

TECHNOLOGY TRENDS

A nation-wide computer industry slowdown has affected the state of Minnesota due to its production of mainframe, or large-scale computers, by firms such as Control Data, Honeywell and Unisys. It is estimated that mainframe sales have increased only 8.8% over the past two years versus 17.5% for the U.S. computer industry.

Offsetting the slowdown in mainframe computers are the success stories of Cray Research (Minneapolis, MN) in super computers and IBM (Rochester, MN) in

mini-computers and personal computers. Other sectors experiencing high growth trends are medical devices software development and biotechnologies.

TECHNOLOGY STRENGTHS

While R&D is funded in university laboratories by federal, state and private sectors, the overwhelming thrust in technological research is performed by individual private companies. Specific firms are identified below by key areas of technological strength:

Key Technology	Specific Firm (major products)
1. Computers	- Cray Research (large-scale scientific computers) - Control Data Corp. (mainframe computers) - Unisys (mainframe computers) - IBM (mini-computers and PC's)
2. Medical Devices	- Medtronic (pacemakers, heart valves) - 3M (health and safety products) - Starkey Laboratories (hearing aids) - St.Jude Medical (heart valves)
3. Software	- National Computer Systems (financial systems for bank trust departments) - Lawson Associates (business applications) - MicroEd (educational software) - MECC (educational software)
4. Biotechnology	- SciMed Life Systems (disposable medical devices) - Incstar (hormones, measuring kits) - Northrup King (seeds) - Pioneer Hybrid (seeds)

KEY ORGANIZATIONS

Key organizations involved in the high technology development include the following: the Minnesota Department of Energy and Economic Development (St. Paul), the Greater Minnesota Corporation (Minneapolis), the University of Minnesota (St. Paul), the Minnesota Trade Office (St. Paul), the Iowa Department of Economic Development (Des Moines), the Nebraska Department of Economic Development (Lincoln), the North

Dakota Development Commission (Bismarck), the Governor's Office of Economic Development (Pierre, South Dakota), and the Montana Department of Commerce (Helena).

KEY SUPPORT PROGRAMS

The thrust of support programs by the individual states is aimed at attracting new industry to the state and developing increased economic growth. Numerous options for achieving these goals are utilized, including joint ventures, financial packages/incentives, R&D support by state universities, etc.