

Games in Barcelona and Madrid's becoming the European Capital of Culture) which will connect Spain's major cities.

R ESEARCH AND DEVELOPMENT

Throughout 1990, the activity of our subsidiary company Telefónica I+D was directed towards responding to Telefónica's needs, and providing profitable technological openings for the Company.

Of particular note was the construction of several prototypes of the Tesys-B packet switching system. We also made progress on the development of the new IBERPAC operating system, which will allow the integrated operating of the Tesys-A and B systems.

As for the Operations and Maintenance Structure (EOC), which is a systems package for telephone network management and operations, we continued to develop new ways of reducing operating costs and improving service quality. In this respect, we started work on a new Control System for IBERCOM and a Transmission Equipment Supervision System, both of which should have the first installations in service in 1991.

Telefónica I+D also carried on its research in the field of speech technology, with one application being the Audiotex service, and in the development of the Broadband Communications Experimental Network.

H UMAN RESOURCES DEVELOPMENT

The aim of Telefónica's human resources strategy is to involve the employees in the company's goals, increase motivation and improve workforce qualification levels in the face of technological change. Telefónica is operating in an environment of constant technological innovation and growing liberalization, and its ability to adapt its human resources to this reality will be a decisive factor for the company's competitive performance. In response to this need, last year saw a major boost in training and development programmes for managers and staff.

By the end of the year, Telefónica had a total workforce of 75,350 employees, an increase of 5.9% over 1989. This increase was accounted for by a net growth of 719 temporary staff and 3,476 permanent staff, 818 of whom were university degree holders. These figures confirm Telefónica's position as the Spanish company with the largest workforce, and as one of the country's leading job creators. In addition, over four million hours of training were given, with training policy supported by an increase

in the resources devoted to this area, from 4.5% of total personnel costs in 1989 to 6.9% in 1990.

INTERNATIONAL RELATIONS

During 1990 we stepped up our contacts with a view to participating in projects likely to expand and consolidate our presence with our own resources on the international scene, and in other projects of significant strategic interest to the company. Of the former, special mention should be made of the signing of the Memorandum Agreements for the TSL (Transovietic Line) project to lay an optical fibre cable across the USSR to the Pacific, the Palma-Algiers and Barcelona-Marseilles underwater cables, the EURAFRICA underwater cable, the UK-Holland 12 and the SAT-2, which will link South Africa with Spain and Portugal in 1993. Of the latter, of prime importance was the signing of the Memorandum Agreement with TELMEX of Mexico for the installation and commissioning in 1994 of an underwater cable between Spain and Mexico, with support in the Caribbean. This agreement will later be extended to the US company ATT and to the Italian company Italcable.

In 1990 Telefónica maintained a higher profile in various international organisations, chairing several CEPT and ETSI committees. We also held the vice-chairmanship of the EURESCOM (European Institute for Research and Strategic Studies in Telecommunication) preparatory committee. In addition, Telefónica coordinated the first steps towards the creation of the operators' association ETNO, a collective decision-making body.

Telefónica continued to reach bilateral agreements with other operators, the most significant being those signed with RTT of Belgium, D.B. Telekom of Germany, CPRM Marconi of Portugal and CTC and ENTEL of Chile.

Telefónica and its affiliates were also extremely active on the EEC front, participating in and closely following the development of community legislation, as well as taking part in various European projects, such as RACE, ESPRIT, CTS-2, DRIVE and COST.

In Latin America, Telefónica continued to play an active role in AHCJET.

THE TELEFONICA GROUP

In 1990 the Telefónica Group companies' sales showed a 27.6% increase over 1989, thus maintaining the upward trend of previous years.

As a result of the Entel-Eria merger, the Entel subsidiaries Maptel and Ecotel joined the group of affiliated companies during the year. Maptel is mainly concerned with digital