

1988 Annual Report





Minnesota Project Innovation, Inc. (MPI), a private nonprofit organization, was created in 1984 to help innovative small businesses and individuals develop and market their leading technologies by securing federal R&D funds offered through the Small Business Innovation Research (SBIR) program. Since its inception, MPI has been remarkably successful. Minnesota's annual awards have increased from \$200,000 in Fiscal Year 1983 to over \$3 million in Fiscal Year 1987. Over 45 companies have been successful in winning one or more SBIR awards in Minnesota, with MPI assisting over two-thirds of them. And, more importantly, thirty-six new companies and over 1,000 new high technology jobs have since been created.

SBIR funds serve effectively as equity capital for individuals and small businesses interested in developing new technology in any one of over 2,000 different technology areas of federal priority. On their own, small businesses would find that the national competition in this program is very competitive, with only 12 percent of submitted Phase I—initial research—proposals winning awards. MPI clients have a Phase I success rate of 28 percent, which is better than twice the national average.

MPI's mission remains unchanged. As we head into the next century, the organization remains committed to helping entrepreneurs with innovative technologies secure federal SBIR funds and successfully establish new businesses.

A WORD FROM THE CHAIR

Since the founding of Minnesota Project Innovation (MPI), a partnership of state lawmakers, corporate leaders and innovative small businesses have focused their efforts on bringing more federal research and development funds into the state of Minnesota. Our record in accomplishing this goal continues to grow. Innovative research has contributed impressively to the federal government needs in agriculture, commerce, education, health, defense, space and science. New products have been commercialized, small businesses developed and new jobs created.

As an organization MPI has matured as well. While federal and state appropriations continue to provide a strong financial base, MPI has aggressively pursued corporate sponsorship and small business support. As a result, the organization has been able to use the added funds to build a stronger marketing communications and consulting program. Those efforts have produced immediate results. Annual inquiries from individual researchers and high technology small businesses continue to rise. Increased consulting services have given more companies the "know-how" to solicit federal Small Business Innovation Research (SBIR) awards. And MPI has helped several small businesses commercialize their products by fostering corporate partnerships, identifying potential markets and providing business development technical assistance.

In completing my term as Chairman of the Board, I believe that state lawmakers, corporate leaders and small businesses associated with MPI can take great pride in what has been achieved. Yet we must continue to dedicate our support to MPI's future. The organization only has begun to tap the vast creative ingenuity of Minnesota's small business scientists and entrepreneurs. With hardwork and continued strong support, the results can become even more impressive and rewarding.

James Bracke
Chair
Minnesota Project Innovation

Federal Awards: The SBIR Program

- National set aside of federal funds for small business research and development
- National competition for the best new technologies in each area of national priority
- Small business can receive up to \$50,000 for Phase I feasibility research
- Small business can receive up to \$500,000 for Phase II development research

The Entrepreneur: How MPI Helps

- MPI provides information and materials on a wide range of public and private financial services, especially the SBIR program
- MPI assists clients in taking a technology from idea to market by giving advice on various public and private programs, services, procedures, or techniques
- MPI serves as an advocate for SBIR funding requests made by clients and will assist with the unsnarling of red tape and developing of support
- MPI conducts workshops and training sessions to increase awareness and develop skills needed for the SBIR program competition

SBIR Program Format

Phase I		<i>Scientific and technical feasibility proposal in response to agency research needs solicitation to \$50 K 6 month research plan</i>
Phase II	Federal Monies	<i>Prototype development proposal 100K-500K 1-2 year research plan Private sector commitment</i>
Phase III	<i>Commercial market development using private sector support and/or government procurement</i>	

*Successful completion of Phase I is required before Phase II

The Year In Review

The small business scientific and research community in Minnesota enjoyed another solid year of growth and success in 1987. The number of firms winning Small Business Innovation Research (SBIR) awards increased 40 percent over any previous year and total federal funds received set a new state record at \$3.03 million. MPI clients contributed to this success with a 28 percent Phase I proposal success rate—more than twice the national average.

The success of Minnesota companies and MPI continued to receive national attention in 1987 as well. APA Optics, Inc., a Blaine Minnesota firm, was selected for national recognition in Boston as an outstanding example of a firm leveraging SBIR awards into Phase III commercial success. Biometric Systems, Inc., Eden Prairie, was selected to address the national Federal High Tech 1989 Conference in Philadelphia to explain its successful strategy for multiple SBIR awards. MPI was the subject of a profile prepared for the National Governors Association as an example of a “uniquely successful public/private partnership” in enhancing SBIR success on a statewide level.

These achievements reflect the increased maturity and focus of MPI’s efforts to assist Minnesota firms in capitalizing on the federal SBIR programs. In 1987 MPI sharpened its marketing focus and introduced the “Minnesota Small Business R&D Funding Report.” This publication, an attractive monthly newsletter, was mailed to over 5000 “high potential” small businesses, researchers, scientists, and key networking individuals such as patent attorneys, accountants, public officials and media. This strategy helped MPI continue to remind the public of the opportunity provided by SBIR.

MPI also developed an extensive reference library of data on individual federal research centers and historical data on SBIR solicitations and abstracts. The key strategy was to help clients by first helping them identify the appropriate federal research center for their technology. The notion of preselling or affirming the agency’s interest in the clients innovation helped MPI and the client determine the relative feasibility of proposal success. This process quickly became overwhelming, however, with over 300 federal research centers soliciting over 2000 technologies each year. MPI has now developed plans to combine this information into a unique data base in order to help make this process more efficient.

MPI also improved its efforts to advocate on behalf of individual clients, specifically, and small businesses, generally, with the federal agencies administering the SBIR program. Specific intervention by MPI at the request of two clients resulted in the award of two Phase II projects that had each been initially rejected. Support from the Minnesota Congressional Delegation was greatly appreciated when agency bureaucrats made errors that initially eliminated these proposals. In one case the episode prompted extensive administrative rule

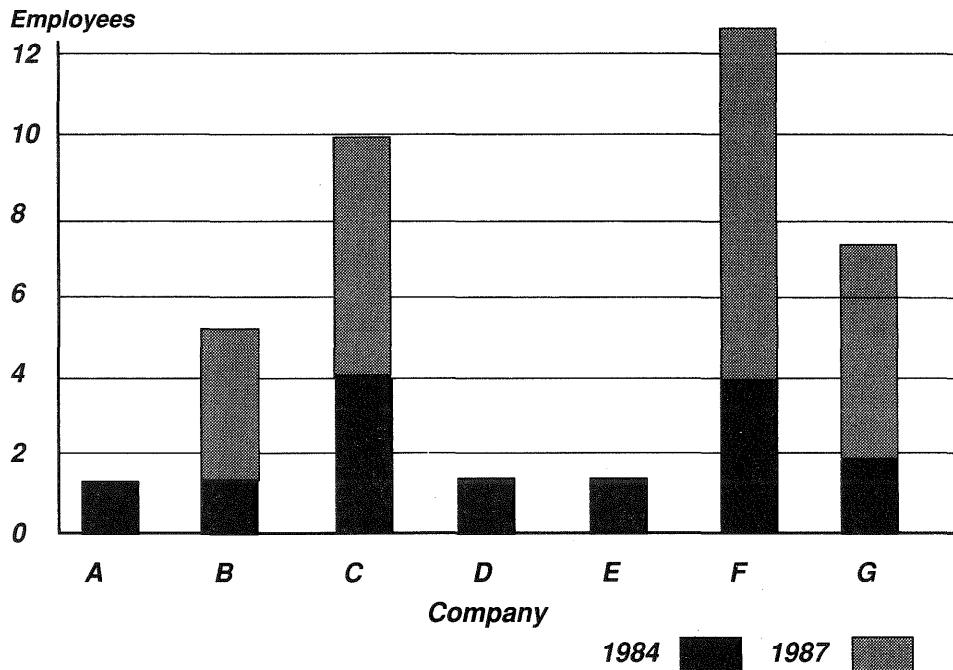
changes by the agency involved.

Overall, 1987 was a year of record growth of MPI clients, a record rate of client success and a record achievement in total SBIR awards. MPI expresses its sincere gratitude to a talented group of small business clients, to the hands-on-help of its Board members and Executive Committee, and to the generous support provided by the Minnesota Legislature, the Minnesota Department of Trade and Economic Development, the Small Business Administration and various private sponsors, including the College of St. Thomas, Norwest Banks, ADC Telecommunications, the University of Minnesota, Peat, Marwick, Main & Co., and many others.

SBIR award winning clients also began to demonstrate increased maturity and growth in 1987. MPI looked back to first year clients, award winners in 1984, and compared their employment then to their employment in 1987. After three years what has happened to Minnesota's SBIR award winning firms?

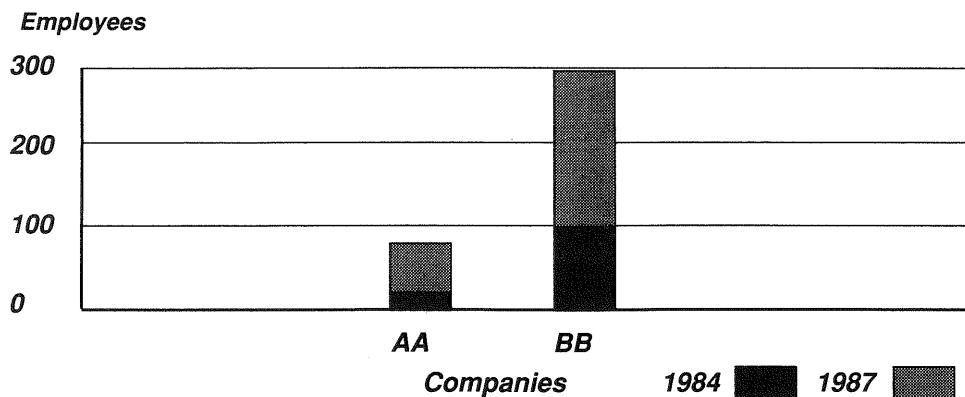
In 1984, nine companies won SBIR awards. Seven were start-up firms using SBIR as seed capital. Two were established high tech firms.

Start-Up Companies Job Growth After 3 Years



By 1987, four of the seven start-up firms had grown from less than three employees each to nine. They have leveraged substantial private capital, recruited key management talent, and are poised to commercialize.

Established Companies Job Growth After Three Years

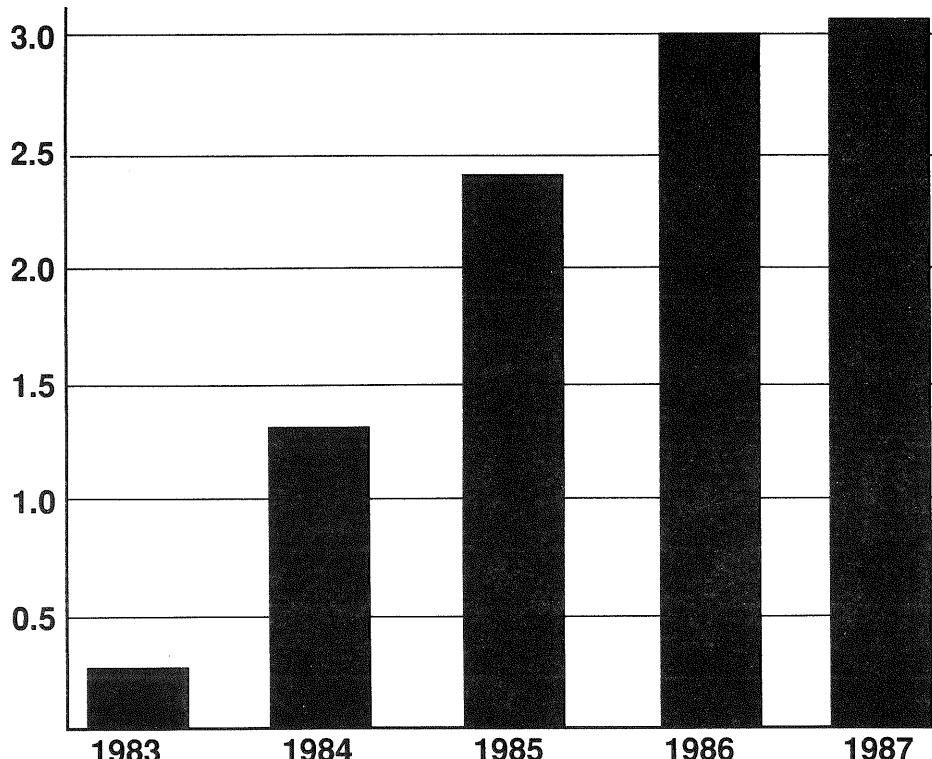


The two established firms already had production, marketing and capital in place to commercialize their new innovations. One firm grew from 19 to 69 employees and the other from 99 to 297 employees during the same three year period.

Our Track Record

The number of firms winning SBIR awards increased during Fiscal Year 1987 by 40 percent over any previous year. The total federal funds received set a new state record at \$3.03 million. MPI clients contributed to this success with a 28 percent Phase I proposal success rate.

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



The Winners In 1987

The following companies were successful in receiving Phase I or Phase II SBIR awards in Fiscal Year 1987. 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, superior in technical design and possessing strong commercial potential.

Agriculture

Molecular Genetics, Inc.
Minnetonka, MN
Ken Tempero, President

Defense

APA Optics, Inc.
Blaine, MN
Anil K. Jain, President

Assessment Systems Corporation

St. Paul, MN
Dr. David Vale, President

Bio-Metric Systems, Inc.

Eden Prairie, MN
Dr. Patrick Guire, Vice President

CyberOptics Corporation

Minneapolis, MN
Dr. Steven K. Case, President

I-Systems

Stillwater, MN
Charles Gordon, President

Multi-Arc., Inc.

St. Paul, MN
Russ Baccaglini, President

Prismoid Optical
Maple Lake, MN
Richard Vizenor, President

PRT Corporation
St. Paul, MN
Ralph McCartney, President

TSI, Inc.
St. Paul, MN
LeRoy Fingerson, President

Commerce
R* Scan Corporation
Minneapolis, MN
Dr. Walter Lyons, President

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

Novcom Systems, Inc.
Minnetonka, MN
Tim Wittenburg, President

Environment
BH Electronics
Burnsville, MN
Eugen Lyman, President

Hamilton Maurer Intl., Inc.
St. Paul, MN

Health

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

Biomedical Frontiers, Inc.
Minneapolis, MN
Dr. Bo Hedlund, President

Data Sciences
Roseville, MN
Brian Brockway, President

Genesis Labs
Minneapolis, MN
John Reaer, Vice President

London Diagnostics, Inc.
Eden Prairie, MN
Iraj Beheshti, President

Science

CyberOptics Corporation
Minneapolis, MN
Dr. Steven K. Case, President

Triple Vision
Roseville, MN
Richard Fundakowski, President

Space

APA Optics, Inc.
Blaine, MN
Anil K. Jain, President

Ross-Hime Designs, Inc.
St. Paul, MN
Mark Rosheim, President

1988 MPI Board of Directors

Executive Committee

*James W. Bracke; President and CEO, LifeCore Biomedical, Inc;
Chair*

Tim Flynn; Partner, Peat, Marwick, Main & Co.; Vice Chair

Mike Grimes; Briggs and Morgan; Secretary

Julia Karns; Peat, Marwick, Main & Co.; Treasurer

*Jayne Khalifa; Chief of Staff, Minnesota Department of Trade and
Economic Development*

*Anthony Potami; Assistant Vice President, Office of Research
Administration, University of Minnesota*

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Dr. William S. Friedlander; Director, Technology Evaluation, 3M

Stanley Gove; Vice President, First Bank Minneapolis

*Thomas Lindquist; Director, Government and Community Relations,
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Edward Meyer; Vice President, Norwest Bank Minneapolis

David McElroy, Jr.; Oppenheimer, Wolff & Donnelly

Deborah T. McWatters; Peat, Marwick, Main & Co.

William Norris; Control Data Corporation

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Brian Brockway; President, Data Sciences, Inc.

Michael Brown; CEO, Micro Dynamics, Inc.

Richard Fundakowski; President, Triple Vision, Inc.

Anil K. Jain; President, APA Optics, Inc.

Alfred Babbington-Johnson; President, LAMPCO, Inc.

Theodore A. Johnson; President, Minnesota Cooperation Office

Thomas Neitge; Vice President, Minnesota Seed Capital, Inc.

University Directors

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Daryl Erdman; Professor, College of St. Thomas

Government Directors

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*Edward Daum; District Director, Small Business Administration
Representative Don L. Frerichs; Minnesota House of
Representatives*

*Lieutenant Governor Marlene Johnson; State of Minnesota
Senator Steven Morse: Minnesota Senate*

MPI Staff

Executive Director

James W. Swiderski

Business Development Director

Bill Connelly

Research Information Director

Lisa Pariseau

Administrative Assistant

Lori Twait

Public Relations Consultant

Steve Senyk

1988 MPI Contributors

MPI 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 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

*College of St. Thomas
Norwest Banks
ADC Telecommunications
Peat, Marwick, Main & Co.*

1989: The Year Ahead

Expectations are high and enthusiasm is strong as MPI looks forward to 1989. MPI has reached agreement with the Minnesota Supercomputer Center as a permanent home in the downtown Minneapolis Technology Corridor. This move will help the organization greatly enhance its efficiency in serving the entire metropolitan area.

MPI anticipates continuing to expand its newsletter mailing list and improving the quality and sophistication of its content. A complete data base on all 20,000 SBIR solicitations and abstracts called SBIR SEARCH is being developed, greatly enhancing the capability of MPI to serve those attempting to locate appropriate federal funding and those wishing to contact SBIR award winning companies with specific technology innovations.

MPI anticipates adding depth in its assistance to existing SBIR award winners through development of specific publications on cost accounting and equity fundraising.

MPI also seeks to expand assistance to firms seeking federal markets for their high technology products by developing both a data base and providing specialized procurement technical assistance. The challenge, of course, will be to continue to increase SBIR awards in Minnesota at a time when federal funds will be diminishing.

*Jim Swiderski
Executive Director
Minnesota Project Innovation*