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ABSTRACT

In 1988, nine institutions operating advanced technology centers (ATC's) to provide workers with up-to-date technical skills formed the National Coalition of Advanced Technology Centers (NCATC). The center was established to increase awareness of ATC's, serve as a forum for the discussion and demonstration of new and underused technologies, develop and facilitate a resource exchange program, and establish partnerships between public and private entities to enhance the performance of ATC's. There are currently over 70 center and associate members of the NCATC, all of which share a commitment to workforce development and industrial modernization. To help define the role of community and technical colleges in this process, the NCATC has developed a proposal to the nation, suggesting that NCATC members: (1) lead the establishment of training programs for high skill workplaces; (2) be the first choice to develop college extension programs in industrial and manufacturing technology; (3) facilitate the transition of science and math students from associate to baccalaureate degree granting institutions; (4) support small businesses by functioning as manufacturing training centers and shared flexible computer integrated manufacturing centers; (5) serve as test-beds for a national apprenticeship program; (6) provide continuous improvement training, including quality management training, for workers and companies; and (7) foster manufacturing partnerships and consortia. A list of member institutions and a map of their locations are appended. (MAB)

National Coalition of Advanced Technology Centers

PROPOSAL TO THE NATION

"If America is going to succeed in gaining control over its economic destiny, its people must do it. No single solution is capable of delivering it into prosperity. No government program will bail it out.

It's everybody's job! Every person, every business, and every community in America must mobilize the resources at their disposal if America is to remain globally competitive and compete in the global economy."

1992 NCATC Chair

OUR HERITAGE

In the early and mid 1980s, many industries had their first serious encounter with what has today become specialized technology in the modern manufacturing facility. For the first time, the skill level of process and production employees, technicians, and support personnel became critical to the successful implementation and use of state-of-the-art production tools. In response to the need for a new renaissance worker, many educational institutions developed specialized training programs and facilities to train and retrain workers. Out of these efforts, unique education facilities evolved, that today are referred to as advanced technology centers.

In 1988, with the help of the Tennessee Valley Authority and the Center for Occupational Research and Development, nine institutions operating advanced technology centers formed the **National Coalition of Advanced Technology Centers** on the premise that community colleges can and do have a role in helping America's industry and workforce keep pace with new technology. The primary goals of the organization were and continue to be:

- increasing **national awareness** for ATCs in business, industry, and government sectors at the local, state, and national levels.
- serving as a **forum** for the discussion and demonstration of new and emerging technologies, underutilized existing technologies, and new methods for providing technological support to American industry.
- developing and facilitating a **resource exchange program** among Coalition members to facilitate the efficient and effective use of staff, training materials, equipment, and related resources.

OUR HERITAGE
(continued)

- establishing **relationships and partnerships** with public and private entities that enhance and/or expand the capacity of ATCs in their quest to serve business and industry desiring to keep pace with new innovations on the horizon for the next century.

Today, the National Coalition of Advanced Technology Centers has become a significant national resource. With facilities and equipment valued at more than $325 million, the NCATC represents a national network of progressive, change-oriented institutions that are assisting businesses in adopting new technologies, and modeling the education and training needed to help America build a 21st century technology infrastructure. With this heritage, the NCATC stands ready to contribute to the national competitiveness agenda by preparing people for work in highly productive, high-performance workplaces.

OUR MEMBERS

Membership in the National Coalition of Advanced Technology Centers is **exclusive by design**. Each candidate for membership must provide evidence of a commitment to education and training that fosters the competencies and qualities of high performance that must characterize competitive companies, large and small, locally and globally. Each candidate must demonstrate a commitment of resources, human and otherwise, necessary to extend technology and teaching to the community, to the workplace, and to other schools for continuous improvement education.

Today, the NCATC has more than seventy center and associate member institutions. The membership primarily consists of two-year community, technical

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(continued)

and junior colleges from urban, suburban, and rural settings in more than 30 states. Geographic representation is well distributed from Massachusetts to Hawaii.

Both large and small schools are members of the NCATC. At one extreme, the ATC is a huge complex with enormous investments in modern manufacturing and instructional equipment. At the other extreme, the ATC may be a small, competent staff that relies on alliances and partnerships with business and industry to meet local training needs. Regardless of where members fall on the spectrum, they all have one thing in common — each represents a significant commitment of resources to workforce development and industrial modernization for the region it serves.

OUR WORK

It could be said that ***NCATC member institutions have created a new paradigm for educating and training the industrial workforce of America.*** These institutions have embraced the opportunity to collaborate with the private sector, and have developed advanced technology training and demonstration centers that introduce new applications of technology, demonstrate the feasibility of technical innovations, test and evaluate prototype workcell configurations, train and retrain existing workers as well as displaced employees, and generally develop the foundation skills needed by progressive companies to reduce their costs and remain competitive.

While the services offered by the membership are similar, rarely are any two identical. Some ATCs specialize in automation control systems, computer integrated manufacturing, and special application

OUR WORK
(continued)

technologies. Others focus their efforts on Total Improvement Audits, SPC, the Design of Experiments, prototype part production, and the like. ***Collectively, NCATC schools may represent the only working prototypes of "the ideal" industry training program for preparing companies for the Total Quality, globally competitive journey.***

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The National Coalition of Advanced Technology Centers believes America has the intellect and the energy to secure its industrial and technological leadership in the world economy. Much of the responsibility for this rests with U.S. firms for they are the only ones who can continuously improve their products and processes by involving employees; investing in research, equipment, and training programs; and forging better relationships with their suppliers and customers.

The role of government and education should be one of support. New strategies are constantly being advanced as potential solutions to competitiveness issues. Test-beds for new ideas are often needed to produce the "lessons learned" necessary for long term support solutions.

With this in mind, the ***National Coalition of Advanced Technology Centers believes there is an appropriate role for the community and technical colleges of America.*** The NCATC proposes that business, industry, and government embrace this national resource for a timely role in U.S. industrial modernization efforts. By virtue of being a national network of ATCs, the NCATC further proposes:

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(continued)

- That member institutions serve as the ***lead organizations in establishing and implementing education and training programs for high skill, high-performance workplaces.*** This is one of the real strengths of NCATC member institutions. They understand both the marketplace and the approach that must be taken for such a program to be successful.

- That member institutions be the first choice for the development of ***Industrial and Manufacturing Technology Extension Programs.*** With the experience base of the two-year colleges, this would be a logical progression in service with tremendous cost savings.

- That member institutions serve as ***Centers of Excellence in Science and Technology Education*** to facilitate the transition of math, science, engineering, and technology students from associate degree granting institutions to baccalaureate degree granting institutions. This would be a natural expansion of many NCATC member programs.

- That member institutions serve as ***Manufacturing Application and Education Centers***. These "teaching factories" would allow workers to study alongside experts in real-time on real-world projects involving commercially available technologies. Some have already initiated this concept with their local industry, and they would provide a foundation from which to build and expand this concept.

- That member institutions be sites of choice for ***Manufacturing Training Centers and/or Technology Support Centers*** designed to support small business. NCATC schools now

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(continued)

- have the experience and a proven track record to accomplish this. These centers could easily be integrated with apprenticeship training and other initiatives designed to support small business.

- That member institutions serve as ***Shared Flexible Computer Integrated Manufacturing Centers***. This could be invaluable to many small businesses in close proximity to two year colleges which do not otherwise have the resources to innovate.

- That member institutions serve as test-beds for a ***National Apprenticeship Program***. Many members are already working in partnership with local companies on apprenticeship training and could easily maintain the long-term relationship necessary to make the program a success.

- That member institutions provide ***Continuous Improvement Training*** to frontline workers as companies expand employee involvement and participation. Many schools are already involved in quality management training, quality improvement, quality audits, SPC, and related initiatives. It would be the perfect marriage.

- That member institutions be called upon to ***foster manufacturing partnerships/consortia*** for cooperative ventures mutually beneficial to all involved. Several ATCs are experienced in establishing and facilitating regional consortia of manufacturers. It would be a logical extension of services for others.

OUR COMMITMENT

Strong action will be needed by all involved to help America secure jobs in the future. This is a task for proven leaders in advanced technology training and workforce competitiveness service. The National Coalition of Advanced Technology Centers represents more than seventy institutions from across America that are proven leaders in education, training, and extension work.

Much has been accomplished, and much remains to be done. ***The National Coalition of Advanced Technology Centers stands ready to serve as an incubator for new ideas and strategies*** that will help America's industry and workforce keep pace with innovations on the horizon for the next century. It can be done. It must be done.

APPENDIX

NATIONAL COALITION OF ADVANCED TECHNOLOGY CENTERS

MEMBER INSTITUTIONS

Center Members

Advanced Tech Application Center
and SC Robot Resource Center
Piedmont Technical College
Greenwood, South Carolina
Michael Reid, Director

Advanced Technology Center
Technical Education
Indian Hills Community College
Ottumwa, Iowa
Curtis Bloomquist, Dean

Advanced Technologies Center
Technology Division
Central Piedmont Community College
Charlotte, North Carolina
Jessie Attrey

Advanced Technology Center
El Paso Community College
El Paso, Texas
Mike Roark, Director

California Manufacturing Technology
Regional Center at Fresno
Fresno City College
Fresno, California
Richard E. Fosse, Director

Advanced Technology Center
Hagerstown Junior College
Hagerstown, Maryland
Charles M. Ernst, Director

Advanced Technology Center
Engineering Technologies
***Lorain County Community College**
Elyria, Ohio
Lawrence Grulick, Director

Advanced Technology Center
South Seattle Community College
Seattle, Washington
Director of Technology
Jerry Riehl

AMTEC
Augusta Technical Institute
Augusta, Georgia
Jim Weaver, Director

APTEC Applied Technology Center
Texas State Technical College/Sweetwater
Sweetwater, Texas
Clay G. Johnson, President

Applied Technology Center
Grand Rapids Community College
Grand Rapids, Michigan
C. J. Shroll, Executive Director

Applied Technology Center
Kilgore College
Kilgore, Texas
Beryl McKinnerney, Dean

Applied Technology Center
Salt Lake Community College
Salt Lake City, Utah
Rand A. Johnson, Director

Center Members (continued)

Arkansas State Technical Institute
Arkansas State University-Beebe
Beebe, Arkansas
Donald A. Cain, Director

***The Bevill Center for Advanced Manufacturing Technology**
Gadsden, Alabama
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Business and Technology Center
Industrial Programs
Austin Community College
Austin, Texas
F. Pat Foy, Coordinator

Center for Advanced Technology
Engineering Technology
***Chattanooga State Technical Community College**
Chattanooga, Tennessee
James Barrott, Director

Center for Applied Competitive Technologies
DeAnza College
Cupertino, California
Paulette Young, Director

Center for Applied Competitive Technologies
Sierra College
Rocklin, California
Larry Forman, Director

Center for Applied Competitive Technologies
El Camino College
Torrance, California
Raymond H. Schmidt, Director

Center for Applied Competitive Technologies
Fullerton College
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Ron Krimper, Acting Director

California Manufacturing Technology Center
Orange Coast College
Costa Mesa, California
Patricia Anthony, Director

Center for Applied Competitive Technologies
San Diego City College
San Diego, California
Joan Stepsis, Director

Center for Automated Manufacturing
***Itawamba Community College**
Tupelo Campus
Tupelo, Mississippi
Charles Chrestman, Director

Center for Business, Industry and Labor
St. Louis Community College
St. Louis, Missouri
Rebecca Admire, Director

Center for Contemporary Technology
Moraine Valley Community College
Palos Hills, Illinois
Richard C. Hinckley, Executive Dean

Center for Productivity and Technology Transfer
Trident Technical College
Charleston, South Carolina
John Irion

Chemeketa Advanced Technology Center
Trades and Technology
Chemeketa Community College
Salem, Oregon
Ronald Jantzi, Director

CIM Center
***Camden County College**
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Martin Schwartz, Dean

Center Members (continued)

College of Technology
Manufacturing Technology
Boise State University
Boise, Idaho
Thomas O. Murray, Program Head

Colorado Center for Advanced Technologies
***Pikes Peak Community College**
Colorado Springs, Colorado
Patti Traynor, Director

Continuing Education and Technology Transfer
Pellissippi State Technical Community College
Knoxville, Tennessee
David G. Sweet, Dean

Dallas County Community College District
Bill J. Priest
Institute for Economic Development
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Glen I. Bounds, Provost

Des Moines Area Community College
Industry and Technology
Ankeny, Iowa
Chuck McFarlin, Dean

Eastern Massachusetts Center for Innovation
in Science and Advanced Technology
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Harmony Center
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Honolulu Community College
University of Hawaii
Community College System
Honolulu, Hawaii
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Institute of Economic Technology
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Manufacturing Productivity Institute
Valencia Community College
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Manufacturing Technology Center
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Orem, Utah
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New Technology Center
Indiana Vocational Technical College
Terre-Haute, Indiana
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Center Members (continued)

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Unified Technologies Center
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Kenneth Krieger, Coordinator

Center for Applied Competitive Technologies
Glendale Community College
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Jerry Lienhard, Director

College Without Walls
Houston Community College System
Houston, Texas
Baltazar Acevedo, President

Kansas Center for Instrumentation
Engineering Technology
Kansas City Kansas Community College
Kansas City, Kansas
Al L. Andrews, Director

Manufacturing Technology Consortium
Industrial Technology Department
Western Illinois University
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National Institute for Technology Training
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Mississippi State, Mississippi
Dale Stapler, Director

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Oregon Advanced Technology Consortium
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Graphic Arts Technology Center of Iowa
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Portland Community College
Professional/Vocational Technical Education
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Doyle Meyer, Director

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South Texas Advanced Technology Center
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TSTC/Amarillo
Texas State Technical College/Amarillo
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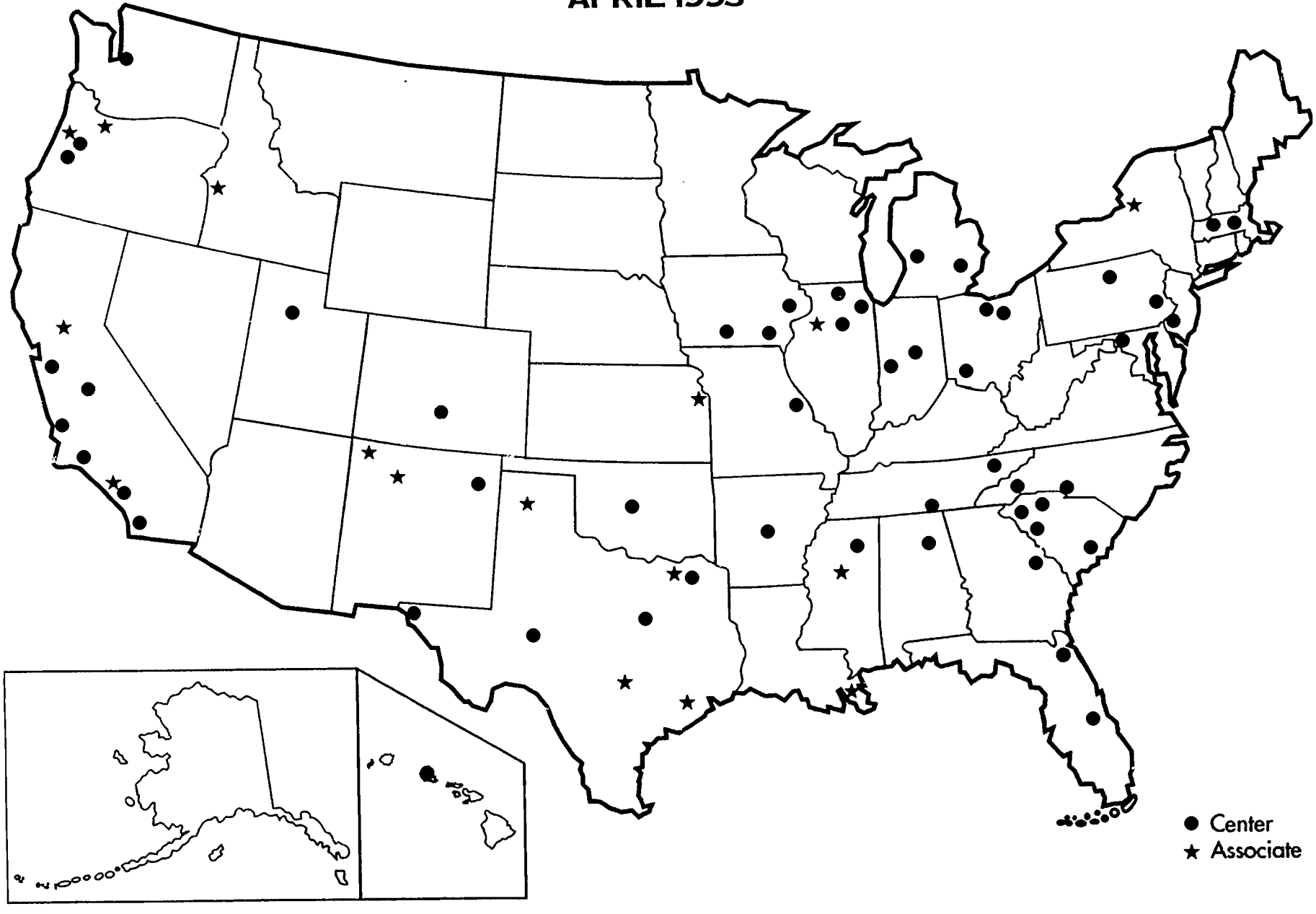
***Founding Centers**

NATIONAL COALITION OF ADVANCED TECHNOLOGY CENTERS

APRIL 1993



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