



### 3.12 FINLAND



*Finland has a population of 4.9 million and a GDP of FIM 440 billion (approx CS\$126 billion).* ● ●

Key industrial sectors include metal products and engineering, pulp and paper, and chemicals. About one-third of the GDP is exported.

In 1989 Finland spent 1.9% of its GDP on R&D. Industry contributes more than 60% of this expenditure.

#### TECHNOLOGY TRENDS

Finland's technological and industrial policies aim especially at:

- maintaining the competitiveness of the country's basic industries (e.g. wood processing and metal)
- creating new industries in emerging sectors of technology (e.g. information technology, biotechnology, etc).

The following national technological programs, initiated by the Technology Development Centre (TEKES), have planned total annual budget expenditures of greater than 40 million FIM (approx \$9 million U.S.):

- Information technology program (FINPRIT)
- Microelectronics program
- Functional paper
- Industrial building technology
- Software technology (FINSOFT)
- Biotechnology
- Powder metallurgy products
- Forest products technology

In 1989, the Finnish Ministry of Trade and Industry initiated a three-year project called, "Managing Technological Change (MTC)" to assist in the internationalization of Finnish firms. The aim of the MTC project is to invite top foreign experts to Finland to advise companies and to lecture in universities.

Finland has a network of seven science parks located throughout the country, and three technology oriented universities: Helsinki University of Technology, the Tampere University of Technology and the Tampereenranta University of Technology.

There is a concerted push to expand international co-operation through EC technology programs, EUREKA, associate membership in ESA.

#### TECHNOLOGY STRENGTHS

Finland has traditionally been strong in wood processing technology (research institutes include Central Laboratory, Technical University's Wood Processing Laboratories and ABO Akademias Wood Processing Department in Turku. Further research is carried out at Oulu University's Process Technology Department, Tampere Technical University's Plastics Technology Institute and the Lappeenranta Technical University's Process Technology Department.