

Other strengths include metallurgy (research institutes include Technical University's Metallurgy Department., Technical Research Centre of Finland's Technical Metallurgy and Minerals), chemistry (Technical University's Chemistry Department, Abo Akademias Chemistry Department., Oensuu University's Physical Chemistry Department., Oulu University's Process Technology Department., Tampere University's Chemistry Department., etc). Technological strengths also exist in microelectronics and telecommunications.

KEY ORGANIZATIONS

Principal technology development organizations include:

- *The Technology Development Centre (TEKES)* Reporting to the Ministry of Trade and Industry, TEKES, headquartered in Helsinki, coordinates international cooperation in technology and assists in raising the standard of technology in Finland through the management of national technological programs that link Finnish industry with research institutions. TEKES provides grants and loans for information technology centres, science parks, industrial R&D, and applied technological research. Its budget in 1988 was 532 million FIM (\$118 million U.S.).
- *The Technical Research Centre of Finland (VTT)* Finland's largest research institute, VTT consists of five research divisions comprising over 30 laboratories and a staff of approximately 3000. The objectives of VTT are to maintain and improve the general level of technology in fields of national importance, and to meet public and private clients' demands for research and testing. It meets these objectives through R&D in five areas:
 - energy and its safe, domestic production
 - extensive exploitation of information technology in products and production
 - advances in the process industry and in the use of domestic raw materials (including research in microbiology)
 - application of building technology in areas such as materials, heating and plumbing, and fire safety
 - manufacturing technology and production methods throughout the mining/metal and machinery/engineering industries

- *The Finnish Pulp and Paper Research Institute* A private corporation owned with a staff of 300 by Finnish paper companies, it is the central research institute of the pulp, paper and paperboard industry in Finland. Research activities within the Institute are divided into four sections: by-products, pulping processes, paper and board, and technical services.

KEY SUPPORT PROGRAMS

International technology development programs co-ordinated by the Technology Research Centre are:

- microelectronics (1987-1990)
- software technology (Finsoft) (1988-1992)
- mechatronics (1987-1989)
- polymer matrix composites (1988-1991)
- powder metallurgy products (1986-1990)
- metal working and forming technology (1985-1989)
- functional paper technology (1977-1991)
- biotechnology (1988-1992)
- pharmaceutical technology (1989-1993)
- Arctic technology (1985-1989)
- industrial building technology (1986-1991)