

the "foundation" for innovation for new products and more jobs. During 1998-2001, government expenditures on research and developed showed an average growth of between 5 to 6% annually, aiming to achieve an overall 20% increase during its legislative term, which will end in the Fall of 2002.

The budget of the Federal Ministry for Education and Research (BMBF) for 2002 is Euros 8.4 billion, a 2.7% increase over the last year's allocation, showing once again the government's commitment that research and skilled expertise remain the "foundation for innovation for new products and more jobs" in Germany.

The institutional funding support for large scientific research centres (e.g. German Research Council (DFG), Helmholtz National Research Centres(HGF), Max-Planck Society, Leibnitz Science Association's Blue List Institutes and the Fraunhofer Society Institutes), have received an additional increase of between 3 to 5 per cent this year.

The following three stand out as priority sectors:

- Biotechnology
- Health and Genomics (including molecular medicine)
- Information Technology (including lasers and photonics)

**Biotechnology:** The Ernst and Young Biotechnology 2000 report describes Germany as the leader with the most biotechnology firms in Europe, pointing to a 25% growth over the 1999 figure. (Of 1350 companies in Europe, 279 are in Germany). At the end of Bio-Regio program, this government has launched its own major program "BioProfile" for which it will be inviting research proposals in 20 biotech concept areas. In addition, research on biosafety will receive special attention under the new program. Biotechnology in the 2002 budget has been allocated 267.9 million Euros (a 49% rise in funding over the 1998 figure).

**Health and Genomics:** The announcement on successful decoding of the Human Genome and Germany's active role in the decoding of Chromosome 21 (together with a Japanese research team), has given this area a significant profile across Germany to explore new applications in functional genomics and proteomics. The National Genome Research Network will receive 217 million Euros from the BMBF budget. In total, for the year 2002, this sector has been allocated 387.2 million Euros, which is a 31.1% increase since 1998 and a 3.5% rise since 2001. 2001 was declared by the government as the "year of life sciences": This was to generate public discussion on a variety of bio-ethics issues, culminating to serious consideration of serious changes to Germany's Embryo Protection Law.

**Information and Communication Technologies (ICT):** This sector has been given the highest priority in the past 4 years. As a key enabling technology, ICT incorporates wide-ranging programs involving the development of information processing according to biological principles, intelligent systems and further development of Man-Machine communication, in electronics, innovating new photonic and opto-electronic components and new chip systems. The challenge is seen as the ability to develop a versatile communication systems which will be portable and able to deliver broad bandwidth multi-media data in real time at any location within Germany, Europe and globally. The 2002 budget allocation for this sector is 660.7 million Euros (a 38% increase over the 1998 figure).

Education in Germany is essentially the responsibility of Laender/provincial governments. Federal government support forms only a small portion (less than one-third) of the BMBF