



Research and Development

Telefónica's I+D activity grew by 30% in 1999 and focused on creating new business, increasing the differentiation in emerging business and maintaining consolidated areas of activity

Telefónica I+D continues to lead Telefónica's Research and Development activities, focusing its efforts on strengthening the positioning and market share of its different business units. These generic objectives, which have given rise to a 30% increase in Telefónica I+D's activities, have focused on three key areas: creating new business, increasing differentiation in emerging businesses, and helping to maintain consolidated areas of business in which the arrival of new players has a greater impact.

As regards the creation of new business, it is worth drawing attention to activities aimed at providing Terra Networks with both value added and market-generating services (videoconferencing, network games, chats, etc.), as well as tools

and systems to support business and internal processes. Telefónica Cable has also been provided with attractive interactive broadband services, integrated into an initial demonstrator (IMAGENIO Project), offering customers the opportunity to become familiar with the capabilities of these new services on personal computers and TV, and enabling their launch on the market in the near future.

In the section on activities aimed at emerging businesses, Telefónica I+D has developed a wide range of new services for the Mobile Telephone business that enable it to strengthen its strategic position with respect to its competitors by means of differentiating its offer. Other developments include new added-value services integrated with Internet and with special speech-recognition technology, new services based on the use of prepayment cards, geographical localization and network intelligence services. New tools have also been introduced aimed at strengthening business management, such as Datawarehouse, and at enhancing Customer Services Centers and Network Management Systems, thus improving the real quality of services both offered to, and received by, users.

Within the scope of data services and Internet access, mention must be made of the development of the InfoVía



A new generation of network and IP services has enabled a highly competitive offer to be launched in El Salvador and Guatemala, where Telefónica operates as a new entrant.



With the IP Network, InfoVía's advanced service, Telefónica I+D can provide highly competitive services in Spain and Latin America


service into the new generation of IP and InfoVía Plus services. This development has enabled Telefónica DataCorp to maintain its leading position in the information services market as a whole, and particularly in the Internet market. The new generation of IP services has helped traditional corporate information services to develop into global solutions for corporate networks, offering a complete solution for internal and external corporate communications across a single network.

The development by Telefónica I+D of this new generation of IP Network and Services has led to the development of the InfoVía service in both Spain and Argentina, and the deployment of data services and Internet access in El Salvador and Guatemala, providing these countries with a range of highly competitive services in a scenario where Telefónica is a new entrant.

In 1999, Telefónica I+D also continued to develop IP Network services; special mention must be made of the incorporation of ADSL access to this network, given the power of this new form of high-capacity access to general Information Services, particularly the Internet.

In the third area of consolidated business, Telefónica I+D has mainly focused on boosting revenues for Telefónica Spain, increasing its Added Value Services, through, for example, new telephone card, invoice information and consumption facilities, and improving Customer Services through the introduction of new information facilities and advanced call centers for SMEs.

It is also worth highlighting the Management Systems developed to continue reducing operating costs, service times and to improve investments in infrastructures. In addition to improving traditional systems such as EOC, SGT, SERA and SERES at national level, other activities (more details of which are provided below) have been initiated with the aim of making these available in Telesp (Brazil) in the course of the year 2000. Other activities that have been maintained include ATM network management services, supervision of the signalling network through real-time analysis of traffic using the IAS system, deployed in order to cover both the fixed and mobile telephone business. The INTEGRA system has also become the single plant register for operative systems and network maintenance that contains all information relating to the switching and transmission plant elements.

An aerial photograph of a city, showing a large, multi-story building complex in the foreground. The image is overlaid with a semi-transparent blue rectangle in the upper left corner, which contains white text. The rest of the image is a faded, green-tinted aerial view of the city's streets and buildings.

By incorporating ADSL access, IP
Network services have progressed
more rapidly.

One important feature of the Management Systems are the systems developed for new businesses, such as the ADSL management system (SIGA), the system of interconnection with other operators (SGI), or those relating to regulatory aspects such as the number portability system (SGCP).

Lastly, it is worth highlighting the initiatives in the transfer of know-how and products whose efficiency has previously been tested at national level with Latin-American operators, with the aim of improving customer services and quality and reducing response times and investment needs. One example of this has been the deployment in Telesp of the Default and Service Orders Bulletins manager, which has enabled the mechanization of desktop processes, which were previously resolved manually; this has substantially optimised customer services.

In addition to all these activities aimed at providing a response to the short-term needs of Business Units, a great deal of work has been carried out with a view to creating the services of the future, in an attempt to identify and determine new scenarios for the fixed and mobile telephone network, their convergence, customer networks, new services and technologies, forms of payment... all based on the new Internet generation.

