

**College: Manufacturing Technology Center
Wytheville Community College**

Location: Wytheville, Virginia

Practice: Manufacturing Technology Center

Helping manufacturers get the education and technological capacity they need to compete

Year Started 1994

Budget \$1 million

Program Participants N/A

College FTE 10,000

Target Sector Manufacturing

Staff Size 12 FT

Structure The center is partnered by five regional community colleges, and is located on the community college campus.

Key Outcomes Job creation
Business expansion and relocation
Significant impacts on local high-tech education levels

Introduction

Recent technology advances have been slow to reach many communities in southwestern Virginia, due in part to mountainous terrain and low population density. On top of that, downsizing of the coal industry has reduced the number of jobs available in that traditional sector.

In response, five community colleges in the region joined together to create the Manufacturing Technology Center* to help the region's 700-plus manufacturers acquire and use current technology and thereby become more competitive.

Community Background

The 17 southwestern Virginia counties that constitute the Manufacturing Technology Center's (MTC) service area are spread across a large and diverse region. Consequently, community economies vary greatly. Some are stable, while others face challenges brought about by the collapse of both the coal and tobacco industries. Unemployment rates range from 4 to 20 percent, depending upon the industry makeup.

Such variance aside, the entire region is distressed. Overall, it has slow job growth,

*Members are Mountain Empire Community College, New River Community College, Southwest Virginia Community College, Virginia Highlands Community College, and Wytheville Community College

Program focus	Sector specific	Economic condition	Economic base			Target populations
			Mfg	Agr	Svc	
Business services and training	Yes	Distressed	28	3.5	27	Dislocated workers, economically disadvantaged, general, firms, youth/students

Service Area Carrol, Floyd, Montgomery, Lee, Wise, Scott, Buchanan, Tazewell, Russell, Bland, Dickenson, Washington, Smyth, Wythe, Grayson, Pulaski, and Giles Counties

<i>Total Population</i>	376,000
<i>Median Household Income</i>	\$23,000
<i>% Below Poverty Level</i>	19.1
<i>% Unemployment Rate</i>	10.6
<i>% Minority Population</i>	2.8
<i>% Rural Population</i>	83.5
<i>% High School Graduates</i>	54.4
<i>% College Graduates</i>	7.7

outmigration, high levels of unemployment, high levels of poverty, and low levels of educational attainment.

Program Description

Created in 1994, the nonprofit MTC seeks to provide training and technology to manufacturers that will help them rank among the best in the world. To accomplish this goal, the center offers both customized services to match industry's particular needs and general services to meet the broader needs of the region's population. The center particularly focuses on smaller manufacturers (most have fewer than 60 employees) that typically find it more difficult to access cutting-edge technology. The center also uses benchmarking to learn from other similar programs. The Manufacturing Technology Center offers the following five principal services.

Environmental Compliance

More than 40 manufacturing companies have received assistance with and training in environmental compliance. Topics include environmental compliance at the workplace, hazardous waste disposal, grant writing, recycling training, pollution prevention training, and permitting. The center also

runs a peer-to-peer mentoring campaign twice monthly that provides networking opportunities. All services are free, without threat of punitive action or breach of confidence.

Mobile Learning Unit

This state-of-the-art mobile classroom delivers on-site training and technology demonstrations to manufacturing companies and secondary schools in the region. Housed in a tractor-trailer, the classroom contains 12 Pentium-class personal computer workstations, printers and plotters, stereo receivers, cassette and CD players, a television monitor, and a VCR. This service helps close the digital divide in the region.

Engineering and Management Consulting

Each year, the center helps more than 100 of the region's firms with engineering product and process development; computer-integrated manufacturing; advanced design and tooling; production and plant management, and marketing. Each consultation consists of on-site assessments by a staff member, one-on-one consulting, the research of new equipment and technologies, and access to MTC's large research network.

Workforce Training

MTC provides a variety of direct training and workforce development programs to manufacturers in the region. These include communications skills, team development, conflict management, and problem solving.

Computer Integrated Manufacturing and Advanced Design

The final component of the MTC is a high-performance manufacturing center. Specializing in leadership, coordination, and technical expertise, staff members teach CIM, CAD, CAM, rapid prototyping, and lean manufacturing to area firms. More than 30 training events have been completed in lean manufacturing technology alone. The center also helps industry, community colleges, and secondary schools evaluate, distribute, and implement these technologies. For example, the center has promoted three-dimensional solid modeling to twelve colleges.

Outcomes

The center's success is evident in a number of ways:

- By 1998, nearly 500 jobs had been added or retained in the region.
- More than 1600 students and employees have been trained.
- As a result of MTC's technology deployment efforts, companies have made nearly \$18 million in capital investments that help improve the region's competitiveness.

Yearly budgets for the center run nearly \$1 million and come from fees for services and grants. Grantors include the State of Virginia, the Tennessee Valley Authority, the Appalachian Regional Commission, and Virginia's Center for Innovative Technology.

Strengths, Challenges, and Replicability

Among its strengths is the fact that the program is led by the private sector. Presidents of companies and plant managers, for example, serve in an advisory capacity. Another strength is the program's diverse source of funds.

Challenges include keeping up with rapidly changing manufacturing technologies. Indeed, maintaining state-of-the-art facilities is a formidable task. The MTC service area is also very large, which sometimes presents difficulties in keeping up with all industries within the region. Finally, it is difficult to raise funds for manufacturing purposes. In Virginia, as in many other states, the perception exists that manufacturing is not relevant for the future—a perception that can be tough to correct.

This project is a useful model for national dissemination. Many rural communities could benefit from a consortium of small institutions in a sparsely populated region working together to assist local companies adjust to the new economy.

For more information, contact:

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