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*Minnesota Project Innovation
has only begun to tap the vast
creative ingenuity of Minnesota's
high-technology industry.
With continued support, the
results can become even more
rewarding and impressive.*

James Bracke,
President and CEO,
LifeCore Biomedical, Inc.

MINNESOTA PROJECT INNOVATION

MISSION

To promote the growth of high-technology small business development in Minnesota by maximizing the benefit of participation in the federal Small Business Innovation Research (SBIR) program statewide.

The SBIR program identifies national market for advanced new technology in the public interest, funds feasibility and development research based on a process of national competition and peer review, and emphasizes commercialization of new technology for both government and industrial consumption. MPI's mission is to assist Minnesota small business clients in each of these critical phases.

MINNESOTA PROJECT INNOVATION

Federal R&D For Small Business

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 **\$450 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:

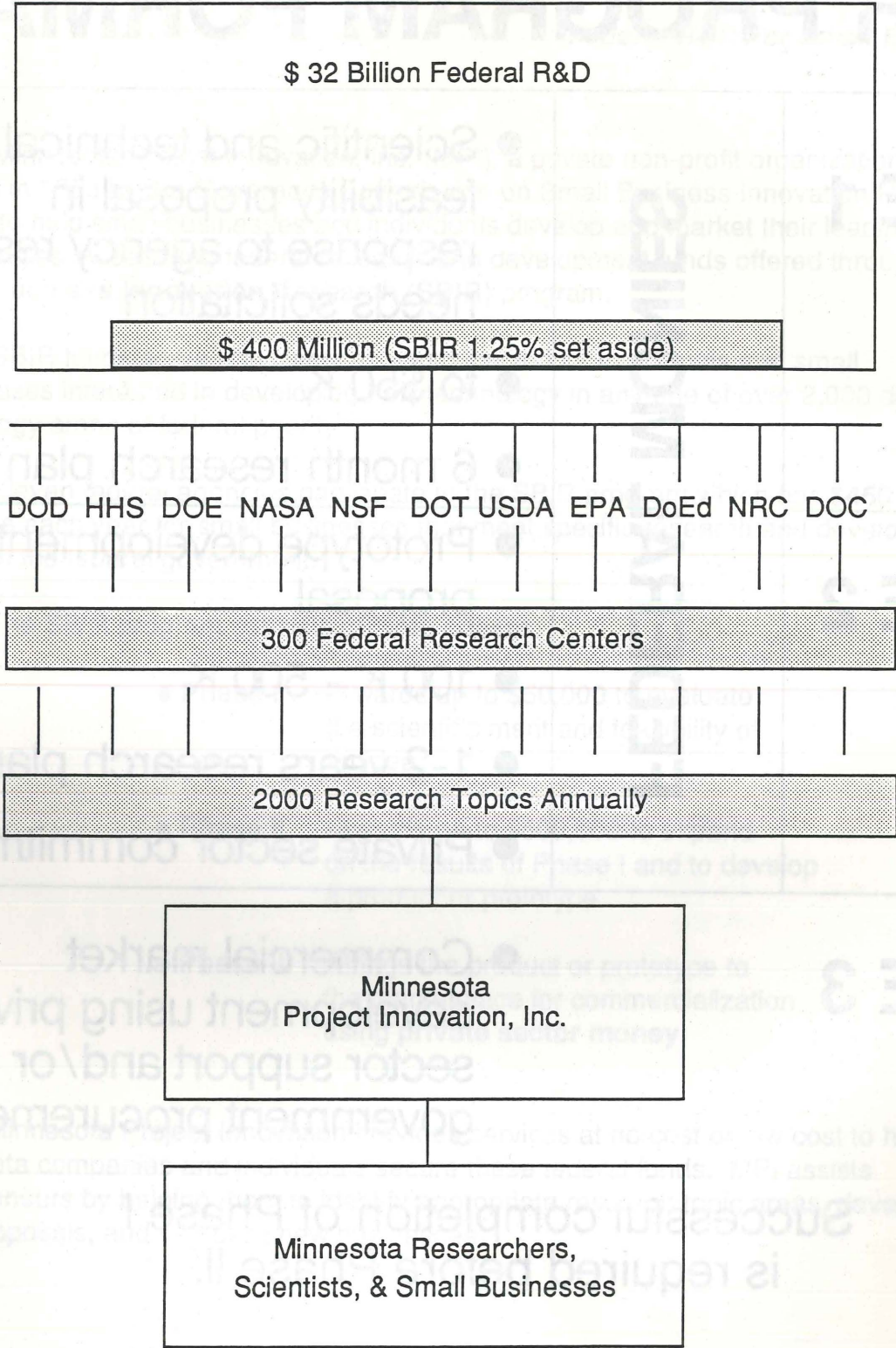
- **Phase I** -Awards up to **\$50,000** to evaluate the scientific merit and feasibility of an idea.
- **Phase II** -Awards up to **\$500,000** to expand on the results of Phase I and to develop a product or prototype.
- **Phase III** -Brings the product or prototype to the marketplace for commercialization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

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

SBIR PROGRAM FORMAT

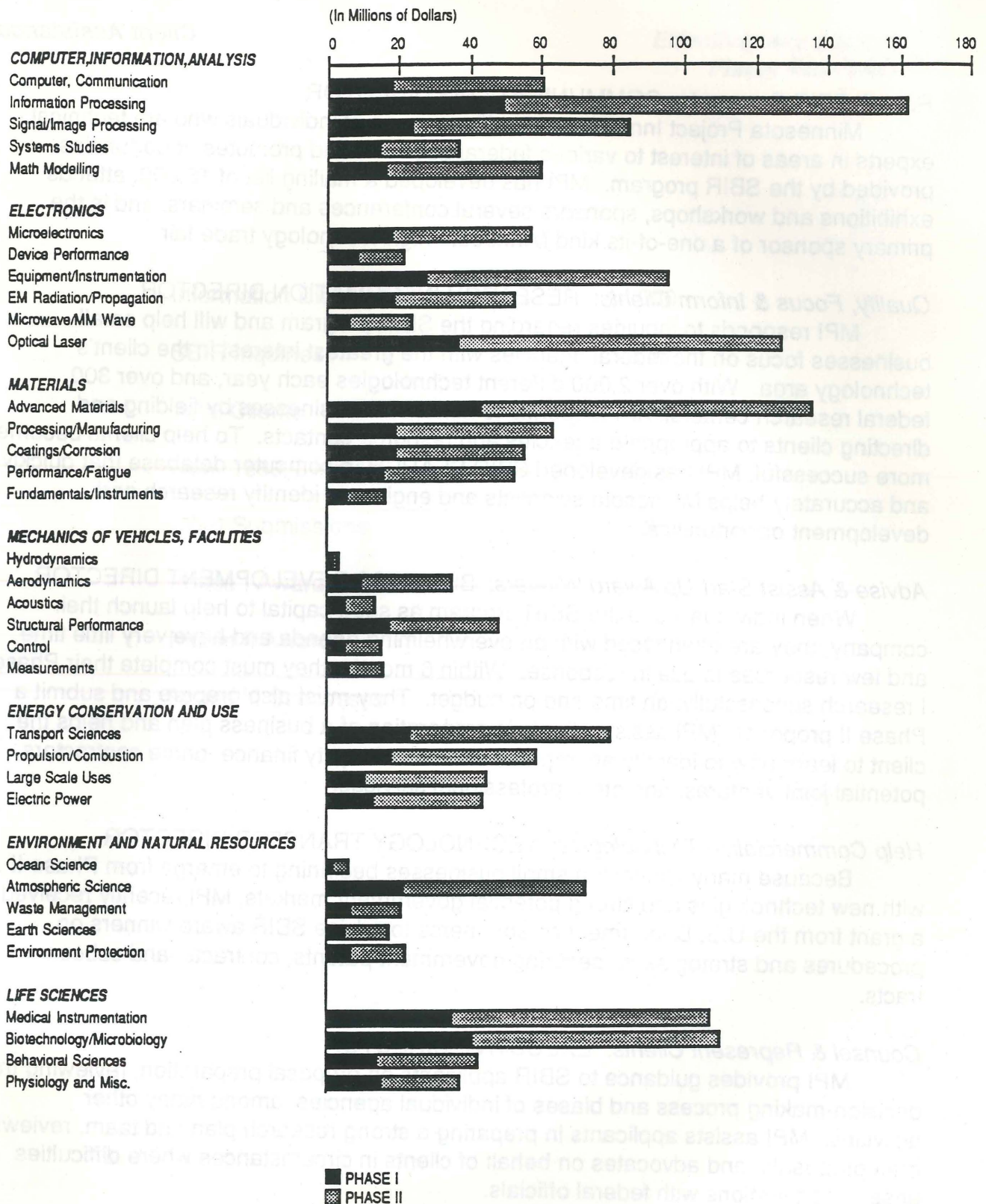
PHASE 1	FEDERAL MONIES	<ul style="list-style-type: none"> ● Scientific and technical feasibility proposal in response to agency research needs solicitation ● to \$50 K ● 6 month research plan
PHASE 2		<ul style="list-style-type: none"> ● Prototype development proposal ● 100 K - 500 K ● 1-2 years research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

Federal R&D For Small Business



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

Multiple Technology Areas Assigned to Awards



MINNESOTA PROJECT INNOVATION

Client Assistance

Recruit SBIR Prospects: COMMUNICATIONS 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 16,000, attends exhibitions and workshops, sponsors several conferences and seminars, and is the primary sponsor of a one-of-its kind Minnesota high-technology trade fair.

Qualify, Focus & Inform Clients: RESEARCH INFORMATION DIRECTOR

MPI responds to inquiries regarding the SBIR program and will help small businesses focus on the federal agencies with the greatest interest in the client's technology area. With over 2,000 different technologies each year, and over 300 federal research centers, MPI responds to Minnesota businesses by fielding and directing clients to appropriate agencies and resource contacts. To help clients become more successful, MPI has developed SBIR SEARCH, a computer database that quickly and accurately helps Minnesota scientists and engineers identify research and development opportunities.

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

When individuals use the SBIR program as seed capital to help 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. MPI assists clients in preparation of a business plan and helps the client to learn how to identify appropriate sources of equity finance, prime contractors, potential joint ventures, and other professional services.

Help Commercialize Technologies: TECHNOLOGY TRANSFER DIRECTOR

Because many Minnesota small businesses beginning to emerge from Phase II with new technologies and strong potential government markets, MPI recently received a grant from the U.S. Department of Commerce to advise SBIR award winners on procedures and strategies for securing government patents, contracts, and subcontracts.

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.

MINNESOTA PROJECT INNOVATION

***Effectiveness Record
Fiscal Year 1989***

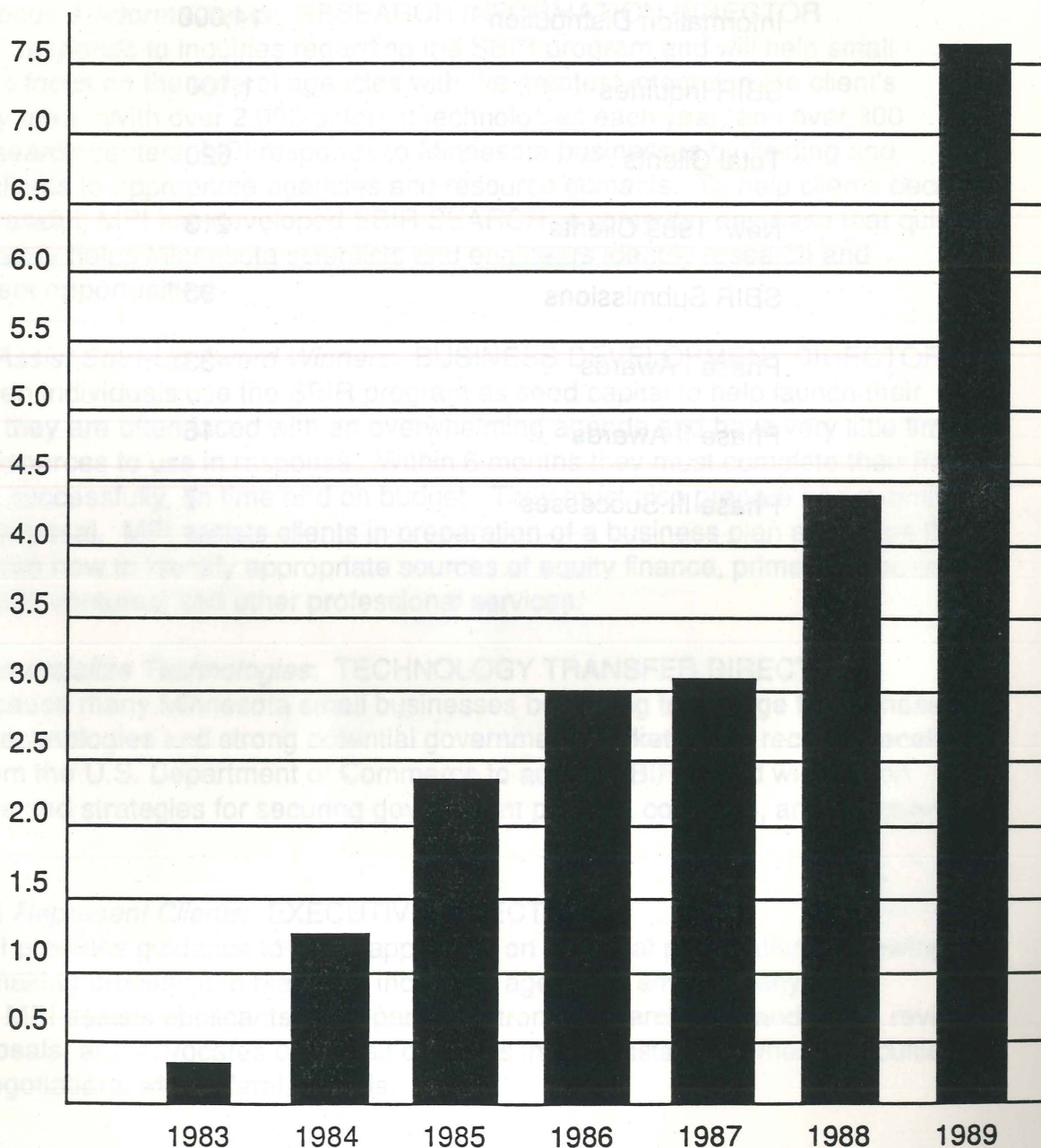
Information Distribution	14,000
SBIR Inquiries	1,100
Total Clients	620
New 1989 Clients	213
SBIR Submissions	95
Phase I Awards	33
Phase II Awards	16
Phase III Successes	7

MINNESOTA PROJECT INNOVATION

Track Record

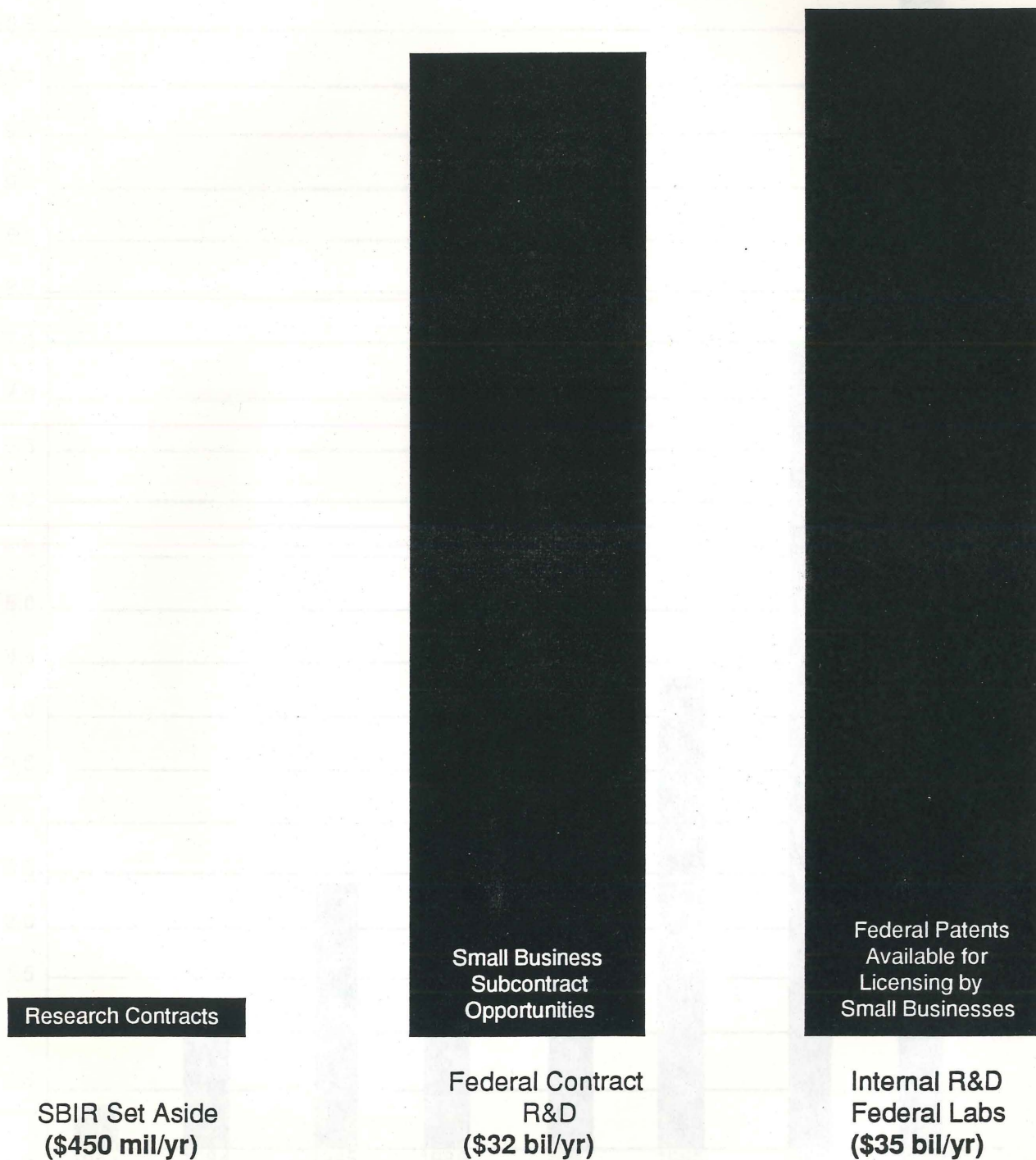
The number of firms winning SBIR awards increased during fiscal year 1989 by 74 percent over any previous year. The total federal funds received set a new state record at \$7.53 million.

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



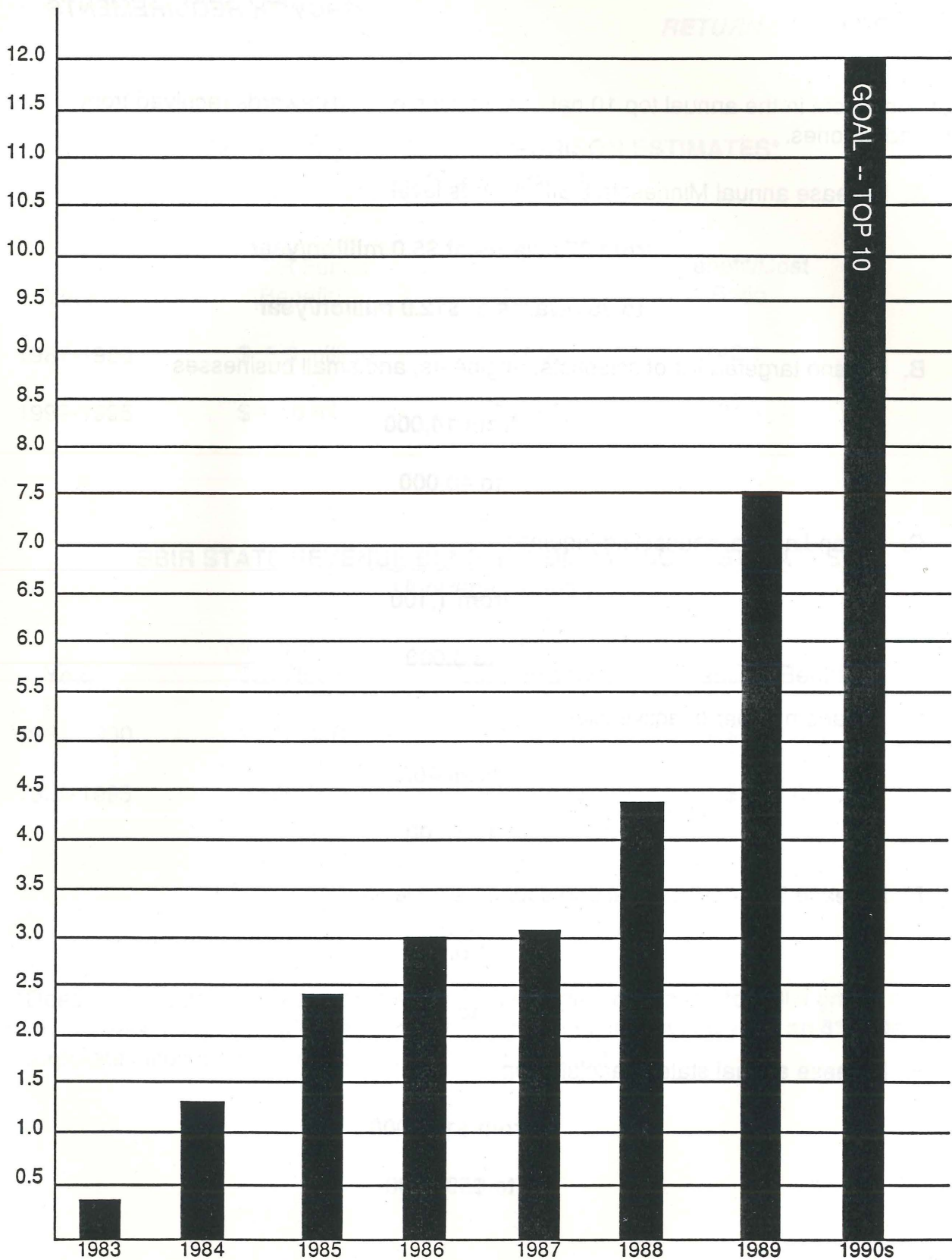
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*R&D Budget Comparisons
January 1991*



MINNESOTA PROJECT INNOVATION

Minnesota's SBIR Growth Potential -- '90s



MINNESOTA PROJECT INNOVATION

GROWTH REQUIREMENTS

GOAL #1

To put Minnesota in the annual top 10 national ranking of SBIR awards received from federal laboratories.

A. Increase annual Minnesota SBIR awards level

from 37 awards at \$5.0 million/year

to 80 awards at \$12.0 million/year

B. Expand targeted list of scientists, engineers, and small businesses

from 14,000

to 40,000

C. Expand annual counseling inquiries

from 1,100

to 3,000

D. Expand number of active clients

from 400

to 1,200

E. Increase MPI professional and support staff level

from 5

to 12

F. Increase annual state financial support

from \$120,000

to \$500,000

MINNESOTA PROJECT INNOVATION

RETURN ON INVESTMENT

SBIR BENEFIT/COST COMPARISON ESTIMATES* (Average Annual)

Year	SBIR Funds (Benefit)	State Funds (Cost)	Benefit/Cost Ratio
1987-1990	\$ 5.0 million	\$ 120,000	42:1
1992-1995	\$ 12.0 million	\$ 500,000	24:1

SBIR STATE REVENUE BENEFIT COMPARISON ESTIMATES* (Average Annual)

Year	MN Income Tax Rev.	State Expense	Treasury Benefit
1987-1990	\$ 320,000	\$ 120,000	+ \$ 200,000
1992-1995	\$ 800,000	\$ 500,000	+ \$ 300,000

*Does not include private sector investment leveraged in addition to SBIR grants received. Assumes 80 % of funds received allocated to salaries taxed at an 8% rate. Corporate income and sales tax revenues not included.

MINNESOTA PROJECT INNOVATION

GROWTH REQUIREMENTS

GOAL #2

To expand technology transfer from federal laboratories to Minnesota businesses.

- A. Increase the number of annual federal licenses acquired by Minnesota firms from federal research laboratories

from 1 in energy technology

to 3 in energy technology
3 in medical and life sciences
3 in computer and information analysis
3 in electronics and optics
3 in environmental sciences, and
3 in materials and composites

- B. Increase professional and support staff level

from 1

to 3

- C. Increase annual state financial support

from \$ 60,000

to \$ 180,000

MINNESOTA PROJECT INNOVATION

RETURN ON INVESTMENT

TECHNOLOGY TRANSFER BENEFIT/COST COMPARISON ESTIMATES* (Average Annual)

Year	License Revenues (Benefit)	State Funds (Cost)	Benefit/Cost (Ratio)
1991	\$ 500,000	\$ 60,000	8:1
1992-1995	\$ 36.0 million	\$ 180,000	200:1

TECHNOLOGY STATE REVENUE BENEFIT COMPARISON ESTIMATES* (Average Annual)

Year	MN Income Tax Rev.	State Expense	Treasury Benefit
1991	\$ 32,000	\$ 60,000	- \$ 28,000
1992-1995	\$ 3.2 million	\$ 180,000	+ \$ 2.1 million

*Does not include private sector investment leveraged in addition to product licensing revenues. Assume 80% of funds go for salaries taxed at 8 %. Corporate income and sales tax revenues not included.

MINNESOTA PROJECT INNOVATION

*Minnesota's Rank in the
National Competition*

State Ranking by Number of SBIR Dollars -- 1989 (in millions)

Rank	State	Dollars	Rank	State	Dollars
1	California	\$ 97.3	27	Wisconsin	\$ 1.8
2	Massachusetts	64.9	28	Missouri	1.5
3	Virginia	23.6	29	Oklahoma	1.4
4	Maryland	20.2	30	Montana	1.3
5	New York	18.3	31	Indiana	1.3
6	Pennsylvania	15.2	32	Maine	1.3
7	Texas	14.1	33	Arkansas	1.1
8	Colorado	12.0	34	Hawaii	0.98
9	Ohio	11.9	35	Iowa	0.94
10	New Jersey	11.2	36	Nevada	0.87
11	Connecticut	10.5	37	Kansas	0.68
12	Florida	9.7	38	Louisiana	0.67
13	New Mexico	9.5	39	Kentucky	0.57
14	Washington	8.1	40	North Dakota	0.55
15	MINNESOTA	7.6	41	Vermont	0.45
16	Illinois	6.7	42	Delaware	0.42
17	Tennessee	6.2	43	Idaho	0.34
18	Michigan	6.1	44	Nebraska	0.32
19	Utah	6.0	45	Mississippi	0.20
20	New Hampshire	5.6	46	South Carolina	0.17
21	Arizona	4.7	47	Rhode Island	0.15
22	Alabama	3.9	48	West Virginia	0.14
23	North Carolina	3.4	49	South Dakota	0.06
24	Oregon	3.3	50	Alaska	0.05
25	Georgia	2.3	51	Puerto Rico	0.05
26	Washington, D.C.	2.2	52	Wyoming	0.04