

SCIENCE AND TECHNOLOGY PROGRAM - USA

increases by nearly 13%, while applied research jumps by nearly 8%. DOE's defence R&D continues the gains of recent years with a 12.0% gain in FY 2001, including expanded investments in defence computing and stockpile stewardship activities.

Most categories of R&D by national mission rise in FY 2001. General science R&D increases by 13.5% to **\$6.2 billion** because of large increases for NSF and programs in DOE's Office of Science. Agriculture R&D increases 10.6% to **\$1.7 billion**, mostly because of an unusually large number of congressionally designated research projects.

Basic and applied research receive large increases in FY 2001 appropriations. Federal support of basic research, the majority of which is performed in the nation's colleges and universities, increases by 11.8% or \$2.2 billion to **\$21.2 billion** because of across-the-board increases to agencies' basic research-oriented programs, including increases of greater than 10% for basic research in NIH, NSF, and DOD. Including applied research, total federal support of research (basic and applied) is **\$41.2 billion** in FY 2001, a jump of \$4.7 billion or 12.8% over FY 2000. Again, there are across-the-board increases to agencies' research portfolios, with six agencies (NIH, NSF, DOE, DOD, NASA, DOT) receiving increases greater than 10%.

With about **\$180 billion** being spent by industry and **\$90 billion** by the Federal Government, the S&T structure in the USA is dominated by both. All other R&D funding - universities, not-for-profits (NFP's) and States - represent only 5% of US R&D funding. In terms of who performs the research, only 25% of the Federal Government R&D funding stays in-house. Industry performs the majority of research at **76%**, followed by universities and colleges at **14%**, the Federal Government at only **7%**, and NFPs at **3%**. Both industry (\$16 billion) and the US Federal Government (\$22 billion) fund university research, to the tune of about **\$38 billion** per year.

S&T Structure in the USA in 2001

The S&T structure in the USA is dominated by industry in terms of applied research and the Federal Government in terms of basic research. However, in terms of those performing R&D, industry dwarfs all others at 76%. Even so, a majority of this 76% is applied research, most of the basic research is performed by Federal Government laboratories and by universities.

Industry still performs most of its own research, although there has been a trend for industry to increase its collaboration with universities, particularly for basic research. In the 1990's, industry also spent considerable funds and energy on forming consortia to perform high risk research, which had significant support and funding from some federal departments. However, this trend has been reversed, as government considered this funding as corporate welfare. Collaborations do continue at a reduced level, and in many cases they have been immensely successful.