3.3.1 Baden-Wuerttemberg

Baden-Wuerttemberg, one of West Germany's leading industrial states, produces 17 percent of the country's exports. The state, whose capital is Stuttgart, has a population of 9.2 million (15 percent of the total population).

The state has more than 12,000 manufacturing companies, 95 percent of which are small and medium-sized enterprises (SMEs). Some 24 percent of Germany's automotive production originates in the state; Daimler-Benz and Porsche are headquartered in Stuttgart. Some 25 percent of Germany's electronic industry output is generated in the state through such companies as Bosch, SABA and AEG-Telefunken which are headquartered in the state. Other key manufacturing sectors include high-precision mechanical parts, machine tools, optical and other scientific and control instruments.

TECHNOLOGY TRENDS

The state has the highest density of research institutes within Europe, providing 30 percent of Germany's applied research capabilities and 22 percent of its industrial research in support of the state's major industries.

Joint Industrial Research Institutes are established by a number of companies to undertake pre-commercial research. As well, technology centers have been established to serve as incubators for new high technology ventures.

TECHNOLOGY STRENGTHS

Baden-Wuerttemberg has world class technology in several areas including; "mechatronics" (the marriage of mechanical equipment with electronics), high-precision mechanics, automotive technology (eg. front-wheel drive, electronic injection systems) optical instruments (eg. microscopes, telescopes, planetariums); surgical instruments and control equipment.

KEY ORGANIZATIONS

The principal technology development organizations include:

- *Fraunhofer Gesellschaft*; 15 of the 34 institutes are in the state. Their principal areas of research are; solid-state electronics, information processing, systems technology, materials technology, environmental technology and process control.
- *Karlsruhe Nuclear Research Center*; (3,800 staff); principal areas of research are fast breeder reactors, fusion technology, nuclear fuel reprocessing and cryogenics.
- *Stuttgart and Karlsruhe Universities*; their major fields of research are micro-electronics, sensors, lasers, informatics, materials, biotechnology and antipollution technology.
- *Stuttgart Max-Planck Gesellschaft;* the major areas of research are, solid-state physics and chemistry, optoelectronics and powder metallurgy.
- *Heidelberg research complex for biotechnology*; several institutes are grouped under this rubric - eg. European Laboratory of Molecular Biology, German Cancer Research Centre, Genetic Research Centre.

KEY SUPPORT PROGRAMS

The principal technology development support program is the Industrial Promotion Program of Baden-Wuerttemberg, aimed at strengthening the international competitiveness of the state's SMEs through financial assistance, vocational training and regional development. Part of the program is to encourage technology transfer through twenty university-based technology transfer centres.