

### 2.1.12 Chicago (Illinois)

Illinois, with approximately 11.6 million people, ranks sixth in terms of total American population. Recent figures indicate that Illinois' gross state product is about US\$209 billion, fourth in the nation. Expenditures on R&D in the state totalled US\$5.4 billion in 1987, approximately 2.6 percent of the state's gross domestic product, with R&D expenditures in the industrial sector accounting for almost 79.8 percent of the total amount spent. Presently, Illinois ranks eight in the United States, in terms of funding for R&D and employs 200,500 scientists and engineers (35 for every 1,000 members of the labour force) in its numerous academic institutions, research facilities and businesses. The key industrial sectors in Illinois that are most involved in R&D are microelectronics, medical electronics, telecommunications and pharmaceuticals. In addition, Illinois is a large financial center with over 1,200 banks and 400 savings and loan institutions which provide the capital to finance the continual expansion and growth of high-tech industry in the state.

#### TECHNOLOGY TRENDS

One of the most significant trends has been in the area of technology commercialization. University researchers, private industry, and government officials have all recognized the importance of collaboration on high technology projects; thus, funding has been provided to universities and federal laboratories to help identify and support emerging Illinois businesses involved in technological research.

The Argonne National Laboratory-University of Chicago Development corporation (ARCH) is an example of technology commercialization at work in Illinois. ARCH is an actual corporation formed strictly to facilitate commercial development of scientific and technical intellectual property originating at the university and national laboratory. This

unique entity has the ability to license patents, to bring together venture capitalists and investors, to provide market studies and other information to prospective participants, to obtain financing for R&D, and to create new companies.

#### TECHNOLOGY STRENGTHS

Illinois has several high-tech firms that are leaders in their fields. For example, Motorola is the national leader in new cellular telephones for cars as a result of a multimillion dollar research and development effort. Several Illinois companies are leaders in computer hardware and software, modems, and data communications equipment, such as Zenith, a major manufacturer of personal computers. Gould Incorporated has emerged as a total electronics company manufacturing mini-computers, medical instrumentation, test and measurement instruments, defence systems, and a variety of electronic components.

As Illinois is the home of several major pharmaceutical companies and nationally recognized medical centers, the state is a leader in medical research, particularly in the area of advanced pharmaceuticals, genetic engineering and the development of sophisticated diagnostic equipment for the early detection of various diseases. Companies such as Baxter Travenol Laboratories, American Hospital Supply Corp., G.D. Searle and Company, Abbott Laboratories, and Smith Laboratories are just a few of the more than 350 producers of medical technology-related equipment and products in the state.

In addition, Illinois is the site of five federal laboratories, including Argonne National Laboratory, the nation's leading center for energy research and related scientific studies.