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MEP Partnerships and the SBDC Program

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Overview

This paper examines the relationship between MEP centers and the SBDC program. It begins with an overview of relationships that MEP centers have across the system with various public and private organizations that provide services to small and mid-sized manufacturers. More in-depth case studies of three MEP centers and their relationships with SBDCs are profiled. Preliminary conclusions are provided based on the study's findings.

Context for Service Coordination

A key element of the Manufacturing Extension Partnership, managed by the National Institute of Standards and Technology (NIST) at the U.S. Department of Commerce, is the development of coordinated local networks of service providers in the public and private sector to serve the needs of small and mid-sized manufacturing enterprises. Across the country, MEP centers have increasingly established and maintained relationships with third party service providers. As of June 1997, the MEP reporting system indicates that more than 2,600 organizations are associated in some way with 68 MEP centers. This number understates the actual amount of organizations involved in the MEP, however. Some centers do not report information about organizations that various center staff informally use to provide assistance to manufacturers. In addition, data from the remaining seven relatively newer centers which describes the system of 75 MEP centers is not included in this analysis. But certainly this number is more than three times the size of the 750 affiliated organizations reported by 40 centers as of at the end of 1995. Moreover, the average center reported 38 organizational affiliates, compared to 19 such relationships at the end

of 1995. These numbers suggest that MEP center affiliation with third party service providers has continued to grow.

Many of these relationships are with small business development centers (SBDC). As of June 1997, 59 percent of MEP centers report having relationships with SBDCs. In comparison, more than 90 percent of centers have relationships with universities and economic development organizations. The next most common type of organizational relationship, for 66 percent of the centers, is with community colleges and technical institutes. Fifty-nine percent of centers have relationships with industry associations, 57 percent with other non-profits, and 48 percent with consulting companies. (See Table 1.)

Table 1. Affiliated Organizations

Type of Organization	% of centers reporting affiliation
Economic development organization	97%
University, 4-year college	95%
Community/vocational College	66%
Industry association	59%
SBDC	59%
Other non-profit	57%
Consulting company	48%
Other government	38%
Federal laboratory	38%
Extension services (cooperative, manufacturing, engineering)	31%
Large company	31%
Electric, power utility	31%
Training organization	29%
Other for-profit	26%
Vendor	10%

Base number of centers reporting is 68. The 10 New York centers reporting results have been treated as one center because they reported in aggregate.

Source: MEP semi-annual report, June 1997.

In our earlier (Phase I) study *Coordinating Industrial Modernization Services*, we examined the development, operation, and effects of efforts to promote local service coordination in the MEP

system.¹ The study found that MEP sponsorship has led to increased service coordination not readily obtained through individual center efforts alone or through demands of state governmental funders. Increased service coordination, in turn, has mostly improved the assistance delivered to firms. The study noted that there were drawbacks to coordinating service delivery with third party organizations including increased costs (e.g., identifying service providers, lost learning within the organization, information sharing, contract management and monitoring projects), difficulties in maintaining quality across partner organizations, delays in timely service delivery, and inter-organizational tensions. At the same time, many benefits associated with service coordination emerged, including avoiding the duplication of services, tapping specialized skills, spreading development costs of new tools, broader marketing to new industrial customers, improving access to particular industries and areas, flexibility in staffing and the delivery of services, improving service quality, enhancing visibility in the locality, and strengthening state and local support.

Phase II of this study probes changes and developments in how MEP centers coordinate services with partner organizations, assessing the impacts of service coordination on centers and firms, and refining and disseminating recommendations for best practices in service coordination. Among the data sources are case studies from MEP centers, including several MEP centers examined in Phase I of the study. The centers examined in Phase I of the study included: Chicago

¹ Shapira, P. and Jan Youtie, with G. Kingsley and M. Cummings, *Coordinating Industrial Modernization Services: Impacts and Insights from the U.S. Manufacturing Extension Partnership*. Atlanta, Georgia: Georgia Institute of Technology, 1996.

Manufacturing Center (Chicago, Illinois) area, Georgia Manufacturing Extension Alliance (state of Georgia), Great Lakes Manufacturing Technology Center (Cleveland, Ohio area), Manufacturing Extension Partnership of Southwest Pennsylvania (Pittsburgh, PA area), Minnesota Manufacturing Technology Center (state of Minnesota), Oklahoma Alliance for Manufacturing Excellence (state of Oklahoma). The design of Phase II calls for revisiting four of these centers—Chicago Manufacturing Center, Georgia Manufacturing Extension Alliance, Great Lakes Manufacturing Technology Center, and Manufacturing Extension Partnership of Southwest Pennsylvania—and adding two new centers—Florida Manufacturing Technology Center and Industry Network Corporation—as case study subjects.

Three of these centers—Great Lakes Manufacturing Technology Center, Georgia Manufacturing Extension Alliance, and Manufacturing Extension Partnership of Southwest Pennsylvania—have had relationships with SBDCs are some time in the history of the center. The paragraphs below summarize the experiences of these centers with respect to their SBDC relationships.

Great Lakes Manufacturing Technology Center

The Great Lakes Manufacturing Technology Center (GLMTC) is one of the first three centers in the NIST Manufacturing Extension Partnership, established in 1989 through its host organization the Cleveland Advanced Manufacturing Program (CAMP). GLMTC is one of seven Edison Technology Centers in Ohio. GLMTC's initial formation included affiliations with several local educational institutions, including Cleveland State University's Advanced Manufacturing Learning Center (AMLC), Cuyahoga Community College's Unified Technologies

Center (UTC), Case Western Reserve University's Edison Sensor Technology Center (ESTC) and the Center for Automation and Intelligent Systems Research (CAISR). These initial affiliations remain, though at various levels of activity—the Advanced Manufacturing Learning Center being the most active. The 1998 budget for GLMTC totals \$8.88 million including \$1.30 million in state support, \$2.98 million in federal support, and \$4.59 million in industrial support. (See Table 2.) GLMTC employs 47 full-time equivalent in-house staff. The number of initial visits in fiscal year 1997 was 220, resulting in three assessments and 35 projects. In total, 253 projects were booked in fiscal year 1997. Sixty-three percent of the projects were done in house and 37 percent were subcontracted to third-party providers. Project revenue exceeded \$3.1 million with the average value of a project at \$15,000. This revenue was split about 50:50 between GLMTC and third-party providers.

In the spring of 1994, CAMP received \$250,000 in federal funds a year for three years from NIST to create a manufacturing-focused Small Business Development Center (SBDC) called the Northern Ohio Manufacturing (NOM) SBDC. CAMP originally saw the pilot program as a way to more fully serve manufacturers that needed financial and marketing services in the course of implementing technically-oriented changes. However, CAMP found that manufacturers did not want traditional SBDC business planning services, and the core SBDCs in Ohio did not have the skills and experience to work with manufacturers. As a result, CAMP/GLMTC used the funds to set up industrial marketing, planning, and finance capabilities and hired corporate finance, marketing, and commercial banking professionals from outside the SBDC system. The NOM-SBDC staff served about

22 percent of GLMTC's manufacturers (about half of which were new to GLMTC) and generated 13 percent of GLMTC's industrial revenue.

When the three-year pilot project ended, NOM-SBDC was brought in-house, without an association with the "SBDC" name. The industrial marketing function was most often demanded by clients, so GLMTC maintained it as part of the in-house consulting services group. The other former NOM-SBDC staff members have been reassigned. Grassroots relationships with the local SBDC organizations were maintained, with CAMP/GLMTC staff referring requests from companies in financial difficulties unable to pay for services to the SBDC and other public organizations. At the statewide level, however, the state SBDC program simultaneously set up a parallel network of "manufacturing SBDCs" to link Ohio's SBDCs and MEP, including a planned manufacturing SBDC in Kent in the northeastern Ohio area.

Georgia Manufacturing Extension Alliance

The Georgia Manufacturing Extension Alliance (GMEA) provides industrial extension and technology deployment services to the state's 10,000+ small and mid-sized manufacturers. The lead organization in GMEA is Georgia Institute of Technology (Georgia Tech) Economic Development Institute, which has a 35-year history of industrial extension service provision focused on rural Georgia. To expand the capacity of the state-sponsored service a proposal was submitted to the competitively-reviewed federal Technology Reinvestment Project (TRP) in 1993. Georgia Tech proposed a new structure, the Georgia Manufacturing Extension Alliance, that would partner Georgia Tech with the University of Georgia Small Business

Development Centers (SBDC), the state Department of Technical and Adult Education's (DTAE) Quick Start program, and Georgia Power Company Technology Applications Center (TAC). Over a two-year period, federal funding of \$6.6 million was committed to GMEA, matched by an equivalent amount of state, in-kind and other funds. In 1996, GMEA was "rolled over" (after an external review) into civilian-side funding from NIST, with about \$2.3 million in federal funds, again matched by state monies and revenues. In Year 4, GMEA's federal funding is reduced from 50 percent to 40 percent of the operating budget. Client fees are expected to make up this difference. From Year 2 to Year 4 client fees are budgeted at more than three times the levels as in Year 2.

GMEA now operates a network of 18 regional offices (compared to 13 offices at the end of 1993), staffed with industrially-experienced engineers and business professionals. Field office services are supported by program skill centers in areas such as quality, manufacturing information technology, human resource development, strategic management assistance, energy, and environmental services. From February 1994 to December 1996, GMEA staff of 62 full-time equivalent field engineers and specialists served over 2,100 companies, equivalent to 21 percent of all manufacturers in the state. Included here were 39 percent of Georgia manufacturers with 20 to 499 employees. GMEA customers were served through 2,647 informal engagements, technical projects and assessments; 11 network group service projects; and 240 workshops and seminars. Thirteen percent of GMEA's informal engagements, technical projects, and assessments involved industrial marketing and business services. Roughly 36 percent of closed projects involved referrals to other organizations or private-sector consultants and vendors.

Since GMEA's original design, relationships with the three original partners have changed and relationships with other partners have become more prominent. The University of Georgia SBDC—now called Business Outreach Services (BOS)—provides pre-venture business planning, financial consultation, capital acquisition primarily through SBA loans, and marketing assistance through a network of 19 regional offices and 60 employees. The SBDC works with a large volume of clients in a year—at least 125 per staff member. Most clients have 10 or fewer employees, and most are in the retail industry. Only 7 percent of SBDC/BOS clients are manufacturers. Initially, the SBDC/BOS received about \$175,000 a year in the first two-year period (February 2, 1994 to June 30, 1996), and \$95,000 in the third year (July 1, 1996 to April 30, 1997), matched by an equivalent amount of cash resources. This money primarily went to support an SBDC/BOS counselor (with an engineering background) on-staff at the EDI main office on Georgia Tech's campus. This counselor was to help develop an assessment tool with a financial analysis component, and to serve as a point of contact for field engineers with problems for which SBDC expertise was relevant. This counselor served only 37 manufacturers through 43 assessments and technical assistance projects during GMEA's first three years of operation. In addition, GMEA co-located with the SBDC/BOS at eight sites around the state.

In year four, there was no formal contract with the SBDC/BOS. The SBDC/BOS program in fact spent only 60 percent of their year three grant. Further, the SBDC/BOS system desired to bring back into (and fund) the counselor previously supported by GMEA. Nevertheless GMEA management has characterized the relationship between Georgia Tech's GMEA management and the University of Georgia

SBDC/BOS leadership "as the best it has ever been." The statewide SBDC/BOS leadership recently stressed the importance of serving small manufacturers at its annual meeting. However, much of the inter-organizational activity occurs informally at the grassroots level rather than as a result of formal top-down policies. In the GMEA Norcross office (one of the seven GMEA/SBDC co-locations), the two organizations split a suite. The two share administrative training expenses, telephone calling systems, a local area network and printers, and connection to the Internet through Georgia Tech's system. The SBDC's regional director reports that thanks to Georgia Tech's connection, the SBDC's staff can obtain information much more quickly than when they used to have to wait for responses from the University's main campus. The two groups participate in a monthly brown bag lunch and staff meeting. They jointly hold training programs (most recently for loan offices from the local banks), and, for programs not jointly-sponsored, for example, Georgia Tech's courses on simulation and product development, SBDC/BOS staff were invited to and did participate in these training programs. They have taken out advertisements together and have jointly visited manufacturing clients. Georgia Tech staff both receive referrals from and provide referrals to SBDC/BOS staff. Georgia Tech staff tend to refer small start-up businesses to the SBDC/BOS. They also use the SBDC/BOS's for applications involving Geographic Information Systems (GIS).

Both organizations report improvements in the appropriateness of the referrals to one another as a result of improved understanding of organizational capabilities. GMEA's director estimates that GMEA/SBDC co-locations save approximately \$20,000 per office. The partnership has also generated new funding.

In the fall of 1997, GMEA's Augusta office and BOS/SBDC were jointly awarded \$80,000 from the Savannah River Regional Diversification Initiative to form a product and technology support center.

Manufacturing Extension Partnership of Southwest Pennsylvania

The Manufacturing Extension Partnership of Southwest Pennsylvania (MEP-SWPA) was established in March 1994 as part the national Manufacturing Extension Partnership (MEP) program of the U.S. Department of Commerce, National Institute of Standards and Technology. The core organization of MEP-SWPA is Southwest Pennsylvania Industrial Resource Center (SPIRC)—one of eight Industrial Resource Centers (IRC) sponsored in 1988 by the Commonwealth of Pennsylvania to assist small and medium-sized manufacturers in the state. As part of the expanded MEP-SWPA, SPIRC has now developed a service partnership with three other organizations covering a 13-county area of Southwestern Pennsylvania (including the Pittsburgh metropolitan region) with some 4,000 small and mid-size manufacturing enterprises (SMEs).

The new program started in March 1994, with an allocation of federal funds of \$3.25m over two years matched by an equivalent amount of state funds. In Year 1, about \$0.8 million goes to the partners, who also have to provide a 1:1 match. The total program budget is about \$4.06 million a year (\$8.13 million over the two year period).

In its first three years, MEP-SWPA was a partnership of 16 organizations, with SPIRC being the lead organization. The origins of this arrangement lied in the response to the announcement in 1993 of the federal government's Technology Reinvestment Project (TRP). The TRP

announcement stimulated attempted responses from both SPIRC and the Ben Franklin Technology Center (BFTC), each with their own proposals with different groups of service providers. After NIST - the manager of the TRP's technology deployment programs - indicated that only one proposal from the area would be viable, SPIRC and BFTC merged their partner groups together. The merged group included three SBDCs based at area universities and colleges as well as state-sponsored non-profit organizations, technology centers, university centers, community colleges, and non-profit economic development groups . Although SPIRC management knew upfront that the size of the merged group would be unmanageable, the result was an enlarged group of more than 16 organizations involving technology centers, universities, community colleges, small business development centers, and economic development groups, with SPIRC as the lead organization.

With the implementation of the MEP, marketing and outreach to potential new customers was conducted through the larger service provider network, resulting in more manufacturers being contacted, visited, and served. In 1993 - the last full year before MEP funding, SPIRC conducted about 200 initial meetings and implemented around 80-100 projects. Most of these projects were operations reviews involving a formal multi-day assessment with recommendations. A further 40-50 projects were referred to outside consultants. In the first year of the MEP (3/94-3/95), with additional resources and partners, the program conducted over 650 initial meetings and implemented more than 160 projects. At the same time, MEP management reported a tendency of affiliates to “keep” manufacturing clients rather than referring them to another affiliated organization. The development of the MEP-

SWPA service network was a complex process, involving many meetings and negotiations between SPIRC and the other service providers. Concerns about what each partner could and would contribute had to be addressed, while fears about clients of one program being "stolen away" by other programs had to be allayed. In the end, all but one of the service partners was able to come up with matching resources (in cash or in-kind). The exception was CTC, which could not use its other federal funds as match. However, SPIRC was able to cover this through its own resources. Of the additional federal funds (\$1.625 million) in the first year, just over 50 percent was budgeted either to SPIRC or to BTFC. Of the balance, universities were budgeted 16 percent, technology centers 10 percent, community colleges 9 percent, and economic development organizations 6 percent. Among the partners, the most productive in delivering projects included BTFC (which in year 1 completed 40 projects - mainly in technology development assessments and product development assistance) and the Center for Hazardous Materials Research (which conducted about 30 environmental compliance audits). One of the Small Business Development Centers (at Duquesne University) was particularly active in business management assistance (14 projects), while the University of Pittsburgh's Manufacturing Assistance Center conducted 11 informal engagements and 8 projects in varied areas of manufacturing and computer-controlled technology. One of the community colleges (CCAC) initiated 16 training assessments and events, while a second (Waynesburg) conducted 9 training assessments and events. On the admittedly very crude measure of delivered activities for allocated budget, the best performers were the SBDCs, BTFC, non-profit technology centers, and community colleges. The universities as a group were slightly behind.

The economic development groups delivered the fewest activities per allocated budget.

The major change in the MEP-SWPA affiliations has been a reduction in the number of affiliated organizations from 16 to three. Following its third year review and Year 4 reduction in NIST MEP funding from \$1.625 million to \$1.213 million, SPIRC reduced its affiliate relationships. The process involved assessing affiliate relationships based on several factors: whether the relationship added value, e.g. complemented SPIRC's service offerings, enhanced its fee income, the performance of the organizations in delivering quality services; the importance of the NIST MEP funding to the organization; and its relationship with SPIRC.

SPIRC designed three organizations as full MEP affiliates: Concurrent Technologies Corporation (CTC), formerly the Center for Hazardous Material Research CHMR; Duquesne University's Institute for Economic Transformation (IET); and the Steel Valley Authority. In severing partnerships with the other former MEP affiliates, SPIRC found that some organizations themselves chose to withdraw. Relationships with other former affiliate organizations were strained at the management level. At the service delivery level, SPIRC has maintained ongoing relationships with many of these organizations—particularly the SBDC at St. Vincent's College, by referring potential clients to one another.

Preliminary Conclusions

The second phase of our work on the coordination of industrial modernization services is still in process, so the observations and conclusions offered here are preliminary. However, from what we have learned so far, we can make the following points:

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- The need and opportunity to better coordinate manufacturing extension services with SBDCs is being recognized at state and local levels by MEP affiliates. It is clear that there are important mutual benefits for MEP and SBDC service providers and business customers when services are coordinated, effective referral systems are in place, information is shared, and joint planning occurs.
 - To be most effective, MEP and SBDC coordination has to occur at the local program level, with strong relationships and mutual trust built between staff and their respective centers. Co-location is one way of facilitating these relationships, although other forms of coordination are possible and necessary too. In each locality, MEP and SBDC coordination takes different forms, depending on local conditions and institutional arrangements and capabilities.
 - Federal policy should encourage local MEP's and SBDC's to better coordinate, but federal policymakers should avoid developing standardized models (which do not take into account local differences). Moreover, SBDCs should not be exempt from requirements applied to all service providers that they offer services that are effective, responsive and of high quality as a precondition for continued MEP affiliation. As our case research indicated, MEP's centers facing new budget situations or changes in customer requirements need to have the flexibility to adjust their partner arrangements and to benefit from learning about partner capabilities in relationship to customer needs so as to optimize MEP service delivery.