

1989 Annual Report





A Minneapolis company, using Small Business Innovation Research (SBIR) funds to get off the ground, has developed a pharmaceutical agent that can save the lives of at least 200 children who die each year from iron poisoning. A Worthington firm, using SBIR monies as equity capital, is improving the agricultural industry by developing an improved program to assure successful vaccination of animals; a St. Paul firm has developed a more humane way of drug testing on animals. Without the seed capital made possible by the SBIR program, 50 companies in Minnesota would not be making the headway they are today with scientific and technological advancements.

Small Business Innovation Research funds serve effectively as equity capital for individuals and small businesses interested in developing new technologies in any one of over 2,000 technology areas of federal priority relating to agriculture, education, defense, commerce, health, environment, science, and space.

In order to promote the growth of high-technology small business innovation in the state, Minnesota Project Innovation was established in 1984 by the Governor's Commission on Small Business Innovation Research Grants. Since its inception, Minnesota Project Innovation has worked with more than 400 small businesses and individuals. As a private non-profit organization, Minnesota Project Innovation has helped these businesses receive over \$14 million in SBIR funds, to establish 50 new companies, and to create more than 500 jobs and 120 innovations in the state.

As a repository of information on funding and business development opportunities, Minnesota Project Innovation helps small companies by providing information and materials on a wide range of public and private financial services; helps clients develop a technology from idea to market by giving advice on various public and private programs, services, procedures, and techniques; serves as an advocate for SBIR funding requests made by clients; and conducts workshops and training sessions to increase awareness and to help develop skills needed for the SBIR program competition.

A Word From The Chair

Since the creation of Minnesota Project Innovation, the agency continues to enhance its mission by supporting research and development through the federal Small Business Innovation Research program. Today, Minnesota Project Innovation has evolved into a successful organization helping entrepreneurs develop and bring to the marketplace exciting new technological innovations that make a difference in today's world. These small businesses have been extremely instrumental in developing technologies and products such as new implements and crop varieties in agriculture, exotic robots and laser images for the space program, new video graphics for improving education, and new medical devices for the aged and critically ill.

As we approach the 1990s, the need to encourage and support the leading-edge research being conducted in Minnesota becomes all the more imperative. While the accomplishments at Minnesota Project Innovation have been gratifying, we still have yet to realize the potential of developing and strengthening the high-technology industry in Minnesota. By prioritizing many sound strategies and programs, and encouraging active participation from the Board of Directors in 1989, Minnesota Project Innovation has now become all the more equipped to help small businesses seeking advice and assistance in developing today's more innovative technologies.

The results of these efforts have been rewarding. Minnesota Project Innovation has more than doubled its client counseling services, has increased the number of Small Business Innovation Research award recipients in Minnesota, has helped to generate more new federal monies into the state, and has significantly helped to shape and improve the state's economy.

As Chairman of the Board, I feel proud and honored to be a part of this exciting partnership venture between Minnesota Project Innovation, state and federal lawmakers, corporate leaders, and Minnesota small businesses. Although much still needs to be accomplished, I am confident that the interest and support for the activities at Minnesota Project Innovation will continue to flourish.

*Mike Brown
Chair
Minnesota Project Innovation*

Federal Awards: The SBIR Program

Many small businesses do not have the capital to research, develop, test, manufacture or market a new product. Firms may seek outside assistance, but often become discouraged not knowing where to get help or funding. Minnesota Project Innovation and the Small Business Innovation Research program are designed to nurture and support the entrepreneur. Innumerable ideas, ideas which could truly make a difference to our economy, our health, and our lifestyles, can be delayed or even lost simply because of a lack of information and opportunity.

The SBIR program was created by Congress in 1982 to give small high-technology firms a greater share of federal research and development dollars. Eleven federal agencies participate in the program making available \$390 million to small businesses throughout the country. The program is designed to stimulate technological innovations, to encourage firms to participate in government research, and to provide incentives for converting research results into commercial applications.

SBIR Program Format

| | | |
|-------------------------------------|---|--|
| Federal Grants and Contracts | <i>2000 Annual Technical Topic Priorities from 11 Federal Agencies</i> | |
| | <i>Submit Proposal by Agency Deadline</i> | |
| | Phase I | <ul style="list-style-type: none"> •\$50,000 •Scientific and technical feasibility •6 month research plan |
| | <i>Successful Completion of Phase I Required Before Phase II Competition</i> | |
| | <i>Demonstrate Potential Phase III Funding Commitment</i> | |
| | Phase II | <ul style="list-style-type: none"> •\$500,000 •Prototype development •2 year research plan |
| Phase III | <ul style="list-style-type: none"> •Government prime or subcontract •Private Investment •Commercialization | |

The Year In Review

While the high-technology industry in Minnesota and around the world is experiencing some major changes, Minnesota Project Innovation enjoyed yet another very successful year. Minnesota Project Innovation clients, Phase I and Phase II winners of the Small Business Innovation Research program, were more successful than ever in 1988: SBIR contracts awarded to Minnesotans increased by an astounding 43 percent.

The success rate of these firms is indicative of the heightened interest and recognition for the need to foster scientific research and development in Minnesota. While Minnesota Project Innovation is very proud of these accomplishments, the outstanding results come from the vigorous determination of Minnesota small business entrepreneurs who are devoted to developing innovative solutions to today's problems.

In 1988, Minnesota Project Innovation outlined several growth strategies to help improve and enhance its services to the small business community. These efforts reflect a two hundred percent increase in the number of inquiries Minnesota Project Innovation received and in the number of clients who visited the facilities.

Moving to the Supercomputer Center in downtown Minneapolis in 1988, Minnesota Project Innovation became more accessible to clients interested in the SBIR program and SBIR SEARCH. The SBIR SEARCH database was developed to help clients identify 2,000 technical topic areas and to move through the SBIR proposal preparation process with greater accuracy and at a much more efficient rate. As a complete computerized catalog with federal research centers and historical data on SBIR solicitations and abstracts, the database also includes federal R&D agency and center profiles, technical contact names, technical information sources, and proposal preparation materials.

Another reference library containing military specifications was brought into the Minnesota Project Innovation facilities in 1989. These specifications include handbooks, drawings, a qualified products list, and federal information processing standards.

Financial and administrative functions were enhanced to improve the agency's policy of providing strong management systems. For the first time, Minnesota Project Innovation brought on board a full-time Business Development Director and a full-time Public Relations Director. The Business Development office is now set up to provide complete and thorough client counseling services to SBIR award winners needing assistance in developing business plans and objectives, and to help clients identify appropriate sources of equity finance, prime contractors, and potential joint ventures.

The "Minnesota Small Business R&D Funding Report" was published regularly and sent to 8,000 small businesses, researchers, and scientists, as well as key networking individuals such as patent attorney's, accountants, public officials, and the media throughout the entire state. Minnesota Project Innovation

also increased cooperation and correspondence with other Minnesota applied research and small business development organizations and programs, and started a corporate sponsorship campaign to help make the Public Relations efforts at Minnesota Project Innovation self-sufficient.

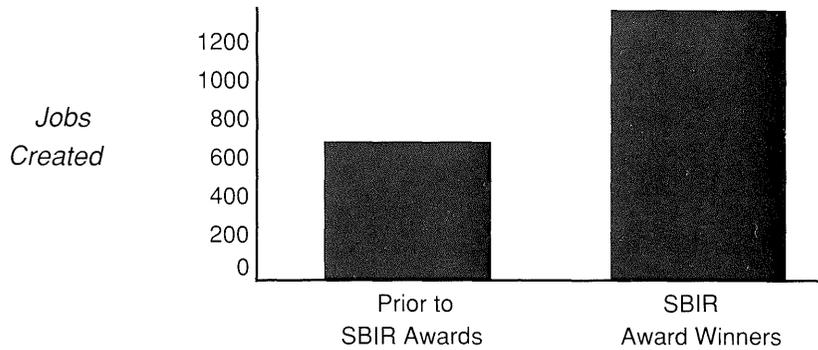
In addition to the strong supporting efforts of the Minnesota Department of Trade and Economic Development, the Minneapolis District Office of the U.S. Small Business Administration, the University of Minnesota, the Greater Minnesota Corporation, the Minneapolis Community Development Agency, and many other public agencies, the most gratifying assistance comes from the support of the business community. Major contributions of funds, advice, and services to enhance Minnesota Project Innovation and the SBIR effort in Minnesota was provided by Norwest Banks, Lindquist and Vennum, KPMG Peat Marwick, Micro Dynamics, Unisys, ADC Telecommunications, LifeCore Biomedical, and Yeager Pine & Mundale.

1988 MPI Effectiveness Record

| | |
|---------------------------------|-------------|
| <i>Information Distribution</i> | <i>6000</i> |
| <i>SBIR Inquiries</i> | <i>780</i> |
| <i>Clients</i> | <i>400</i> |
| <i>New Clients</i> | <i>82</i> |
| <i>Submissions</i> | <i>75</i> |
| <i>Phase I Awards</i> | <i>31</i> |
| <i>Phase II Awards</i> | <i>9</i> |
| <i>Phase III Successes</i> | <i>3</i> |

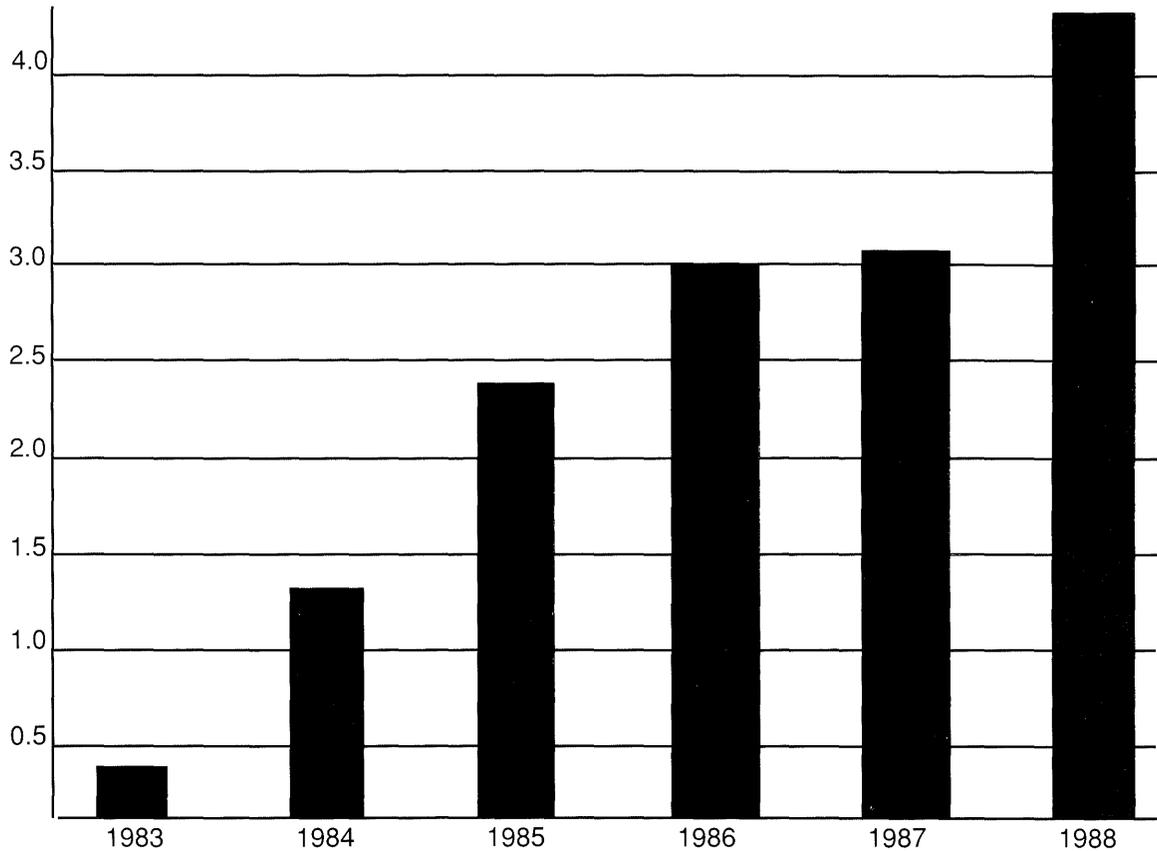
MPI's Track Record

SBIR Impact on Jobs Created in Minnesota



Minnesota Small High Tech Businesses

Federal R&D Funds to Minnesota Small Business (in millions)



The number of firms winning SBIR awards increased during fiscal year 1988 by 43 percent over any previous year. The total federal funds received set a new state record at \$4.36 million.

The Winners in 1988

The following companies were successful in receiving Phase I or Phase II SBIR awards in fiscal year 1988. Many of these firms were MPI clients, others were successful on their own. For each award, an expert national review committee selected the innovative technology or process and research plan proposed by this company. These proposals, judged among hundreds submitted from throughout the nation, were determined to be an advancement on the state-of-the-art, to be superior in technical design, and to have strong commercial potential.

Agriculture

Oxford Veterinary Laboratories

Worthington, MN

Dr. Jack Carlson

Defense

APA Optics, Inc.

Blaine, MN

Dr. Anil Jain, President

Bio-Metric Systems, Inc.

Eden Prairie, MN

Dr. Patrick Guire, Vice President

Cuyuna Engine Company

Crosby, MN

Roger Worth

DAINA

Columbia Heights, MN

Janis Pukite, President

Digital Dispatch, Inc.

Fridley, MN

Roy Wahlberg

Jonnes Research Company

Stillwater, MN

Nelson Jonnes

SEB Engineering Inc.

Eagan, MN

Svenn E. Borgersen, Vice President

TSI, Inc.
Shoreview, MN
LeRoy Fingerson

Vector-Vision
Minneapolis, MN
Dr. Brahm Mozyaney, President

Education

ADA Software Engineering Tools
St. Paul, MN
Matthew Gawronski

Information Technology Design Associates, Inc.
Bloomington, MN
Dan Klassen, President

Environment

BH Electronics
Burnsville, MN
Eugene Lyman, President

Bio-Metric Systems, Inc.
Eden Prairie, MN
Dr. Patrick Guire, Vice President

EWA, Inc.
Minneapolis, MN
Asadul Chowdhury

Hamilton Maurer International., Inc.
St. Paul, MN
David Thimsen

Health

Berner Associates
Golden Valley, MN
John Berner

Bio-Metric Systems, Inc.
Eden Prairie, MN
Dr. Patrick Guire, Vice President

International Medical Corporation

Minneapolis, MN

Dr. Jeff Shideman, Vice President

Geriatric Environmental

New Brighton, MN

Margaret Christenson

LKT Associates

Navarre, MN

Luke K.T. Lam

Project Management Teams

International Falls, MN

Archie Hamilton

Science

Bio-Metric Systems, Inc.

Eden Prairie, MN

Dr. Patrick Guire, Vice President

CyberOptics Corporation

Minneapolis, MN

Dr. Steven K. Case, President

Itasca Consulting Group

Minneapolis, MN

Magnus Pergman

Space

APA Optics, Inc.

Blaine, MN

Dr. Anil K. Jain, President

Ross-Hime Designs, Inc.

Minneapolis, MN

Mark Rossheim, President

1989 MPI Board of Directors

Executive Committee

Michael Brown, CEO, Micro Dynamics, Inc.; Chair
Dr. Anil Jain, President, APA Optics, Inc.; Vice Chair
Rolf Engh, Lindquist and Vennum; Secretary
Timothy Flynn, Partner, KPMG Peat Marwick; Treasurer
*Jayne Khalifa, Chief of Staff, Minnesota Department of Trade
and Economic Development*
Minnesota State Senator Steven Morse
Thomas Neitge, Vice President, Minnesota Seed Capital, Inc.
Dr. William Friedlander, Director, Technology Evaluation, 3M
*Anthony Potami, Assistant Vice President, Office of Research
Administration, University of Minnesota*

Corporate Directors

Paul Anderson, Director, Systems Development, Honeywell, Inc.
Mike Grimes, Briggs and Morgan
*Thomas Lindquist, Director, Government and Community
Relations, UNISYS*
Deborah McWatters, KPMG Peat Marwick
Edward Meyer, Vice President, Norwest Bank Minneapolis, N.A.
Mike Miles, Vice President, Greater Minnesota Corporation

Small Business Directors

Brian Brockway, President, Data Sciences, Inc.
James Bracke, President, LifeCore Biomedical, Inc.
Richard Fundakowski, President, Triple Vision, Inc.
Theodore Johnson, President, Minnesota Cooperation Office
*Dr. Steven Zuckerman, President, M-T Venture Capital
Funds, Inc.*

University Directors

*Dr. Bruce Ellis, Professor, School of Engineering, St. Cloud
State University*

*Daryl Erdman, Professor & Chair, Small Business &
Entrepreneurship, College of St. Thomas*

Government Directors

*Ed Daum, District Director, U.S. Small Business Administration
Minnesota State Representative Gene Pelowski
Minnesota Lieutenant Governor Marlene Johnson*

MPI Staff

Executive Director

James W. Swiderski

Business Development Director

Bonnie Untereiner

Research Information Director

Lisa Pariseau

Public Relations Director

Cate Murphy

Administrative Assistant

Lori Twait

1989 MPI Contributors

Minnesota Project Innovation is a public/private partnership and provides services at no cost or low cost through funds provided by the Minnesota Department of Trade and Economic Development, the U.S. Small Business Administration, and various corporate sponsors.

MPI Contributors

*Governor's Office of Science and Technology,
Minnesota Department of Trade and Economic Development*

*Minnesota Small Business Development Centers,
U.S. Small Business Administration*

MPI Sponsors

ADC Telecommunications

College of St. Thomas

Data Sciences

KPMG Peat Marwick

LifeCore Biomedical

Lindquist and Vennum

Micro Dynamics

Norwest Bank, Technology Division

Minneapolis Community Development Agency

Minnesota Chamber of Commerce and Industry

Minnesota SURE Access

University of Minnesota

UNISYS

Yeager Pine & Mundale

1990: The Year Ahead

As a private non-profit agency organized to promote the SBIR program, Minnesota Project Innovation receives a majority of its operating funds from the Minnesota Legislature. In fiscal year 1988, for every dollar invested by the state, Minnesota Project Innovation brought in thirty-six dollars. Becoming a leader in the research and development community, Minnesota Project Innovation believes this sound track record will continue to improve in 1990 as more support and recognition is given to programs established to enhance and improve the high-technology industry.

While Minnesota Project Innovation saw a significant increase in the number of SBIR award winners in fiscal year 1988, expectations are that the conversion ratio of Phase I to Phase II award winners will bring an all-time high of new federal dollars into Minnesota in fiscal year 1989.

Minnesota Project Innovation is also hopeful that its SBIR SEARCH database will become an integral part of the SBIR solicitation process and that the organization will continue to build its track record and enhance its ability to generate support from the private sector to maintain its independence.

Maximizing the potential of SBIR applicants has always been the mission of Minnesota Project Innovation. As we move into the 1990s, it is our hope that we will be able to continue helping Minnesota entrepreneurs to focus and manage their efforts to become successful in Minnesota's private industry by developing and utilizing new technologies. Helping SBIR award winners of the 1980s commercialize their innovative products in the marketplace is a high priority for Minnesota Project Innovation because research and technical expertise in this state is indeed a reality.

In Minnesota, partnerships like Minnesota Project Innovation are introducing entrepreneurs to financiers and scientists, and are bringing together academicians and manufacturers to create the innovative technologies of the 21st century. Facilitating the transfer of new technologies so that new processes and products can be moved from the research phase into the commercial market and fostering the manufacture and marketing of these technologies by new businesses, are among many of the objectives Minnesota Project Innovation plans to accomplish in 1990.

*Jim Swiderski
Executive Director
Minnesota Project Innovation*