the Milwaukee facility prompted Eaton to examine closing more carefully. So from 1994 to 1996, the company explored the possibility of growing a vibrant technology business operation while also assessing the merits of selling or shutting down the facility.

In October 1996, Eaton hired Edward L. Bartlett, Jr., as general manager of the Northwest Side facility. Since Bartlett was neither a Milwaukee native nor a lifelong Eaton employee, he had no particular commitments to either and no inclinations as to whether the plant should remain in

operation or be closed. His sole focus was on building the business of the plant. Bartlett acknowledges that Eaton continually reevaluates the decision to keep operating the plant. He says the decision now, as it was from 1992 to 1996, is based on political, operational, economic, and technical (POET) considerations. In particular, there are very real political and economic factors that influence Eaton to maintain the plant.

A decidedly political component to Eaton's commitment to the Milwaukee community is Herbert Kohl, Wisconsin's senior United States senator and a member of the Senate Appropriations Committee, and his commitment to improving the economic conditions of the inner city. Kohl has been an advocate for funding to install shipboard hardware using technology developed by Eaton in the Navy's new Destroyer design, DD21. Statements by Kohl implicitly link his support on the appropriations committee to Eaton's continuing commitment to community economic development:

Advanced technology developed by innovative suppliers significantly reduces the Navy's cost for these vital ships and is very important in its own right. And when you combine it with a nationally-recognized leader in community economic development that is actively creating jobs in a once depressed inner-city urban neighborhood, you have true government and business teamwork. I commend Eaton for the work that they are doing here and will continue to actively support the development and use of this technology in our future Navy.³

Eaton's relationship with the mayor and the City of Milwaukee is also politically significant. In July 1999, the NCD plant was flooded with 5 million gallons of raw sewage, caused by an inadequate metropolitan sewage system. Bartlett told the mayor that if the city didn't fix the sewage system immediately, Eaton would close the plant. In response, the metropolitan sewer district and city moved quickly to fix the system. Later in 1999, Eaton was recognized as Milwaukee's Corporate Citizen of the Year. By late 2000, the company, the city, and the State of Wisconsin were cooperating on a planned expansion of the Milwaukee facility. Bartlett believes its partnership with NWSCDC has given Eaton the credibility to win support of the city and state in planning for a substantial investment in 2001 and beyond.

Like many manufacturers, Eaton has considered moving operations to an area where labor unions are less common or influential than they are in Milwaukee. Eaton NCD, however, is a largely engineering-driven business and depends heavily on its ability to recruit and retain world-class design engineers. Many of Eaton's most talented electronic engineers are graduates of the University of Wisconsin's engineering school and are established in the area and do not want to move. Thus Eaton would prefer to stay within the Milwaukee metropolitan area. However, moving to a nearby suburb would put the plant closer to where these white-collar workers tend to live and possibly make it easier to compete with its primary competitor, located in Anaheim, in attracting and retaining young, highly skilled talent. These are significant operational and technological benefits.

³ Kohl Press Release, "U.S. Senator Herbert H. Kohl Visits Eaton Navy Controls Division's Milwaukee Plant for Electric Drive Technology Demonstration," June 4, 1999. www.ncd.eaton.com/news6.html

However, a major economic consideration prevents a move to suburban Milwaukee from being a viable option. Eaton NCD's union contract contains a provision that if the company moves the facility anywhere within a twenty-five-mile radius of its current location, the contract remains in effect. Additionally, Eaton would be required to pay for the cost of cleanup of its current contaminated industrial site. The company has repeatedly concluded that the costs of moving would outweigh the benefits.

In the years immediately following Bartlett's taking the helm, the Milwaukee plant's total revenues tripled. His success in turning around the plant was recognized by the Eaton Corporation in early 2000, when Bartlett was promoted to vice president and general manager of Cutler-Hammer Engineering Services and Systems and Eaton Navy Controls Divisions. Bartlett now oversees operations at 64 Eaton facilities, of which the Milwaukee plant is the largest.

Bartlett explains that NCD was able to halt its falling revenues by becoming more proactive. It retrofitted existing ships with new technology that can extend a ship's useful life, and it aggressively applied new technology to new ships, helping to increase both the Navy's cost and military efficiencies. Eaton has also shifted its operating strategy by contracting with other divisions of the Eaton Corporation and with competitors to deliver products.

A major market opportunity for the firm is the widespread application of a new technology developed by Eaton NCD. Success depends largely on implementing lean manufacturing concepts. To pioneer this new frontier successfully, NCD faces three challenges: recruiting a highly talented group of specialized engineers, developing a blue-collar workforce to meet production targets, and establishing a network of local suppliers to ensure efficiencies in design cycles and production costs. To meet these challenges, Eaton NCD has turned to NWSCDC for help.

An Innovative CDC Approach

NWSCDC grew out of a community-based campaign in the early 1980s in Milwaukee's Northwest Side community. The community wanted an organization that would speak for and to merchants, communicate their needs to the community, help meet those needs, and thus entice companies to remain in the neighborhood rather than moving to the suburbs. Thus, from its beginning in 1983, NWSCDC's mission has been economic development, making it an exception among community development corporations, most of which focused, at least initially, on producing affordable housing.

NWSCDC has concentrated its activities in three areas. The first is workforce development and employment placement support; NWSCDC works to ensure that the residents are prepared for local employment opportunities and then to connect them with area companies. The second focus area is business development. Here, NWSCDC draws together Northwest Side companies, city officials, and small entrepreneurs to collaborate in programs designed to attract, create, expand, or retain business. The CDC's third focus has been to work with the area's residents,

organizations, schools, and businesses in maintaining the Northwest Side as a safe and viable environment for children and families.⁴

“Globalization offers the greatest opportunity since the war on poverty to have a positive impact on older neighborhoods,”⁵ believes NWSCDC’s Executive Director, Howard Snyder, who emphasizes cooperative arrangements with the private sector. Snyder’s view is that, in the increasingly competitive business environment created by globalization, the neighborhood in which a company operates should be considered as one of the resources necessary to compete. Because of negative perceptions of inner-city neighborhoods, firms in these neighborhoods may have difficulty recruiting the best recent graduates with the requisite technical skills to help those companies compete. Here is where Snyder sees a role for organizations like NWSCDC. Nonprofit community groups can work with businesses both to enhance the quality of life in the neighborhood and to develop the necessary skilled workforce among local residents. Snyder refers to his philosophy as the “third way” of approaching economic growth and stability in low- and moderate-income urban neighborhoods, a middle ground between top-down command economies and “killer” capitalism, neither of which works to promote sustainable investment in these neighborhoods. In his words:

The “third way” is meant to encourage the reintroduction of social relationships between companies and their resident and merchant neighbors. Neighbors patrol and look out for communities. Real estate brokers work with CDCs to seek new ways to in-fill commercial strips. Companies hire community residents and kids because a skilled work force increases productivity. Larger businesses hire local firms to be vendors and suppliers, who in turn hire and buy locally.

Resident-controlled citizen associations and CDCs make long-term investments in older communities, making them more livable. We all plan for sustainable growth. That is the “third way.”

A lot of lives depend on what we do with the current prosperity. Business and community leaders can show how economic development is done in a way that is competitive and efficient, yet opens the doors of opportunity to places and people who presumably have been left behind in the global marketplace. Reconnecting business to neighborhood should be the way Milwaukee and America [do] business and still [win].⁶

The Eaton-NWSCDC Business Alliance

During the economic recession of the early 1980s, community members and local companies shared the same goals: preventing businesses and people from fleeing the inner city, revitalizing the community, and making the city a desirable and safe place. The relationship between Eaton NCD and NWSCDC dates virtually to the NWSCDC’s inception. It began in 1984, when

⁴ Northwest Side Community Development Corporation Fact Sheet.

⁵ Howard Snyder, “Businesses Need Healthy Neighborhoods,” *The Business Journal* July 13, 1998. www.amcity.com/milwaukee/stories/071398/editorial2.html

⁶ Ibid.

Snyder approached the NCD plant manager about creating an alliance. Since then, Eaton management has served on NWSCDC's board and various committees and supported its community development efforts.

To attract highly skilled workers, Eaton NCD needed to remain viable in the Northwest Side community. The company's early activities with NWSCDC focused on crime prevention as a means of making the community more appealing to both businesses and residents. In order to combat vandalism and fear of crime among white-collar suburban employees, Eaton and NWSCDC founded the Eaton Block Watch, later renamed the Coalition for Hope. Eaton NCD was also helped secure funding from other local companies for the Northwest Opportunities Vocational Academy (NOVA), an alternative secondary school which works to improve the quality of the neighborhood workforce (see Sidebar 3). More recent and significant initiatives have focused on workforce development and on establishing a network of locally owned suppliers for the Eaton plant. Those efforts are discussed in detail in the following sections.

Welfare-to-Work Program Meets Mutual Interests

In the fall of 1996, managers at Eaton NCD determined that the plant needed as many as 100 new workers; they also realized that finding them would not be easy. Encouraged by Eaton Corporation headquarters, which had been requested by President Bill Clinton to become involved with welfare reform efforts in the communities where it operated, plant officials chose to reach out to welfare recipients and the disadvantaged in their community. They first contacted the Wisconsin Regional Training Partnership (WRTP), an alliance formed in 1992 between union and manufacturing industry leaders to develop both a skilled workforce and good-paying jobs. WRTP took the lead in forming a strategic collaboration among Eaton, the Machinists Union, Milwaukee Area Technical College (MATC), NWSCDC, the Private Industry Council, and the Milwaukee Jobs Initiative to develop a model welfare-to-work training program.

In the meantime, Snyder and NWSCDC had realized that the parents of the students attending NOVA needed skills training as much or more than their children. Snyder also understood that most of the companies supporting NOVA did so for philanthropic reasons, not because they saw it as a training ground or recruiting arm for their workforces. Snyder believed that a workforce training program directly linked to Eaton NCD, NWSCDC's strongest corporate ally, could help demonstrate that workforce training was not just a charitable exercise but was in a business's best interest. It could also help connect neighborhood residents, many of them African Americans, with neighborhood businesses. The result was the Future New Employees Training program (F-NET).

In order to qualify for F-NET, applicants had to be at least 18 years old, have a high school diploma or GED, pass a drug test administered by Eaton, and (because Eaton NCD works under contract for the U.S. Navy) be a United States citizen. Applicants who met all of these requirements were interviewed, taken on a tour of the Eaton plant, and given skills testing by Milwaukee Area Technical College. Once candidates were recruited and screened, they participated in two weeks of "soft" skills training conducted by NWSCDC, followed by 12 weeks of "hard skills" training conducted by MATC at the Eaton plant. Trainees were not paid during the training period. Among the first trainees, several supported themselves with part-time

jobs, while others received support payments, welfare benefits, and—for one who had lost a previous job—unemployment compensation.⁷

Training

The first phase of training incorporated such employability and life skills as communication, anger management and conflict resolution, workforce diversity training, and juggling workplace and personal issues like child care and transportation needs.

In spite of this soft skills training, turning F-NET trainees into viable, reliable, and successful employees remained a challenge, Melanie Lewis, Eaton NCD's human resources director at the time, acknowledged. Eaton management learned that, generally, these employees did well for about six months; then when the reality of the daily routine and responsibility struck them, attendance and reliability fell. Several F-NET hires were single mothers and former welfare recipients for whom child care was a significant concern. Eaton NCD explored the possibility of creating an on-site day care facility, but the demand (an employee survey counted only 55 children among the plant's 1,500 employees) was insufficient to justify the estimated cost of \$500,000. Lewis and Eaton hoped they could help these former welfare mothers overcome their child care issues by paying living wages plus benefits, unlike many other welfare-to-work programs. At the Eaton plant wages ranged from \$11.49 per hour for starting janitors all the way to \$23 per hour for tool and die makers; benefits added another 30% to 36% to basic wages. Eaton also conducted focus groups to help employees deal with the reality of working day-to-day after the warm glow of getting off welfare and into work faded.

During the second phase, participants received intensive training in technical skills required by NCD, including basic math and algebra, wire harnessing, basic electrical circuit analysis and assembly, blueprint reading, and applied communications skills to help trainees read with greater understanding and speed.

Outcomes and Follow-Up

The first F-NET class began in October 1997 and graduated in February 1998. A second class began almost immediately and graduated in May 1998. Combined, the classes had 23 trainees; 20 completed the program, for a graduation rate of 87%. Graduates were eligible for any of four positions at the Eaton plant, all with a starting wage of \$12.49 per hour. One graduate was promoted to a supervisory position after showing leadership skills.

The newly hired F-NET graduates were matched with an experienced employee in a one-on-one mentoring program designed to smooth the transition from classroom to job, provide more individualized job training, and orient the new employees to Eaton company culture. The volunteer mentors received four hours of training, provided by the company.

Between the first F-NET training class and the second, the course was reviewed and refined to better meet the needs of both Eaton and the students. The changes included scheduled breaks for

⁷ "From Welfare to a Good Union Job in 14 Weeks," AFL-CIO Milwaukee Labor Press (February 26, 1998).

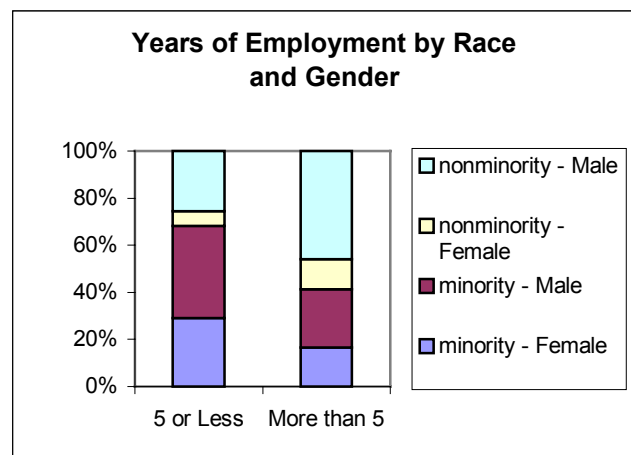
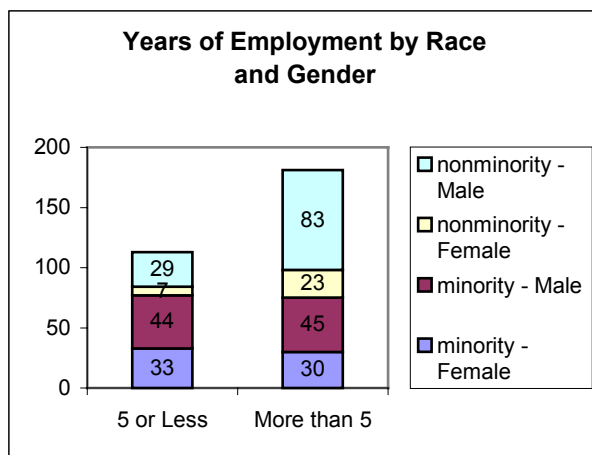
students between classes, the use of a time clock to register attendance, and a clear explanation of employee expectations based on the company’s 90-day probation guidelines.

Two years after the second class of F-NET graduates began working at NCD, their retention rate was still at 70%. However, plans for a third F-NET class never materialized as recruitment needs changed as word-of-mouth in the community provided sufficient walk-in traffic. In the spring and early summer of 2000, after the failure of another Eaton operation located in the same plant, the facility was forced to lay off newer employees in order to absorb more senior workers into the navy division. All of the welfare-to-work employees lost their jobs.

Though F-NET is no longer active, Eaton officials agree it was a positive program, and an effective way to meet their human resources needs. The plant likely would use the same strategy again, Bartlett feels, if and when production warrants. Both Bartlett and Snyder point out that the program was successful in bringing former welfare recipients into the workforce, providing them with marketable skills and experience, and building their resumes.

Challenges and Lessons Learned

The F-NET program created two distinct clusters of employees in the Eaton workforce, with significant differences in gender, race, age, tenure, lifestyle, and culture. The younger, more recent F-NET hires were proportionally more female and African American, and included more single parents, than the long-term employees, who were primarily married men with families.. More than two-thirds (68%) of the new hires were minorities, compared to 41% of the previously existing workforce; this changed the balance of the overall workforce to 52% nonwhite.



Because of their differences, these older workers perceived a work ethic in the younger, newer minority employees that was different from their own. The established workforce thought that “F-Netters” (as they were derisively referred to by some employees) were coddled, receiving favorable treatment and additional training they had not been given. In the fall of 1999, with 38% of the plant’s workforce having five years or less of tenure, Eaton instituted a required course in diversity and cultural sensitivity in an effort to bridge the gulf between the two groups.

Human resources managers at Eaton indicate they learned two important lessons from the experience of having two distinct groups among its core workforce. First, when a program targets a group that differs from the existing employees, it is advisable to make similar investments in the firm's established workforce. Second, when establishing a new program, it is a mistake to set it apart by name from the basic orientation and training typically given to any new employee. Doing so makes it easy to stigmatize new workers by labeling them.

Supplier Linkage—Boosting the Local Economy Meets Eaton's Competitive Interests

Connecting local suppliers to Eaton NCD is a more recent and more innovative effort between the company and NWSCDC, and one that has critical elements of both economic development and business strategy. For Eaton, creating a network of local suppliers is essential to improving the plant's productivity and efficiency. For Snyder and NWSCDC, helping broker purchasing contracts between Eaton and locally owned firms represents is the "next frontier" of community economic development, an opportunity for economic revitalization of the Northwest Side neighborhood by making sure that, to the greatest degree possible, money made in the community is spent there.

The overall downward trend in defense spending in the past fifteen years has led to significant price competition among all industry players. In order to meet the challenge of sustainability and growth, NCD has established a goal of drastically reducing production costs and has adopted the concept of lean manufacturing in order to accomplish that goal (see Sidebar 4). NCD management embraced lean manufacturing fully and sought to transform the entire enterprise according to its principles, applying them in every stage of operation, from concept through life cycle support, starting with suppliers.

In a lean manufacturing organization, emphasis is placed on eliminating any costs that are not essential to the primary mission—delivering products. By evaluating its processes from this perspective, a firm can eliminate non-value-added activities that drive costs and prices higher. As part of its lean efforts, for instance, NCD reduced the manufacturing floor space it utilizes by 80%, which increased its profitability 15 to 20%. All of this is pursued in an effort to be able to afford the labor costs in the Milwaukee area and still compete with plants that are now being located in Mexico.

Eaton determined that one area that could particularly be targeted for greater efficiency was its supply chain, and Bartlett was given a mandate to reduce the number of suppliers by 20% annually. At their first meeting, Bartlett told Snyder that supply chain management was his greatest concern. The two decided to work together to address the problem in a mutually beneficial way. The result was the Supplier Linkage program, in which NCD's purchasing power helps boost local companies by using them as suppliers and vendors.

The Supplier Linkage program, initiated in July 1998, has two objectives. The first is to link NCD with existing Northwest Side firms that produce one or more of the seventy-two standard inputs NCD needs and can meet the requisite industry standards and costs. The second, bolder objective is one of social entrepreneurship: to create new companies or to attract to the community branches of existing companies that can supply the more specialized inputs NCD

requires. The ultimate vision is for NWSCDC to take a leadership role in establishing a “lean manufacturing campus” of suppliers, possibly taking an equity position in one or more companies.

Supplier Linkage Network

In its first two years, the program focused primarily on brokering connections between existing local firms and Eaton (as well as three other corporate partners that have joined the network). As the program now operates, NWSCDC selects potential suppliers from the local community that match the needs of Eaton and the other three manufacturers. After initial screening by NWSCDC, NCD conducts its own screening, including inspecting potential suppliers' facilities. The small firms involved in the Supplier Linkage program also use NWSCDC's job training and placement services to meet any employment expansion needs created by their participation in the program.

Having other large manufacturers in the neighborhood join the supplier linkage network is beneficial to both NWSCDC and Eaton. Having more partners gives NWSCDC more opportunities to connect local entrepreneurs with large corporate buyers, and the more local vendor contracts that are established through NWSCDC's efforts, the greater the tangible evidence of the nonprofit's success. Such evidence is necessary for the nonprofit to obtain continued grant funding to support its work. For Eaton, having other manufacturers in the program may advance the vision of creating a supplier campus on the Northwest Side. Since these firms purchase some of the same basic industrial parts, their commitment to a local supplier initiative may entice vendors who can serve more than one corporation to start a new supply firm or relocate an existing one within the proposed supplier campus. This would help Eaton achieve its goal of shortening its supply chain and making its production operations leaner and more efficient.

Results of Early Supplier Linkage Efforts

By August 2000, the Supplier Linkage program claimed credit for establishing a total of \$1.7 million in vendor contracts. These contracts build wealth within the neighborhood and have generated 150 new jobs for neighborhood residents. At that time, 37 vendors were participating in the program, though not all had contracts in place, and three of the four major corporate partners had local supply contracts.

NWSCDC has connected Eaton with a printing company for its newsletter, an electronic engraving company to make nameplates, a restaurateur to replace a national food service contractor in serving 600 meals per day in the plant's cafeteria, and a locally-owned travel agency to arrange Eaton's travel business (estimated at \$400,000 annually).

The owner of the travel agency is quick to point out that he had a 13-year relationship with Eaton, built while working at another firm prior to starting his own agency, before bidding for the NCD plant's travel contract. NWSCDC brokered the contract by identifying the travel agent to Eaton, but Snyder acknowledges that the agent's longstanding relationship helped smooth the way for the contract. NWSCDC has learned that the success of the supplier linkage program is

largely dependent on personal relationships. The proprietor credits Eaton for its effort to contract with local and minority suppliers, thereby giving small businesses a chance to expand and grow. He believes that being able to list Eaton as one of his customers gives him credibility and is responsible for other large corporate contracts he has secured.

The supplier linkage program has not always gone smoothly. NWSCDC connected NCD to a local, minority distributor of industrial supplies, owned by an African-American woman who started her small business through the MetroWorks small business incubator operated by NWSCDC. The owner feels that NWSCDC staff played a critical role in getting vendors an audience with the corporate buyers and applying some pressure to negotiate contracts. Getting an audience allowed her to demonstrate to Eaton that she was not too expensive, as they had first assumed. However, for a variety of reasons, including purchasing department turnover at Eaton NCD and miscommunication and misunderstanding between the firms, the supplier has not yet established a contract with Eaton, in spite of more than two years of intermittent negotiations.

Challenges and Lessons Learned

Establishing supplier linkages is an extremely time-consuming and relationship-driven process, Snyder notes. Because NWSCDC can only afford to have one employee focused on the program, delivering a contract frequently takes a long time. For this reason, NWSCDC is exploring ways to streamline the process by using the Internet to help connect large corporations and local businesses as well as to expand the network to more major corporations. At a minimum, all vendor companies would have Internet access, e-mail capability, and Web sites linked to the NWSCDC Web platform and from there to the buyer community. Operating the supplier network via the Web would make the process more efficient and less time-consuming, but he points out that NWSCDC does not have the time or resources—nor has it found a willing technology partner—to set up such a system at this point.

Expanding the supplier linkage program to its second objective, social entrepreneurship, has met several challenges, as discussed in the next section. While seeking ways to overcome those challenges, NWSCDC has focused much of its efforts on expanding the supplier linkage network by adding new manufacturers and brokering purchasing relationships between them and existing local vendor firms. Snyder says NWSCDC has chosen to continue emphasizing the supplier linkage initiative's first objective as a means to keep the program viable. Although it is considering establishing a membership fee, NWSCDC does not now receive direct compensation for the staff time and resources it expends on the supplier linkage project. The organization must depend on grants, and for those it must produce evidence of success in the form of new contracts between large corporations and locally owned firms.

A Bold Vision—The Future of Supplier Linkage

Virtually all of the local vendor contracts established through the Supplier Linkage program have been for basic maintenance, repair, and operations (MRO) supplies, rather than the specialized equipment Eaton uses in production. NCD Division Manager Tom O'Connell asserts that the program focused first on these MRO contracts because they were relatively easy to establish and provided successful examples of local supplier linkages, which could be built upon to expand the

network. O’Connell and Curtis Scott, who oversees Eaton NCD’s involvement in the Supplier Linkage program, agree that the focus on establishing linkages with existing local companies was largely successful, but that aspect has now essentially reached its saturation point for two reasons. First, the bulk of the plant’s basic MRO needs are now met by the existing contracts, so creating contacts with additional suppliers would only work at cross-purposes with the plant’s goal of becoming leaner and more efficient. Second, and more significantly, Eaton concluded that no local firms could meet its needs for high-tech core components for its electronic switching systems in terms of either volume or quality.

Since much of Eaton’s annual spending is on highly technical components, the contracts that do exist represent a drop in the bucket of what both Eaton and NWSCDC would like to establish. Thus, the challenge for the partners is to create a local supply network for Eaton’s highly specialized production needs. The idea of enticing some of Eaton’s current vendors to relocate to Milwaukee spawned a vision of creating a lean manufacturing campus, a sort of industrial park in the Northwest Side neighborhood that would house a network of companies to supply the community’s large corporations.

The supplier campus vision is based on Eaton’s belief that the future of its business depends on faster design and launch cycles and reduced production costs, both of which are improved by having local suppliers. Because NCD produces highly technical and specialized goods, it likewise purchases highly specialized supplies such as sheet metal and magnetics, often available from one or just a few suppliers. If there is a problem with one of these inputs, NCD typically must halt production while its engineers travel to the supplier’s location to work with them to solve the problem. If suppliers were local, there could be more ongoing communication and cooperation to ensure that Eaton’s production needs were being met and less downtime, thus reducing costs. Closer proximity to sole-source providers would also give Eaton greater oversight and quality control.

As of early 2001, however, the concept of a lean manufacturing campus remained just that. Part of the difficulty lies in identifying and arranging financing for a suitable parcel of land. Another is the fact that Eaton did not make significant investments in the supplier linkage project from mid-1999 through the end of 2000. Bartlett attributes this to two overriding events in the company’s Milwaukee operations: the July 1999 sewage flood and the discussions over whether to close the Cutler-Hammer operation within the plant. These combined events, which set back Eaton’s business by as much as 18 months, occurred during a tumultuous time in the defense industry, making it too tenuous, in Bartlett’s words, for Eaton to implement sweeping business changes, as the supplier campus concept would require.

By late 2000, things appeared to be shifting so that the plant could renew its commitment to the supplier linkage initiative. The general feeling among the defense industry, Bartlett indicates, is that after ten years of contraction in Navy shipbuilding, the Bush administration will need to build more ships. In addition, the Secretary of the Navy has committed to utilizing electronic drive technology pioneered by Eaton on the Navy’s next new ship. Based on anticipated expansion in the end market, Eaton is positioned for growth in 2002 and beyond, and much of it is expected to take place within the Milwaukee plant as the company centralizes more of its manufacturing in one location. Along with this growth will come a renewed focus on and

investment in establishing the supplier campus, projected to be in place by the end of 2001 or early 2002.

The social entrepreneurship component of the Supplier Linkage program is recognized by both Eaton NCD and NWSCDC as a bold vision: creating new companies that leverage neighborhood linkages in order to create jobs and overall value. In seeking to establish or recruit companies to fit the supply chain needs of the existing manufacturers, the partners hope to capitalize on the unique conditions of the Northwest Side neighborhood: the needs of the large companies and the benefits of geographic proximity to them; the current social and political interest in inner-city development; the available labor force in the neighborhood; and available inner-city real estate. These are precisely the kinds of advantages identified for inner city neighborhoods by Professor Michael Porter in his influential work on the competitive advantage of the inner city as a business location.⁸

Conclusion

The results of the projects undertaken within the rubric of the Eaton–NWSCDC partnership appear somewhat mixed. Graduates of the welfare-to-work program lost their jobs in a company downsizing. The purchasing contracts for local companies developed through the Supplier Linkage program have been only for basic MRO needs and a fraction of the Eaton NCD plant’s total annual purchasing. Prospects for expanding the program to create or bring in companies to meet Eaton’s production needs and thereby bolster the local economy—the broader, bolder vision of the alliance—are uncertain. Bartlett acknowledges that one could conclude there has been much more talk than action, particularly where the supplier campus is concerned.

The longer view, however, is that the efforts have been so successful in meeting Eaton’s basic business needs that the corporation is now anticipating making a substantial expansion in the Milwaukee plant in the next two years. Moreover, the recognition the manufacturer has received for its community involvement activities has given it the credibility to successfully seek cooperation from city and state officials in planning for and accommodating that expansion. In positioning for growth, Eaton is anticipating hiring several hundred new employees and becoming integrally involved in seeing the supplier campus become reality. From this perspective, one of the biggest lessons from this case is that dramatic changes in the way a large corporation does business take time, and such business model adjustments and community relationships are subject to business and marketplace cycles, as in any business endeavor.

The Eaton–NWSCDC cooperation reflects more integral business interest than many corporate–community relationships, as it has been molded to meet the corporation’s changing needs. As such, it has become an integral part of Eaton’s business strategy and has been recognized by corporate executives as a “game-changer,” that is, the partnership is interconnected with an overall business strategy that turned around a declining plant.

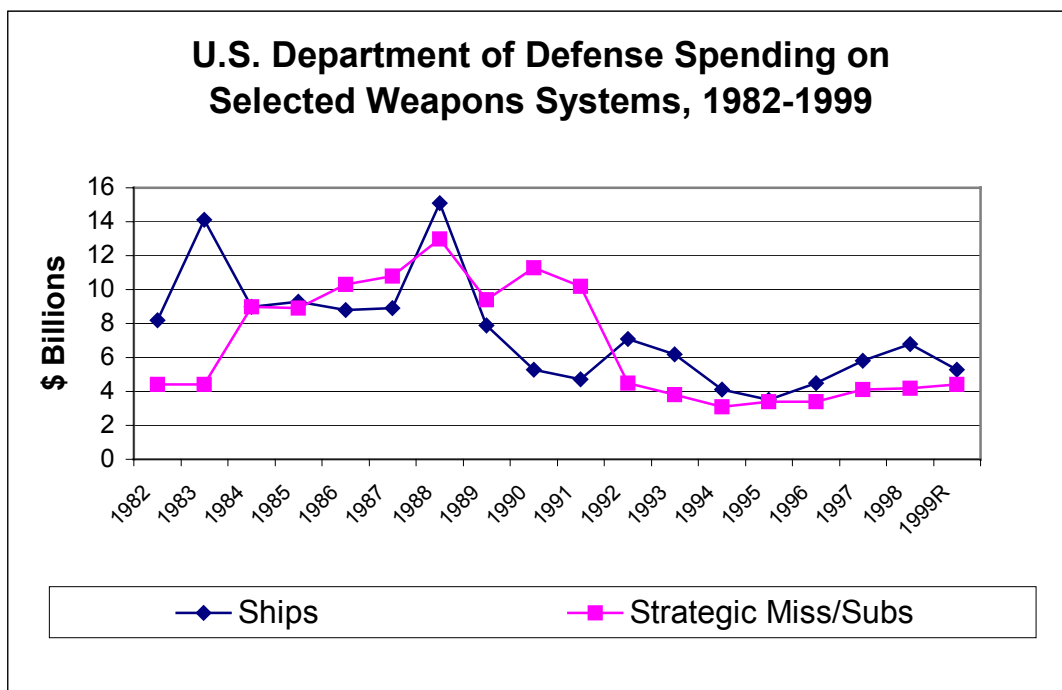
⁸ Michael Porter, “The Competitive Advantage of the Inner City,” *Harvard Business Review* 73 (3): 55-71.

Sidebar 1: Defense Industry Spending Trends

Eaton NCD’s financial uncertainties were largely a result of its participation in the defense industry, which became extremely volatile during the late 1980s and early 1990s. The profitability of the Northwest Side NCD facility was highly dependent on federal government defense spending. The U.S. defense budget underwent 14 consecutive years of decline, ending in 1998 at its lowest post-World War II level—representing the lowest proportion of the federal budget in modern history.¹

By 1999, spending on all major weapons systems except space-based systems was down sharply from the

1984–86 spending peak. Those defense appropriations with the most impact on Eaton NCD, ships and missile/submarines systems, were vulnerable to shifts in political attitudes. Ships saw a net 35% appropriations decline from 1982, representing a 65% drop from the highest year of spending on ships (1988) and a 41% decrease from the average of the 1984–86 overall defense spending peak. Strategic missiles and submarines (which are considered together as a weapons class) evened out, re-attaining 1982 levels by 1999, but still undergoing a 61% decline from their highest year (again, 1988) and a 53% drop from the 1984–86 average.²



¹ Vance D. Coffman (Chairman and CEO of Lockheed Martin Corp.), remarks presented to the Council on Foreign Relations, Washington, D.C., October 1, 1998.

² S. G. Cowen Corp., Aerospace/Diversified Technology Review Part 10, September 29, 1998.

Sidebar 2: The Northwest Side Neighborhood

Milwaukee's Northwest Side neighborhood, like many other urban neighborhoods, has undergone significant demographic and economic transitions over the course of its history. The Northwest Side was an independent suburb known as North Milwaukee from 1897 to 1929, when it was incorporated into Milwaukee. Even after incorporation, the community remained largely self-contained and self-sustaining, with vibrant residential, commercial, and industrial elements.

The Northwest Side was settled primarily by German families from the north side of Milwaukee. Two of the state's busiest rail lines dissected the community and led to its considerable industrial growth in the late 1800s; by 1915, it was one of the densest industrial districts in the Milwaukee area. In its heyday, the area was a thriving retail district as well, full of banks, restaurants, and specialty shops centered on Villard Avenue.¹

The neighborhood underwent significant transition in the 1970s. African Americans were attracted to the Northwest Side, searching for a better quality of life. Meanwhile, many of the original residents retired from the companies in the neighborhood and moved away or died. Their children, who inherited their homes, typically either became absentee landlords or sold the properties, facilitating a demographic transition.²

¹ Felicia Thomas-Lynn, "Villard Avenue Making a Comeback," *Milwaukee Journal Sentinel* January 4, 1998. Available at: <http://www.jsonline.com/news/sunday/real/0104/villard.stm>.

² Ibid.

At the same time, many city residents began shopping at the malls that sprang up at suburban highway interchanges, prompting city merchants to either move to the malls or close down. Several nearby factories that had traditionally provided good-paying jobs closed their doors. According to a study by the University of Wisconsin School of Urban Planning, factors like these led to a loss of a quarter of the jobs in the city of Milwaukee between 1970 and 1995. The Northwest Side lost only 7% of its jobs during the same period, due largely to aggressive business retention efforts.³

The Northwest Side is home to approximately 71,000 individuals and 26,000 households. The neighborhood is mostly African American (77%), with whites comprising another quarter and Hispanics, Asians, and Native Americans making up the remainder. The area is more heavily minority than even central city Milwaukee, where in 2000 blacks made up 37% of the population and whites 50%.⁴

Neighborhood household median income was estimated at \$32,097 in 2000, compared to the Milwaukee city median of just under \$33,000 three years earlier.⁵ The average median income for

³ Cited in Northwest Side Community Development Corporation, Neighborhood Partner Application for Social Compact Award, 1998.

⁴ City of Milwaukee Demographic Profile, www.milwaukeebiz.com/cli_demo_profile.html; U.S. Census Bureau, Census 2000.

⁵ City of Milwaukee Demographic Profile, www.milwaukeebiz.com/cli_demo_profile.html.

the years 1997 to 1999 was \$43,055 for Wisconsin and \$39,657 for the U.S.⁶

The Northwest Side neighborhood homeownership rate is estimated at 54%, higher than the Milwaukee city rate of 45% but lower than the metropolitan area as a whole at 61%.⁷

⁶ U.S. Census Bureau, Current Population Survey, March 1998, 1999, and 2000.

⁷ U.S. Census Bureau, Census 2000.

Sidebar 3: Northwest Opportunities Vocational Academy (NOVA)

Although originally focused on business development activities, since 1994 NWSCDC has begun a number of job training and placement activities. One of the largest efforts is its school-to-work program called NOVA, an acronym for Northwest Opportunities Vocational Academy. Created in 1993 with help from the Northwest Business Council, NOVA is the first and largest program of its kind in Milwaukee. Eaton NCD played a key role by winning financial support from other local companies.

NOVA's goals are to graduate students who are academically and socially prepared to enter the job market and/or continue their education at colleges or technical schools, and who are instilled with compassion and social awareness. Each year NWSCDC, which operates NOVA, educates one hundred at-risk students, grades seven through twelve, from the Northwest Side who are committed to their education. Many of them are placed in internships with local companies, which provide advice, tutors, mentors, career exploration, and workplace visits.

The school is structured in three parts. Division I enrolls 35 to 40 students who have failed the seventh or eighth grades. Group bonding and social awareness begin at this level, as students work cooperatively within the classroom. Each year 20 or more students are expected to be promoted into Division II, which has 40 to 50 students. Here, academic rigor is continued and enhanced, and social awareness becomes a focus. With a flexible schedule and progression, students in Division II have the opportunity to move at or above their

grade levels, as long as they meet the academic standards set by the staff.

The Senior Institute is the final year for NOVA students and is designed to serve as a transition into adulthood. During this year, students are required to intern with selected area businesses while working to fulfill their portfolio requirements, demonstrating the skills they have acquired. Students graduating from NOVA have the options of enrolling in a college or university, continuing training at a technical school, or entering the workforce.

Sidebar 4: Lean Manufacturing and Implications for Supply Chain Management

The term *lean manufacturing* was coined in 1989 by researchers at Massachusetts Institute of Technology, who set out to determine why Japanese companies were so good at making cars. They concluded that the Japanese manufacturing model was fundamentally different from American manufacturing and dubbed it lean manufacturing.¹

At its core, lean manufacturing contrasts sharply with traditional American manufacturing, which is based on the principles of Henry Ford. The latter involves a “push” schedule: fluctuations in end-customer demand and problems in production are buffered by a vast bank of finished units forced upon vendors and by equally vast buffers of parts at every stage of production. Lean manufacturing, on the other hand, uses less of everything: half the human effort in the factory, half the manufacturing space, half the investment in tools, and half the engineering hours to develop a new product in half the time. It requires keeping far less than half the needed inventory on site, results in fewer defects, and produces a greater and ever growing variety of products.² As a result, lean manufacturing focuses on the entire business—particularly how the various elements and processes work together—rather than on boosting manufacturing productivity.³

Lean manufacturing emphasizes simple techniques and basic metrics. Becoming

¹ Karthik A. Rao, “Review of Jeffrey K. Liker, ed., *Becoming Lean: Inside Stories of U.S. Manufacturers.*” *Monthly Labor Review*, January 1999, pp. 50-51.

² *Ibid.*

³ “Lean Manufacturing Now Dominant U.S. Strategy.” *Technical Training* 9 (2): 2-3.

lean requires a focus on “touch labor”—the amount of time workers spend on the product, the number of steps in assembly, where the product moves from one station to the next, and even the distance that each part travels before the finished product leaves the building.⁴

Lean manufacturing improves efficiency and saves production costs and time. A worker does not start his day by gathering drawings and instructions from one point in the facility, specific parts from another location, and fasteners from a third. Rather, a kit of parts, tools, and instructions is delivered to the work site.

Nor does lean manufacturing tolerate awkward processes or clutter. Work stands that can support the worker, tools, and parts replace stepladders. Job-specific toolkits, assigned to each station, replace the once ubiquitous personal tool carts.

Another change in philosophy is that assembly processes should continually be critically examined and modified to improve efficiency—in Japanese, this is the notion of *kaizen*. In human resource management terms, this fundamental aspect of lean manufacturing results in a bottom-up approach to decision-making, with workers trained to find the core cause of a production problem and to work in teams, sharing ideas to improve slow or difficult assembly operations. The function of managers is to implement those ideas.

⁴ “Lean Manufacturing.” *International Defense Review* 32(6).

The flow of parts, or *kanban*, is critical in lean manufacturing. The concept of *just-in-time*—defined as “the right part at the right time in the right amount”—focuses on producing only what is needed. Together, the two concepts reduce inventory and allow for better production scheduling.⁵

Because of this emphasis on the flow of parts and avoiding keeping extraneous parts or finished products on hand, managing the supply chain becomes an integral component of lean manufacturing. To realize the full productivity benefits of lean manufacturing, vendors and buyers should work together to adopt lean systems throughout the supply chain and ferret out waste.⁶

The two key challenges for manufacturers and suppliers are short-notice changes in demand and cancellations of orders. Better coordination and communication between supplier and customer are needed to keep production flowing smoothly⁷

The concept of lean manufacturing has become popular in American manufacturing, with 74% of the respondents in a 1998 survey of mid-level manufacturers naming lean manufacturing as their dominant strategy to enhance global competitiveness. .⁸

Another study of 249 small suppliers of automotive component parts concluded that adoption of lean concepts had a positive impact on performance.⁹

Automaker Freudenberg-NOK adopted lean systems throughout its North American operations in 1993 and in the first year cut project lead time by 50%, work-in-process inventory by 85%, travel distance on the factory floor by 63%, and scrap by 17%. Productivity increased by 52%.¹⁰

In 1999 a group of people applied the Pentagon’s Lean Aircraft Initiative to assembling the weapons bay door of a Lockheed Martin F-22. Once they understood the flow—using wall charts, Lego building blocks, and adhesive notepads—they were able to eliminate 40% of the steps, 70% of the distance parts traveled, and 70% of the touch labor.¹¹

⁵ ”Lean Manufacturing.”

⁶ “Involving Entire Supply Chain Key to Industry’s Success with Lean Manufacturing, Freudenberg-NOK Executive Says.” *PR Newswire* August 2, 1994.

⁷ “Involving Entire Supply Chain Key to Industry’s Success...”

⁸ “Lean Manufacturing Now Dominant U.S. Strategy.”

⁹ Rao, 1999.

¹⁰ “Involving Entire Supply Chain Key to Industry’s Success...”

¹¹ ”Lean Manufacturing.”