



JAMES W. SWIDERSKI
Executive Director

"Minnesota Project Innovation has only 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,
MPI Board Chair, 1987-88
President and CEO,
LifeCore Biomedical, Inc.

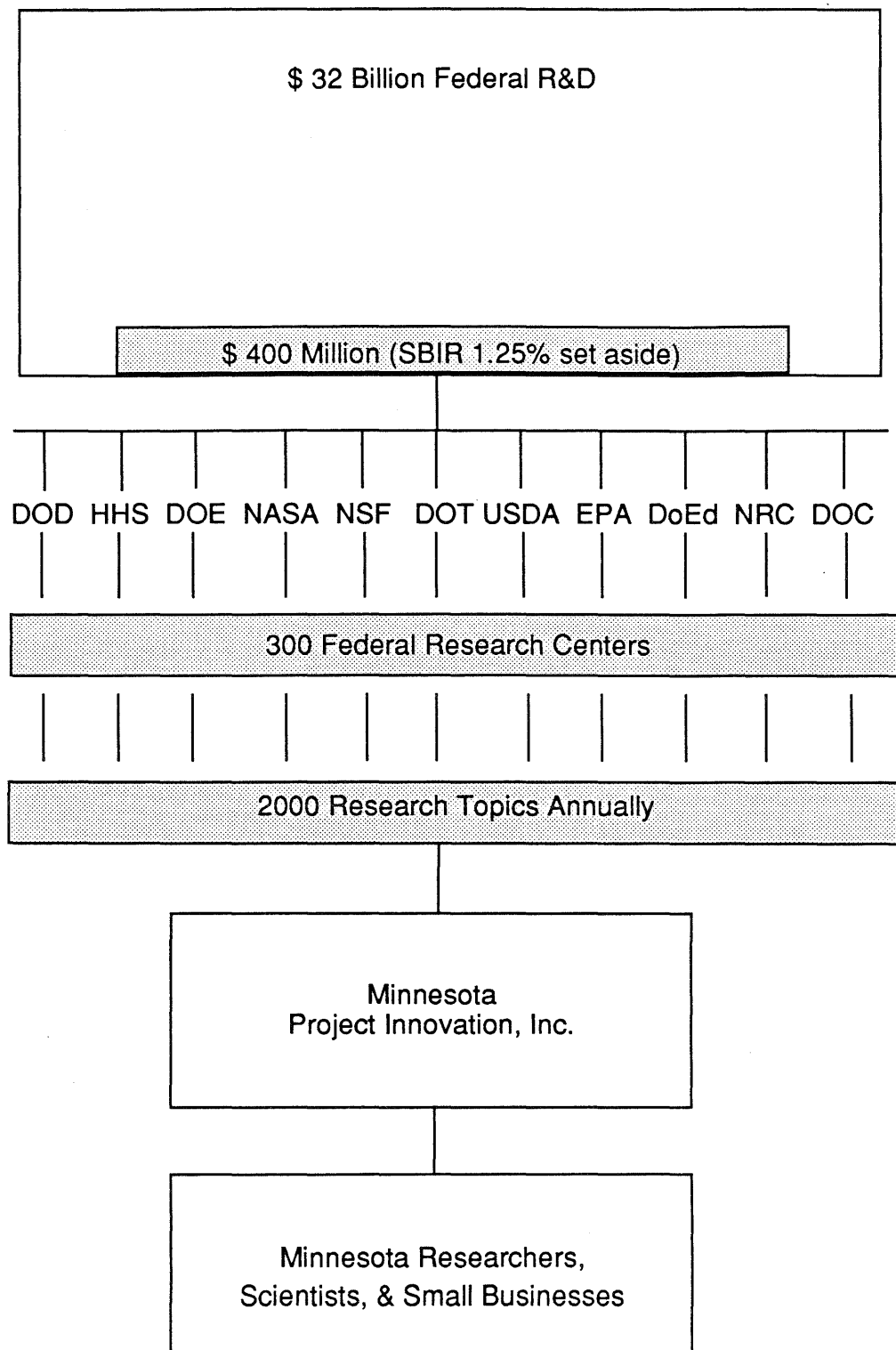
OUR MISSION

To promote the growth of high technology small business innovation in Minnesota by maximizing the benefit of participation in the federal SBIR program statewide.



**A HIGH TECHNOLOGY
SMALL BUSINESS
DEVELOPMENT CENTER**

Federal R&D For Small Business



What is Minnesota Project Innovation

Minnesota Project Innovation, Inc. (MPI), a private non-profit organization, was created in 1983 by the Governor's Commission on Small Business Innovation Research Grants to help small businesses and individuals develop and market their leading technologies by securing federal research and development funds offered through the **Small Business Innovation Research (SBIR) Program**.

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.

Eleven federal agencies participate in the SBIR Program which has \$400 million available each year for small businesses that meet specific research and development needs of the federal government.

The SBIR Program consists of three phases:

- Phase I - Awards up to \$50,000 to evaluate the scientific merit and feasibility of an idea.
- Phase II - Awards up to \$500,000 to expand on the results of Phase I and develop a product or prototype.
- Phase III - Brings the product or prototype to the marketplace for commercialization using private sector money.

MPI provides services at no cost or low cost to help Minnesota companies and individuals secure these federal funds. MPI assists entrepreneurs by helping them identify appropriate research topic areas, helping them develop and write proposals, and helping them establish their new business.

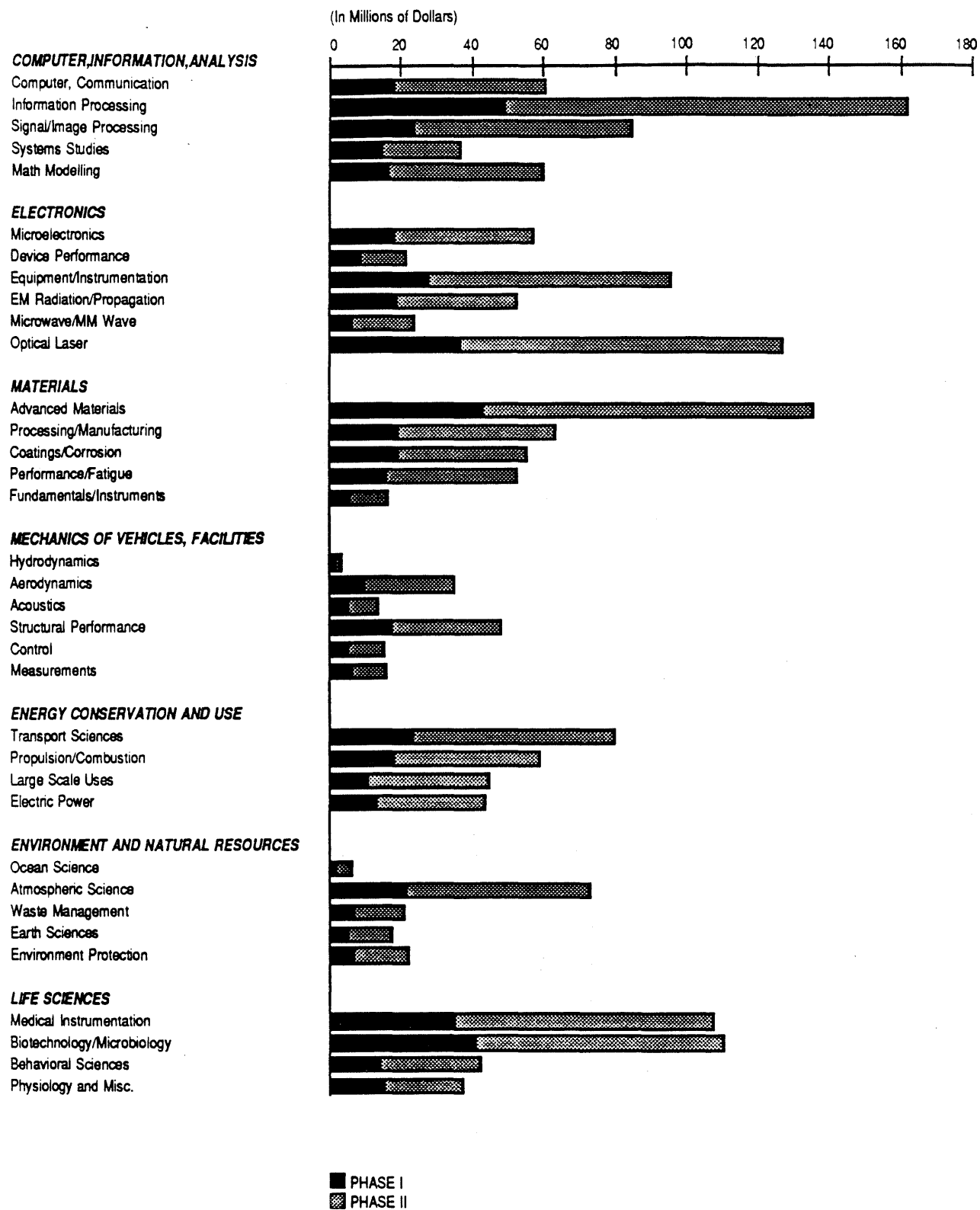
SBIR PROGRAM FORMAT

PHASE 1	FEDERAL MONIES	<ul style="list-style-type: none">● Scientific and technical feasibility proposal in response to agency research needs solicitation● to \$50 K● 6 month research plan
PHASE 2		<ul style="list-style-type: none">● Prototype development proposal● 100 K - 500 K● 1-2 years research plan● Private sector commitment
PHASE 3 <ul style="list-style-type: none">● Commercial market development using private sector support and/or government procurement		

Successful completion of Phase I is required before Phase II.

DISTRIBUTION OF FISCAL 1983-1987 PHASE I AND PHASE II AWARDS AMONG TECHNOLOGY AREAS

Multiple Technology Areas Assigned to Awards



1987 Effectiveness Ratios

Target	5000	}	Inquiry Ratio	7%
Inquiries	360		Client Ratio	55%
Clients	200	}	Active Ratio	44%
Active Clients	88		Submission Ratio	44%
Submissions	38	}	Phase I Ratio	28%
Phase I Awards	11		Phase II Ratio	36%
Phase II Awards	4	}	Phase III Ratio	25%
Phase III Success	1			

Minnesota Project Innovation Client Assistance

Recruit High Potential Prospects: PUBLIC INFORMATION DIRECTOR

Minnesota Project Innovation identifies groups of individuals who are technical experts in areas of interest to various federal agencies and promotes opportunities provided by the SBIR Program. MPI has developed a mailing list of 6,000 and currently mails a newsletter 10 times a year. MPI also attends exhibitions and workshops, and hosts an annual conference.

Qualify, Focus & Inform Clients: RESEARCH INFORMATION DIRECTOR

MPI responds to inquiries regarding the SBIR Program and will help interested small businesses focus on the federal agencies with the greatest interest in the client's technology. With over 2,000 different technologies each year, and over 300 federal research centers, this job can be overwhelming. MPI has developed a computer database called SBIR SEARCH to speed the process. This program may have national market potential.

Counsel & Represent Clients: EXECUTIVE DIRECTOR

MPI provides guidance to SBIR applicants on proposal preparation, reviewing the decision-making process and biases of individual agencies, among many other activities. MPI assists applicants in preparing a strong research plan and team, reviews draft proposals and advocates on behalf of clients in circumstances where difficulties arise in negotiations with federal officials.

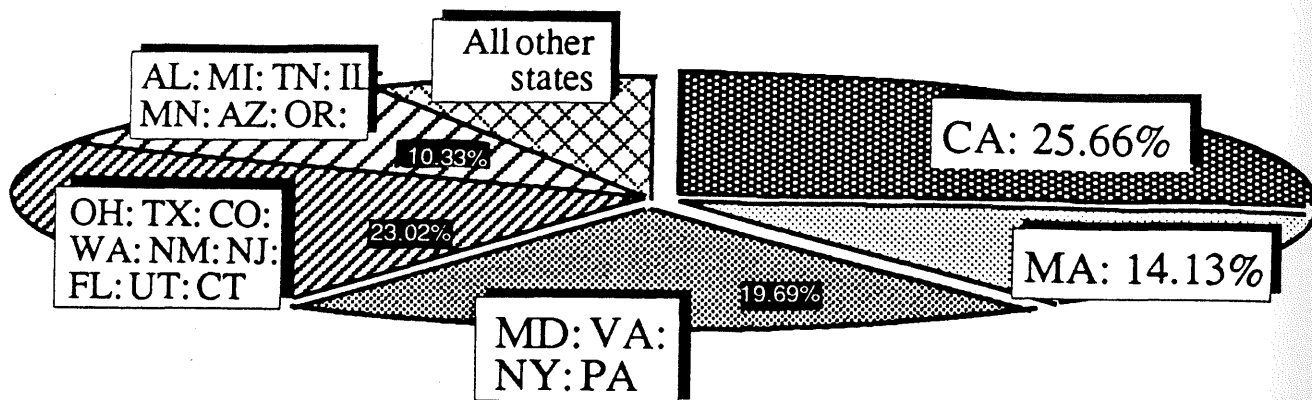
Advise & Assist Start-Up Award Winners: BUSINESS DEVELOPMENT DIRECTOR

When individuals use the SBIR Program as seed capital to help them launch their company, they are often faced with an overwhelming agenda and have very little time and few resources to use in response. Within 6 months they must complete their Phase I research successfully, on time and on budget. They must also prepare and submit a Phase II proposal that will include evidence of their ability to eventually commercialize the technology. MPI assists clients in preparation of a business plan and helps the client learn how to identify appropriate sources of equity finance, prime contractors, potential joint venture partners, and helps them identify the appropriate resources they need to acquire including legal, accounting, and other professional services.

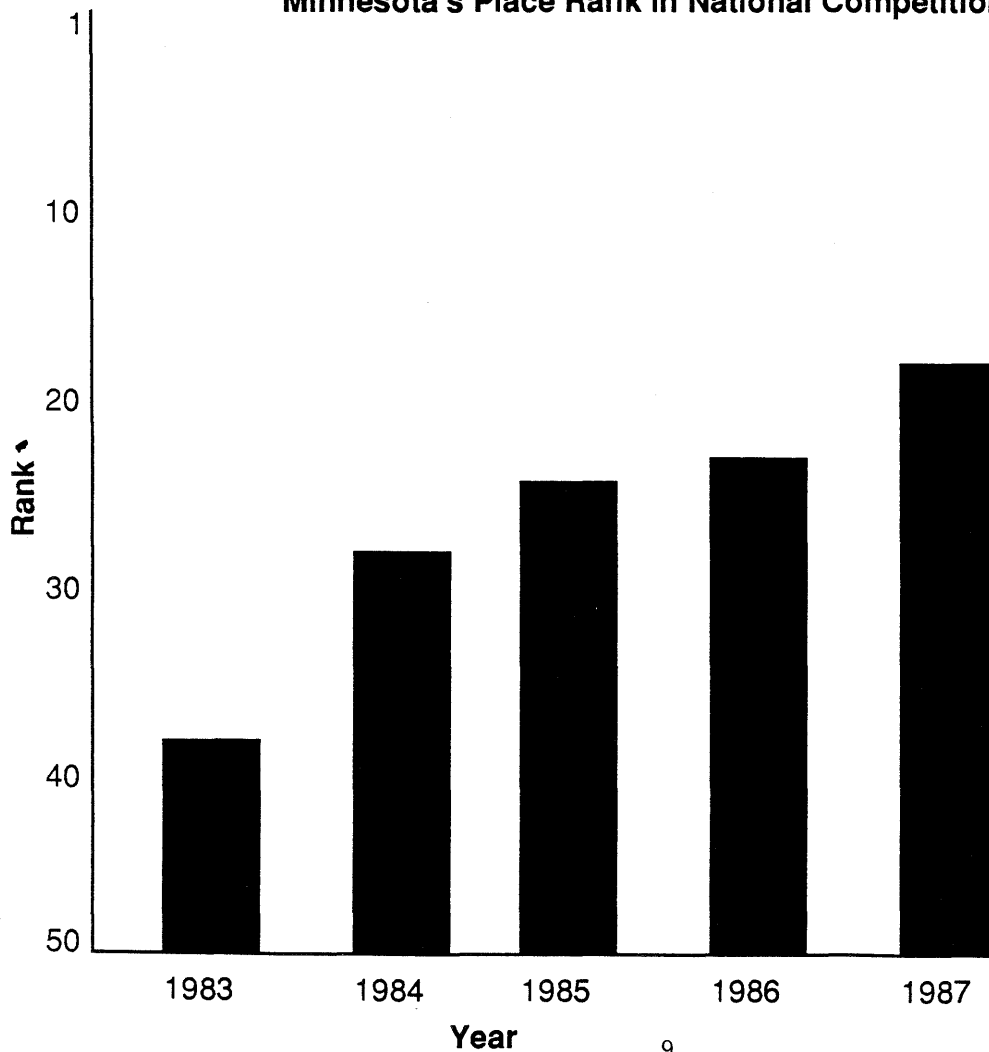
Help Commercialize Technologies: PROCUREMENT ASSISTANCE DIRECTOR

With many Minnesota small businesses beginning to emerge from Phase II with new technologies and strong potential government markets, MPI is proposing to add a Procurement Assistance function. MPI currently provides federal and military specifications necessary to bid on government contracts. MPI proposes to advise SBIR award winners on procedures and strategies for securing government contracts and subcontracts. MPI will also help non-SBIR high technology firms develop government markets for their existing products and services.

1987 SBIR Phase I Awards Distribution by State



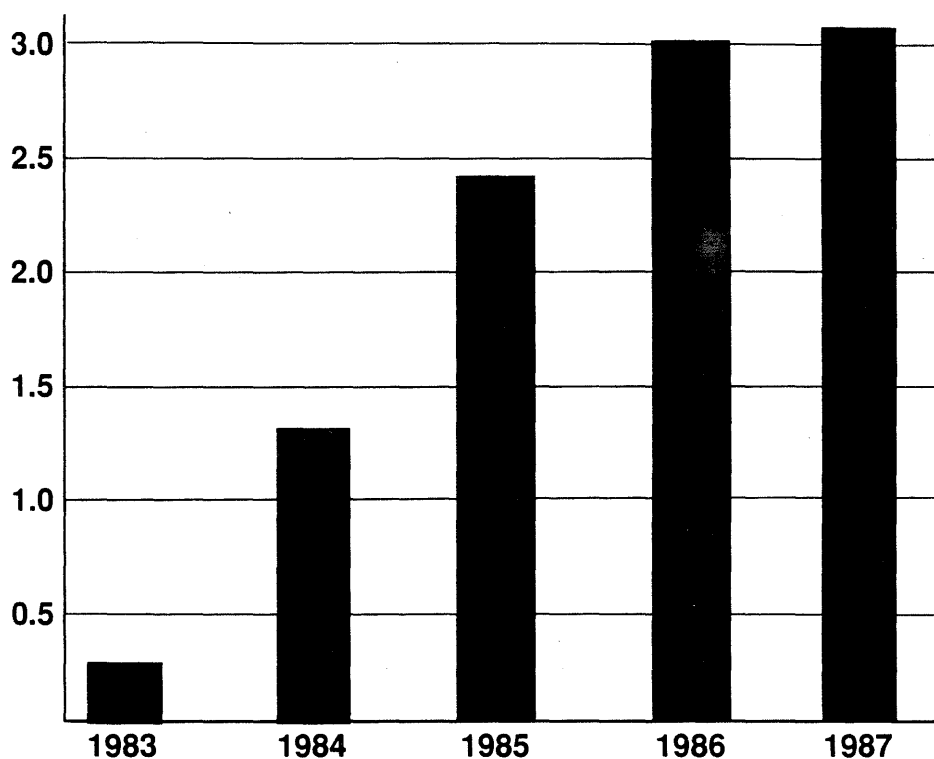
Minnesota's Place Rank in National Competition



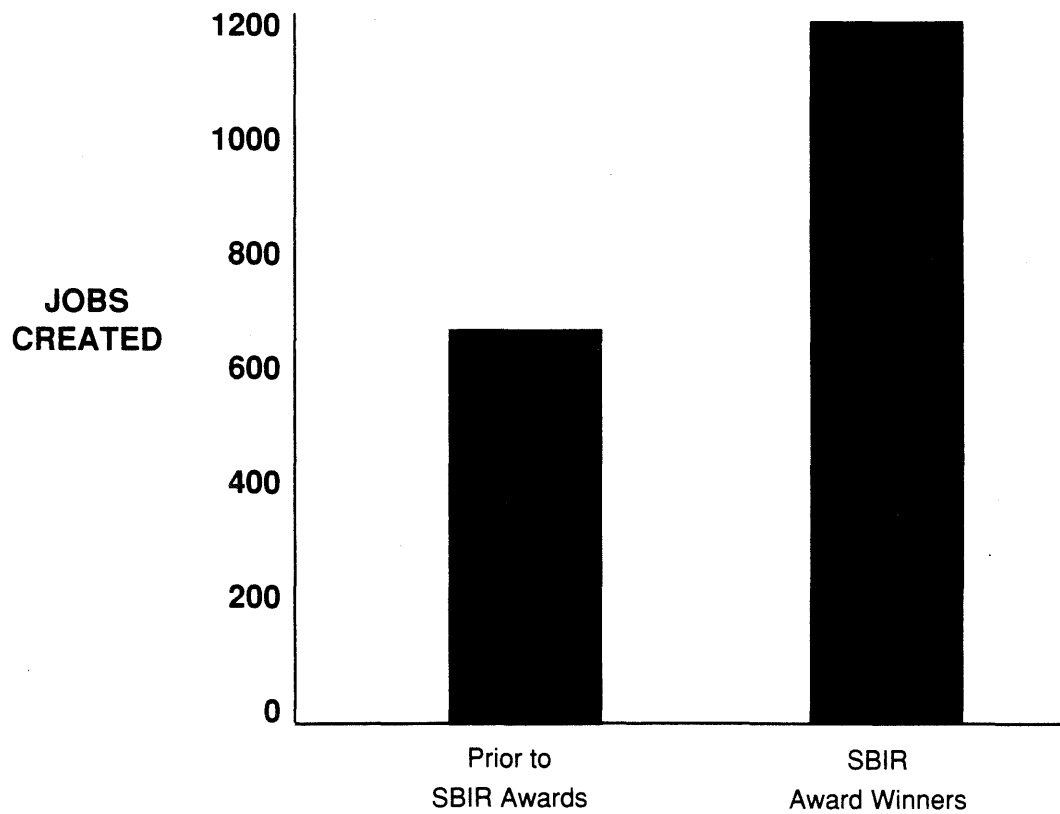
Minnesota Project Innovation's Track Record

Minnesota Project Innovation's efforts to assist Minnesota firms secure federal research and development grants have been successful. Since MPI's inception, 44 Minnesota high technology businesses have received over \$10 million in SBIR R&D contracts in the areas of agriculture, education, defense, commerce, health, environment, science, and space. Employment has expanded by 519 jobs. In FY 1987, the number of Minnesota firms winning SBIR awards increased by 40 percent over any previous year. The total federal funds received set a new state record of \$3.1 million.

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



SBIR Impact on Jobs Created in Minnesota

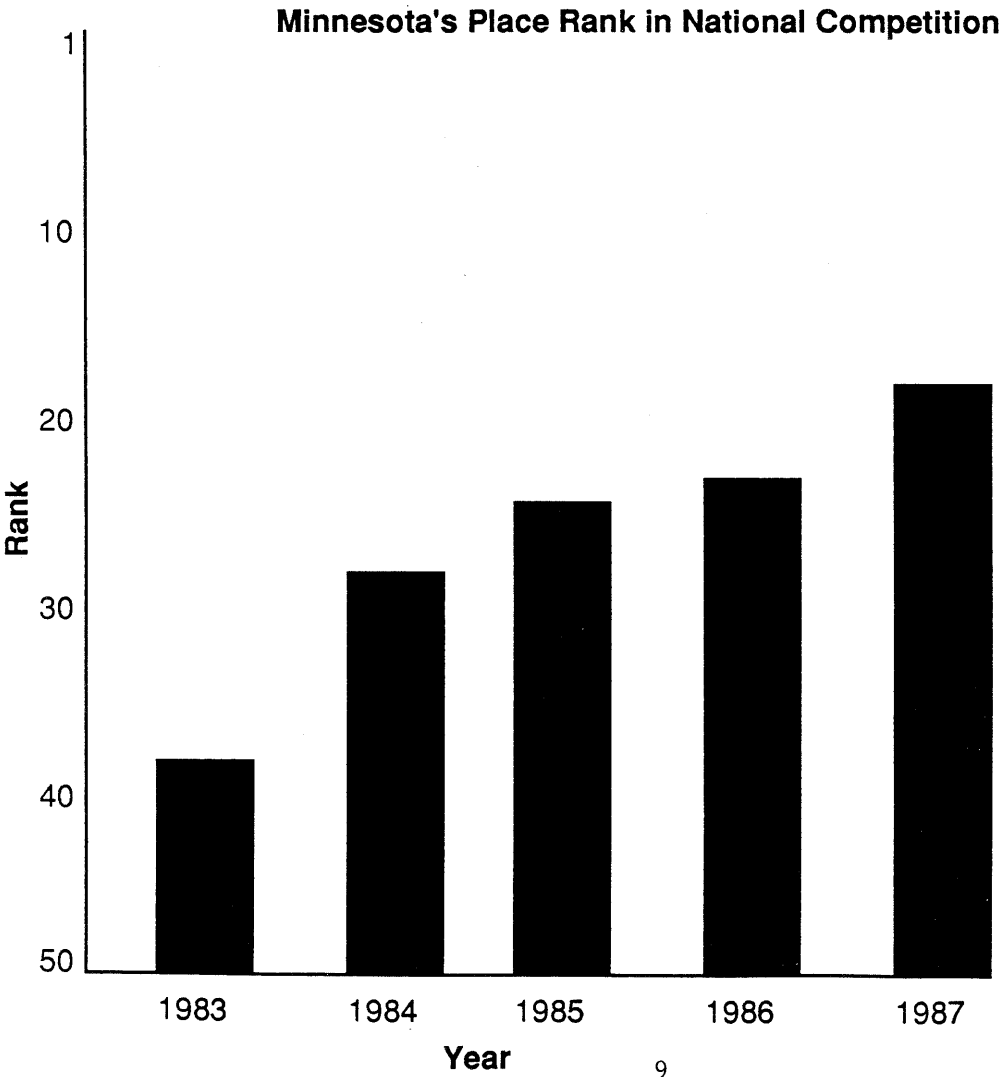
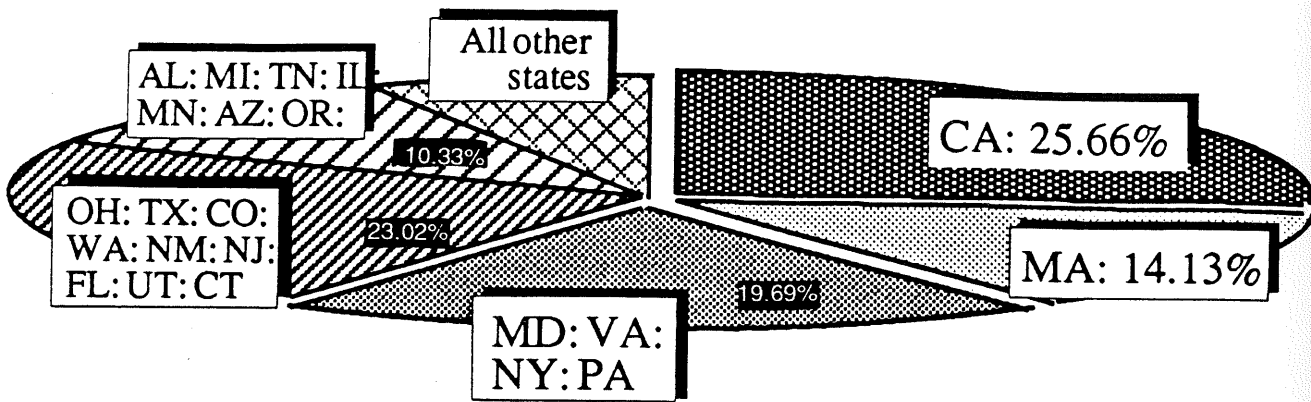


SMALL HIGH-TECH BUSINESSES

SBIR Job Expansion Track Record

<u>Company</u>	<u>Location</u>	Jobs		<u>SBIR Start-Up</u>
		1983-1987 Prior to <u>SBIR Awards</u>	Dec.1988 <u>Current</u>	
A	Willmar	15	N/A	No
B	Minneapolis	3	5	Yes
C	Blaine	6	46	Yes
D	St. Paul	6	3	Yes
E	Burnsville	80	160	No
F	Minneapolis	100	297	No
G	Moorhead	1	N/A	Yes
H	Minneapolis	6	6	Yes
I	Eden Prairie	4	45	Yes
J	Minneapolis	7	7	No
K	Minneapolis	2	4	Yes
L	Minneapolis	2	4	Yes
M	Minneapolis	19	23	No
N	Columbia Heights	1	4	Yes
O	Roseville	4	19	Yes
P	Plymouth	6	15	Yes
Q	St. Paul	1	2	Yes
R	Stillwater	1	2	Yes
S	Minneapolis	5	11	Yes
T	Minneapolis	4	10	No
U	Minneapolis	9	17	No
V	New Brighton	1	1	No
W	Minneapolis	1	1	Yes
X	Eden Prairie	6	14	Yes
Y	Minneapolis	1	1	Yes
Z	Minnetonka	65	55	No
AA	Minneapolis	1	5	Yes
BB	Maple Lake	5	5	Yes
CC	St. Paul	1	5	Yes
DD	Minneapolis	2	24	Yes
EE	Minneapolis	2	5	Yes
FF	St. Paul	4	3	Yes
GG	Minneapolis	1	2	Yes
HH	Excelsior	4	7	No
II	Minneapolis	1	1	Yes
JJ	Eden Prairie	2	5	Yes
KK	St. Paul	272	333	No
LL	Minneapolis	3	5	Yes
MM	Moose Lake	30	29	No
NN	Minneapolis	9	12	Yes
OO	International Falls	2	7	Yes

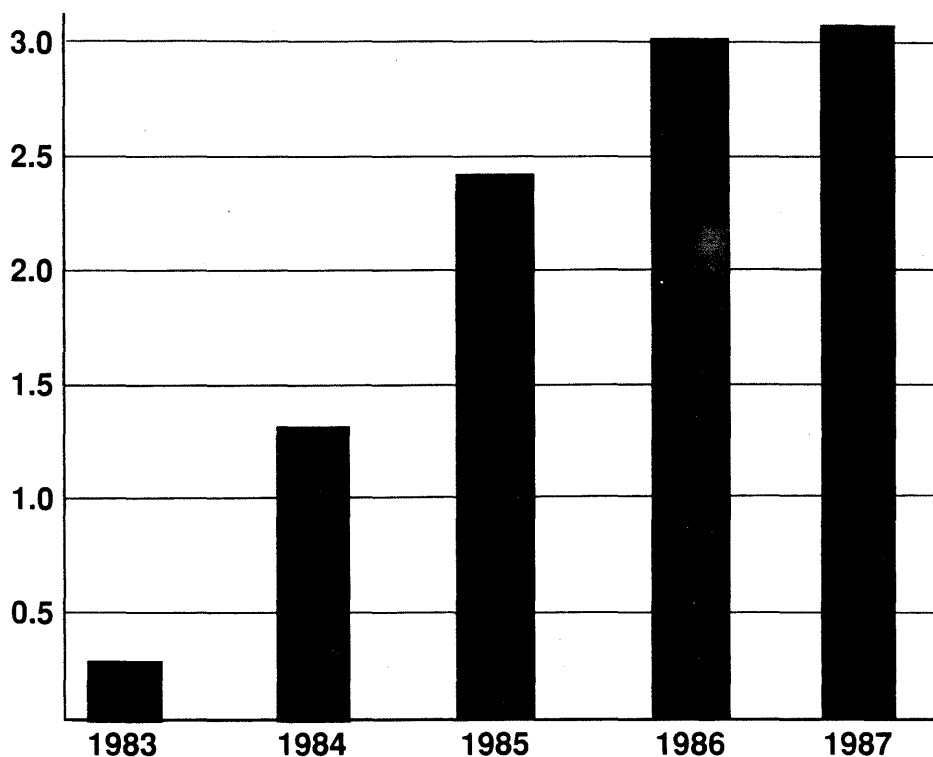
1987 SBIR Phase I Awards Distribution by State



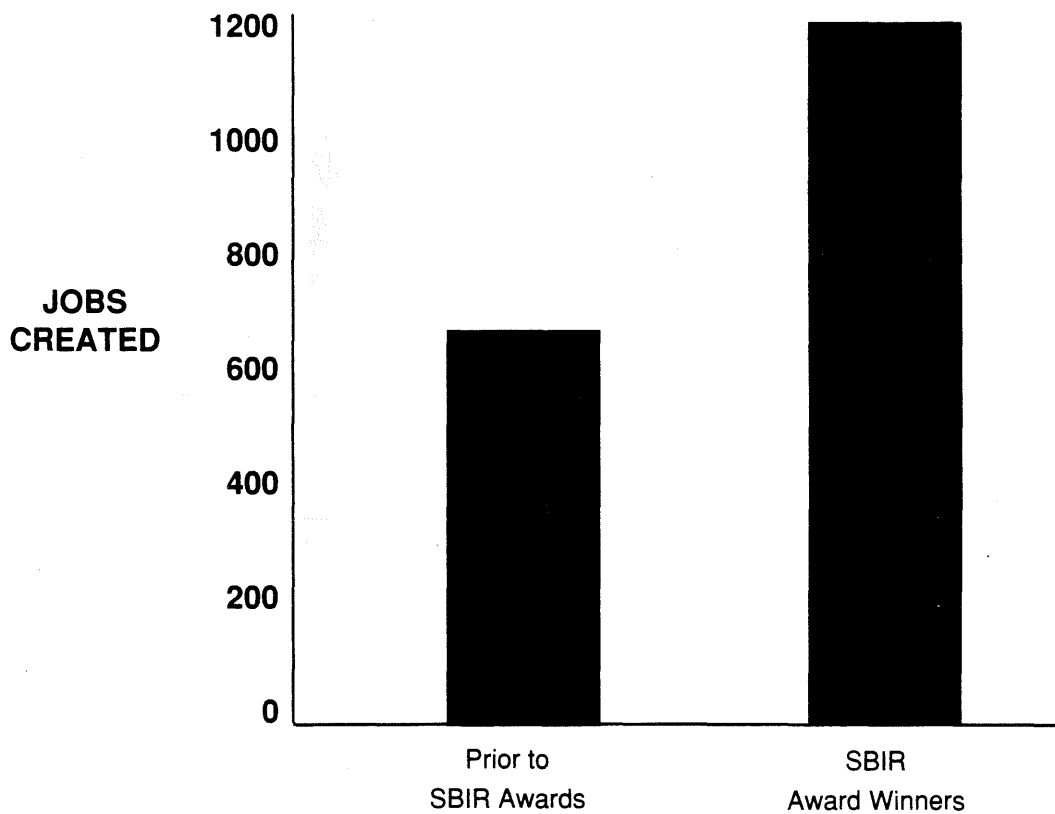
Minnesota Project Innovation's Track Record

Minnesota Project Innovation's efforts to assist Minnesota firms secure federal research and development grants have been successful. Since MPI's inception, 44 Minnesota high technology businesses have received over \$10 million in SBIR R&D contracts in the areas of agriculture, education, defense, commerce, health, environment, science, and space. Employment has expanded by 519 jobs. In FY 1987, the number of Minnesota firms winning SBIR awards increased by 40 percent over any previous year. The total federal funds received set a new state record of \$3.1 million.

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



SBIR Impact on Jobs Created in Minnesota



SMALL HIGH-TECH BUSINESSES

SBIR Job Expansion Track Record

<u>Company</u>	<u>Location</u>	Jobs		<u>SBIR Start-Up</u>
		1983-1987 Prior to <u>SBIR Awards</u>	Dec.1988 <u>Current</u>	
A	Willmar	15	N/A	No
B	Minneapolis	3	5	Yes
C	Blaine	6	46	Yes
D	St. Paul	6	3	Yes
E	Burnsville	80	160	No
F	Minneapolis	100	297	No
G	Moorhead	1	N/A	Yes
H	Minneapolis	6	6	Yes
I	Eden Prairie	4	45	Yes
J	Minneapolis	7	7	No
K	Minneapolis	2	4	Yes
L	Minneapolis	2	4	Yes
M	Minneapolis	19	23	No
N	Columbia Heights	1	4	Yes
O	Roseville	4	19	Yes
P	Plymouth	6	15	Yes
Q	St. Paul	1	2	Yes
R	Stillwater	1	2	Yes
S	Minneapolis	5	11	Yes
T	Minneapolis	4	10	No
U	Minneapolis	9	17	No
V	New Brighton	1	1	No
W	Minneapolis	1	1	Yes
X	Eden Prairie	6	14	Yes
Y	Minneapolis	1	1	Yes
Z	Minnetonka	65	55	No
AA	Minneapolis	1	5	Yes
BB	Maple Lake	5	5	Yes
CC	St. Paul	1	5	Yes
DD	Minneapolis	2	24	Yes
EE	Minneapolis	2	5	Yes
FF	St. Paul	4	3	Yes
GG	Minneapolis	1	2	Yes
HH	Excelsior	4	7	No
II	Minneapolis	1	1	Yes
JJ	Eden Prairie	2	5	Yes
KK	St. Paul	272	333	No
LL	Minneapolis	3	5	Yes
MM	Moose Lake	30	29	No
NN	Minneapolis	9	12	Yes
OO	International Falls	2	7	Yes

Minnesota Project Innovation Board of Directors

Executive Committee

Michael Brown, CEO, Micro Dynamics, Inc.; Chair
Anil Jain, President, APA Optics, Inc.; Vice Chair
Rolf Engh, Lindquist and Vennum; Secretary
Timothy Flynn, Partner, 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
State Senator Steven Morse
Thomas Neitge, Vice President, Minnesota Seed Capital, Inc.
Dr. William Friedlander, Director, Technology Evaluation, 3M

Corporate Directors

Paul Anderson, Director, Systems Development, Honeywell, Inc.
Mike Grimes, Briggs and Morgan
Thomas Lindquist, Director, Government & 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, MN Cooperation Office
Dr. Steven Zuckerman

University Directors

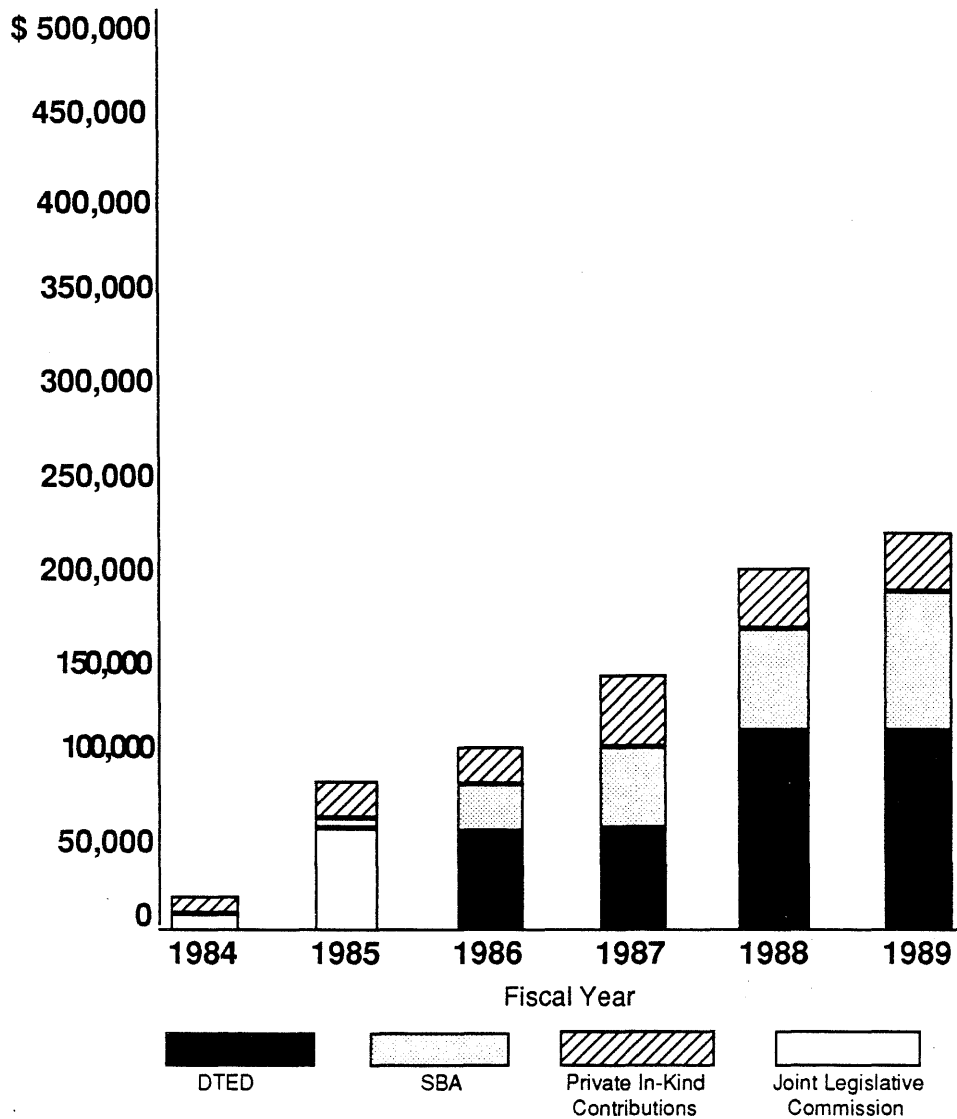
Dr. Bruce Ellis, Professor, School of Engineering, St. Cloud State University
Daryl Erdman, Professor & Chair, Small Business & Entrepreneurship,
College of St. Thomas

Government Directors

Ed Daum, District Director, U.S. Small Business Administration
State House of Representative Don Frerichs
Minnesota Lieutenant Governor Marlene Johnson

Who Funds Minnesota Project Innovation

Minnesota Project Innovation was established by the Governor's Commission on Small Business Innovation Research Grants in 1983. Today, Minnesota Project Innovation continues to be supported by the Governor's Office of Science and Technology, Department of Trade and Economic Development; the U.S. Small Business Administration; and private in-kind contributions.



Minnesota Project Innovation Objectives

Challenges

Recruitment

- Newsletter

Information

- SBIR SEARCH

Business Development

- Gap Funding
- Business Planning/Fundraising





Procurement

- Phase III Markets
- Existing High Technology Companies

Minnesota Project Innovation Budget Request

	FY 1989		FY 1990	
	<u>DTED--Other</u>		<u>DTED--Other</u>	
Recruitment				
Consultant/Staff	15	0	25	0
Publications	0	25	25	25
Research Information				
Staff	30	0	30	0
SBIR SEARCH	15	0	30	20
Business Development				
Staff	0	30	0	30
Materials	0	0	5	10
Procurement				
Staff	0	0	20	20
Library/Support	0	0	10	10
Administration				
Staff (2)	45	20	70	0
Office/Support	15	40	25	50
<hr/>				
Total	\$120	105	240	160

Gap Funding

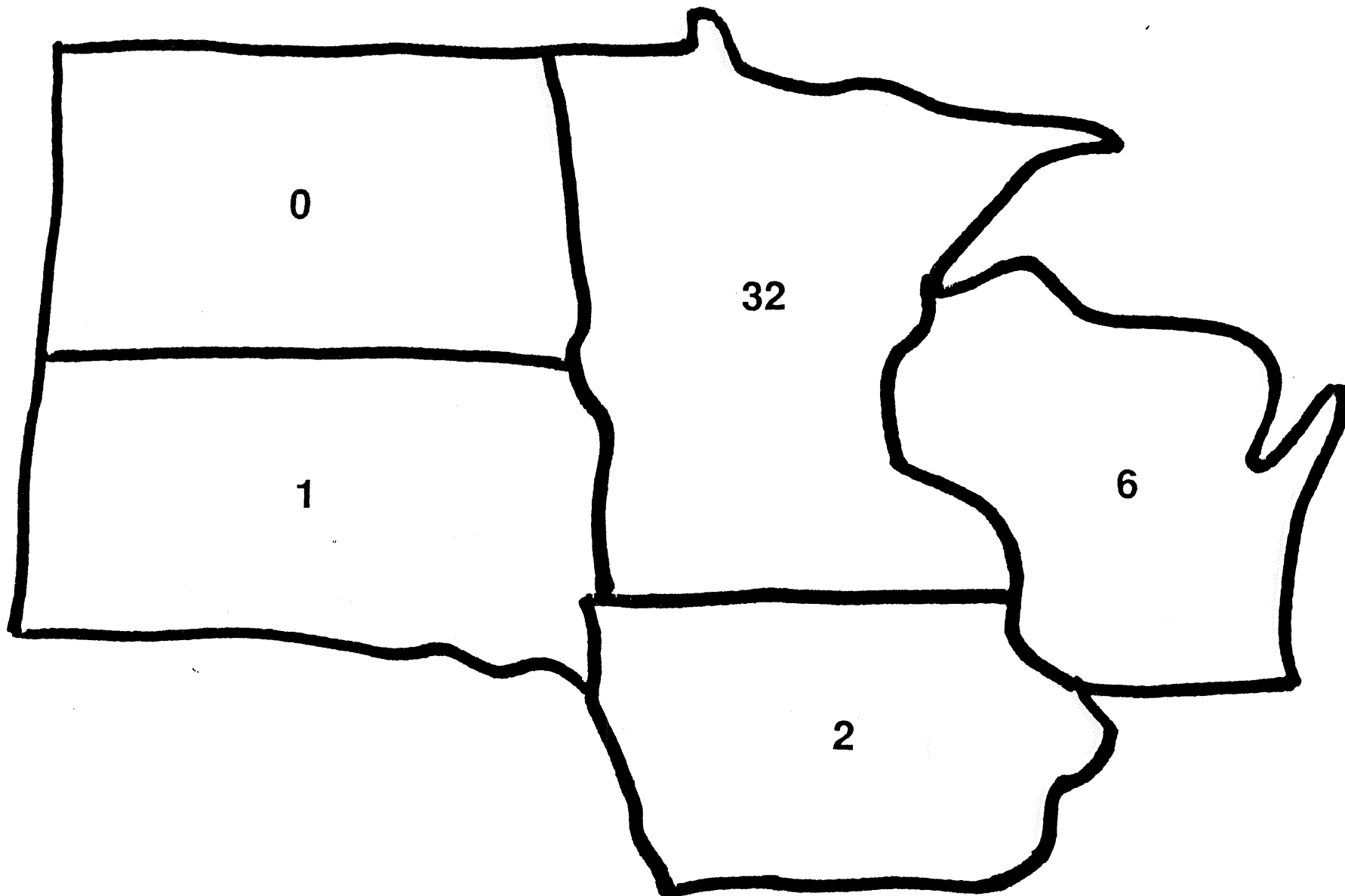
	<u>FUNDS</u>	<u>TIMELINE</u>	
Federal Agency announces topics		Month 1	Year 1
		2	
Proposal Deadline		Month 3	
		4	
		5	
		6	
		7	
		8	
Phase I Awards		Month 9	
		10	
		11	
		12	
Phase II Proposal Due		1	Year 2
		2	
		Month 3	
		4	
		5	
		6	
		7	
		8	
Phase II Awards		Month 9	
		10	
		11	
		12	
		1	Year 3
		2	
		3	
		4	
		5	
		6	
		7	
		8	
		9	
		10	
		11	
		12	
Phase III Commercialization		Month 9	Year 4

Gap Funding

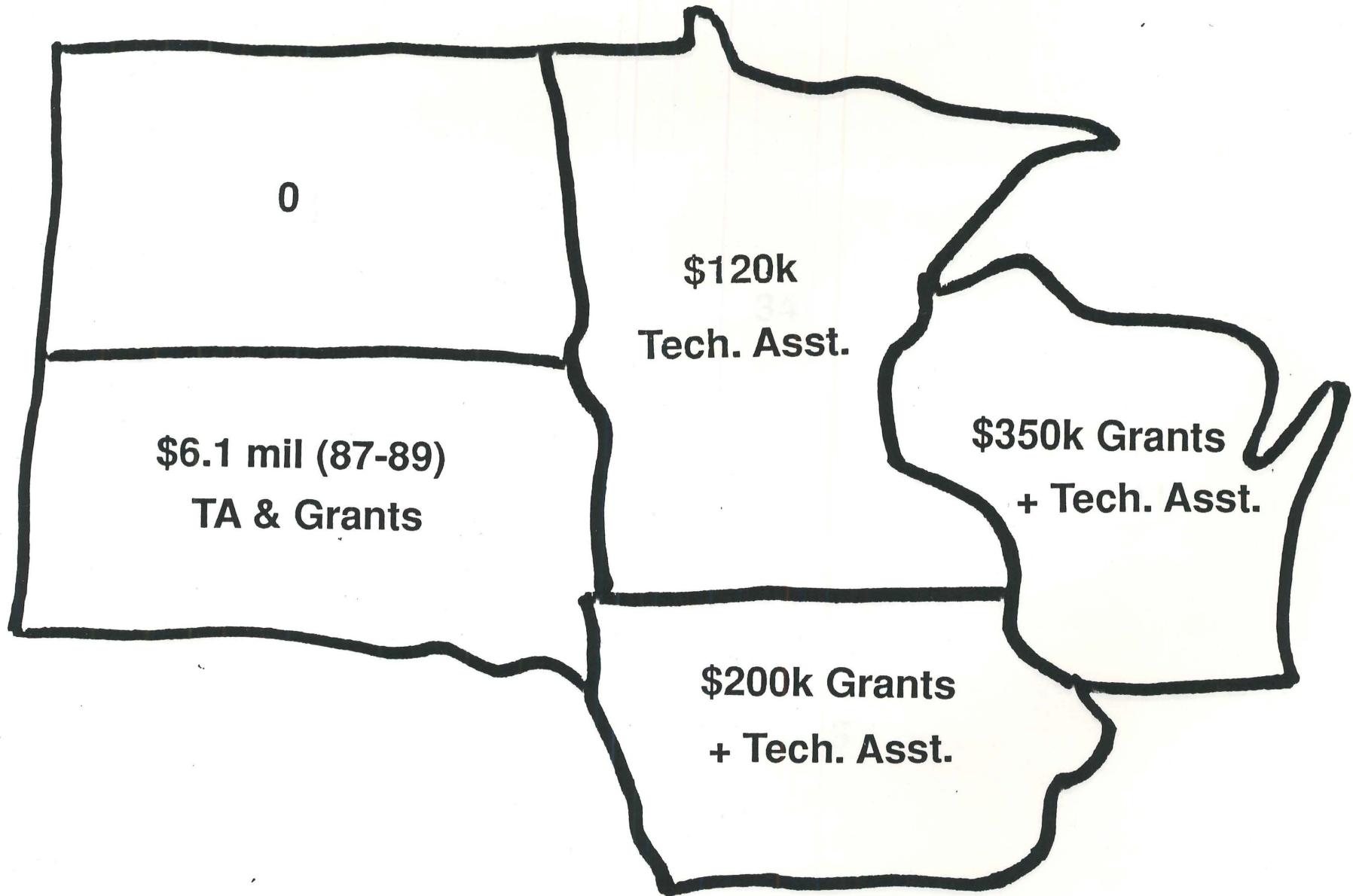
Successful Gap Funding Requirements

- Entitlement - reduces the risk of launching a new venture
- Focus - continuation of refining specific application
- Timeliness - builds momentum, maintains staff
- Simplicity - minimizes time commitment and obligations
- Accountability - subject to federal cost accounting
- Ownership - adds value, avoids diluting equity

FY 1986 SBIR Awards



FY 1987 SBIR State Assistance



FY 1987 SBIR Awards

