II. Fund competitive grants to community and technical colleges and universities to match business contributions for acquiring equipment and software and maintaining high-tech instructional laboratories.

A state fund that will provide money to match business contributions for equipping laboratories will leverage state resources and support improvements in the quality and relevance of new and existing programs.

**GOAL 4: CLOSE THE GAPS IN RESEARCH**

**By 2015, increase the level of federal science and engineering research funding to Texas institutions by 50 percent to $1.3 billion.**

Despite the success of many Texas health science centers, research universities and regional and specialized institutions in attracting more research funds over recent years, none of the state’s institutions ranks among the top 20 nationally in federal research and development grants. Overall, Texas ranks sixth among the states in the amount of federal research and development funding. Nationally, at least 10 institutions in other states individually receive more intellectual property income—income generated by research discoveries and applications—than is received by all Texas higher education institutions combined.

To increase the level of federal research and development funds, it will be important to support the work of high quality faculty and graduate students. It is the faculty who obtain federal research grants, and the quality of their work must be exceptional to compete with faculty from other states. Graduate students support the work of faculty, and in the process learn the needed skills to conduct independent research in the future.

**TARGETS FOR CLOSING THE GAPS IN RESEARCH**

Interim targets will help measure progress toward the research goal:

- Increase federal research and development funding to Texas universities and health-related institutions from $845 million to $1 billion by 2007 and to $1.3 billion by 2015.¹

- Increase research expenditures by Texas public universities and health-related institutions from $1.45 billion to $3 billion by 2015 (approximate 5 percent increase per year).

¹ All dollar estimates are in 1998 constant dollars.
RESEARCH STRATEGIES FOR THE STATE

I. Permit universities, like health science centers, to retain all overhead income for grants and contracts.

Currently, the Texas Legislature allows Texas public universities to retain only 50 percent of the overhead income received from grants and contracts. Allowing them to retain all overhead will increase these institutions’ research capabilities.

II. Establish the Texas Science and Engineering Collaborative to expand research in focused areas through collaboration among institutions.

Texas higher education institutions, the business community and the state must work together to build research capacity. This cooperation will assist contributors in identifying critical participants and resources as well as in defining strategically sound areas of research and building institutional and business collaboratives that produce results greater than the sum of their parts.

III. Increase funding for the Advanced Research/Advanced Technology Programs.

In 1987, the 70th Texas Legislature created the Advanced Research Program (ARP) and the Advanced Technology Program (ATP) with a $60 million appropriation. These are complementary, statewide research programs providing competitive grants to Texas college and university researchers. The Advanced Research Program is designed to attract and retain the best students and researchers and help provide the knowledge base needed for innovation. The Advanced Technology Program is devoted to promoting the state’s economic growth by increasing the number and quality of scientists and engineers in Texas, enlarging the technology base available to business and industry, creating new products and services, and attracting new industries to Texas.

An increase in funding to $90 million per biennium will restore to these programs the purchasing power they had when created in 1987. Designating a portion (not to exceed 30 percent) of this increase to provide matching funds that will leverage the state dollars to attract even more external research funds. It will also help increase links between higher education and the business community.

IV. Establish a competitive grant program to expand research and research capacity at developing research universities in current and projected major urban areas and at other universities with substantial research programs.
Houston, Dallas–Fort Worth and San Antonio are among the nation’s 10 largest urban areas; the research capacity at the public higher education institutions within these regions and at rapidly growing major urban areas along the border with Mexico should be further increased. At the same time, Texas must support further research advances at the state’s major research universities.

**A SYSTEM TO ENSURE PROGRESS TOWARD GOALS**

**STRATEGIES FOR THE STATE**

Develop benchmarks and measures to assess progress toward goals of the plan by each institution and by higher education as a whole.

These recommendations represent a shared vision and commitment to closing the gaps in Texas higher education. To assure that progress is made towards these goals, the state shall establish benchmarks and measures to assess progress toward the goals by each institution and Texas higher education as a whole.