

### 3.13 NETHERLANDS

**T**he Netherlands has a GDP of about C\$270 billion and a population of 15 million. R&D expenditures amount to 2.3% of GDP. Of this total, 61% is performed in and mostly paid for by industry. Some 63,500 people, that is more than 1% of the working population, are involved in R&D. ● ●

The principal Dutch exports are machinery and transport equipment, food, drink and tobacco, chemicals and plastics. Over 70% of exports go to the EC.

#### TECHNOLOGY TRENDS

More attention is being focussed on environmental technology. A national Environmental Technology Programme (NPM) will start in 1990 and there are more and more environmental projects within EUREKA.

There is increased internationalization of science and technology, but with strong emphasis on Europe and continuing strong participation in EUREKA. The Netherlands, through Philips, will play a key role in the joint European Submicron Silicon Initiative (JESSI) aimed at developing European submicron chip technology.

Increased emphasis is being placed on technology diffusion and small firms. There are now 18 innovation centres scattered over the country and each university has its transfer point.

#### TECHNOLOGY STRENGTHS

The following sectors have been identified as strong sectors:

- health care and medical technology; TNO, universities
- microelectronics; Philips, Holland Elektronika, Centres for Microelectronics at the three technical universities

- new and advanced industrial materials; TNO, universities, selected companies
- ocean related science and technology; Marin, WL, universities, Ministry of Transport
- geosciences; GD, universities
- biology and biotechnology; universities, selected companies
- agriculture and tropical forestry; agricultural university, Ministry of Agriculture
- environmental technology and equipment; Federation of Suppliers of Environmental Services and Technologies (FMPS)

#### KEY ORGANIZATIONS

The Ministry of Economic Affairs is responsible for stimulating development of new industrial technology.

STIPT (implementing organization for technology stimulation programmes) is a semi-governmental organization responsible for implementing technological innovation. Stipt is also responsible for the EUREKA program.

The Ministry of Education and Science is responsible for scientific research, mainly within the university and scientific institutes.