INFORMATION TECHNOLOGIES

Northern Ireland

The Northern Ireland software sector has grown from one company, in 1966, to approximately 100 companies today, employing 2,000 persons. The wider information technology sector, which includes in-house data processing departments of large firms, provides employment to approximately 4,000. The United Kingdom telecommunications market is the most deregulated and most open in the European Union. One of the first in Europe to transfer ownership from the public to the private sector, the UK is now in the vanguard of a privatization movement which is sweeping the telecommunication industry throughout Europe.

Software

The software sector provides applications and systems products and services. Larger firms,such as Kainos, Parity, CFM, CEM, Unicomp and MSS International, employ 50-250 people, and are not exclusively owned by Northern Ireland interests. The larger firms tend to be export-oriented, using the distribution channels and marketing support of their overseas parent or partners.

They also tend to focus on systems integration or developing individually tailored products, and operate in separate niches where there is no strong rivalry Many firms in the sector are small, typically employing 1-10 persons and typically offering their services to the local market..

Multinational information technology firms operating in Northern Ireland fall into two distinct categories; those merely selling hardware and shrink-wrapped packages (IBM, HP, Bull, Siemens/Nixdorf), and those developing and manufacturing software products (e.g. British Telecom and Northern Telecom).

The local Northern Ireland market for software approximates 80-100 million pounds sterling ($128-160 million). While government in Northern Ireland and the Republic, both local and central, is the largest customer, some products are sold to large Northern Ireland firms such as Shorts Brothers.

Northern Ireland produces the necessary intellectual assets required by the sector in terms of graduate recruits. However, there is no local supply base for software development tools, most being purchased from U.S. suppliers. Venture capital, both from public and private sector sources is generally available for innovative

products, although it can be difficult for start-up operations to qualify for funding. While the Government was not instrumental in creating the sector, it provides active support through grants and training.

Telecommunications

As a consequence of this open market, a number of telecommunication carriers, including some of U.S. parentage, have been awarded licenses to operate in the United Kingdom in direct competition with the two established carriers, British Telecom (BT) and Mercury. The services which these new players provide have initially been based on leasing excess capacity from the principal carriers, although they have begun to invest heavily in their own fiber optic-based networks. Several of the UK's water, gas, electricity and transport utilities are forming joint-ventures with telecommunications carriers to install fiber optic networks along pipelines and rail tracks. In addition, cable television companies, with ambitious plans to expand their networks making use of their freedom to compete as local telecommunications carriers, are now installing more fiber than BT and Mercury Communications.

The openness of the UK market has created a very dynamic and highly competitive domestic industry, much of it U.S.-owned. Competition in the UK market has driven down charges to telecommunication consumers. UK phone rates are among the lowest in Europe, a boost to the competitiveness of those sectors, such as teleservices, whose business is based on heavy telecommunications use.

Northern Ireland has been successful in attracting international telecommunications companies seeking a base for a range of operations. Firms establishing a presence in Northern Ireland can benefit from a healthy domestic market, and be well placed to exploit the opportunities expected to flow from the anticipated wave of privatizations and deregulation in other European countries.

Border Counties

Ireland is well-positioned to take advantage of the international information technology revolution. With its well-educated and computer literate labor force, strong base in computer software and electronics, and modern telecommunications infrastructure, the country can utilize information technologies to develop new forms of employment which make its island location irrelevant. These opportunities could be pursued in any parts of the country, including the border counties.

U.S. firms, with their reputation for technology leadership in the telecommunications, electronics, and informatics sector, could lead this development through pursuing of inward investment, licensing, or technology transfer initiatives in Ireland. Domestic software firms have a good reputation

for quality products and services. In addition, Ireland possesses a pool of skilled software graduates, many already having international experience. Telecommunications, multimedia, and environmental software are the areas expected to show the strongest growth.

Ireland is endeavoring to utilize telecommunications and information technologies to offset its peripheral island status and create employment. The national telecommunications company, Telecom Eireann, has invested substantially in modernizing the telecommunications network. It has the second highest level of digitalization in Europe, after France. Telecom Eireann is now seeking to increase the intelligent features of its network, provide a large range of advanced telecommunications services, and participate in the developing area of multimedia services.

Software is one of Ireland's fastest growing business sectors, and, according to some industry observers, Ireland now ranks behind only the United States as a software exporter. The Irish software industry is comprised of over 350 firms employing almost 9,000 people in a broad range of activities including development and customization, localization and translation, production and distribution, and technical support. Total output is about $4 billion and the industry is growing at about 15 percent every two years. The software industry is expected to continue growth of both employment and exports through this decade. The industry includes 3 broad categories - multinational firms exporting to the EU and elsewhere; local firms also exporting; and indigenous firms serving the domestic markets for software and services.

The industry is comprised of three categories of companies: multinational corporations exporting to the EU and beyond, indigenous companies engaged in exporting, and indigenous firms servicing the local Irish market. The multinational sector is comprised of over 80 international software producers, including:

- 5 of the top 10 independent software companies in the world
- 7 of the top 10 package software vendors in Europe
- 6 of the top computer services groups in Europe.

The presence of these multinational firms is testimony to IDA Ireland's success in attracting international investment in this industry. U.S. firms account for much of this investment with over 30 companies, including Microsoft, Lotus, Motorola, Claris, Digital, Symantec, Informix, Sun Microsystems, Novell and EDS having operations in Ireland.

Multinational firms account for almost 90 percent of industry output and are using Ireland as a European localization and translation base. Multinational companies not only republish and distribute software from their base in Ireland

but also are involved in software localization, translating applications into the major European languages and packaging those products for sale.

The result is that 40 percent of all PC package software sold in Europe each year is manufactured in Ireland. The Irish software industry is an export-oriented industry with over 90 percent of the total $4 billion output being exported annually. Software localization is considered to have strong growth potential within Ireland and the country has a significant competitive advantage in this area.

Ireland has become a significant world center for software development because of its skilled, highly-educated workforce, excellent supply infrastructure, cost competitive environment, and sophisticated telecommunications network. In terms of people, Ireland has one of the most educated populations in Europe with about 1 million people in full-time education. Ireland produces over 400 computer science graduates annually and these individuals are being employed in the local software development laboratories of major international software firms.

There are over 1,000 personnel employed in localization, translation, and customization activities in Ireland. In terms of infrastructure, there is a comprehensive local supply infrastructure comprised of services such as turnkey vendors, disk manufacture, telesales, telemarketing, fulfillment services, CD-ROM mastering and duplication, localization, printing, packaging, and freight forwarding. Irish suppliers to multinational firms have quickly adopted WCM techniques and provide products and services to the required quality levels utilizing modern technology within the required lead times at the right price. At the same, this supply infrastructure is continually developing as suppliers are preparing their operations to service the software sector into the future.

Within the border counties, the software sector is developing as Forbairt seeks to foster the growth of indigenous manufacturers and developers. The business innovation centers at the regional Technical Colleges in Dundalk, Letterkenny, and Sligo are also playing a role in the development of the software industry in the region. With its modern telecommunications infrastructure, Ireland has also emerged as a worldwide technical support location for international software firms. The border counties could benefit from this growth in the future as the region becomes more established as a software location.

U.S. software firms seeking to penetrate the lucrative European software market (forecast to be $155 billion in 1996) should consider entering into joint venture/licensing agreements with Irish firms who have the experience of exporting to EU markets. Like indigenous electronics firms, local software firms engaging in exporting are interested in matching up with U.S. software firms and Forbairt is available to assist in this matching process.