

grants under new regulations. The way in which local government raises money from its residents has recently been changed and is about to be changed again. Local government needs more flexible information systems to cope with these changes and sees GIS as a promising part of such systems. GIS are also needed to help local government assess the virtues of different maintenance tenders, for example. Councils feel the need to have better management of their information bases, so as to respond better to changing political processes and pressures. Some 80 per cent of information held by local authorities is geographically based, so GIS are crucial in managing it. Over 100 local councils are currently piloting GIS.

There are broader-based government GIS activities. In Northern Ireland all the utilities, councils and government departments have banded together to produce an integrated GIS for the whole province. Across the UK, central government wants to be able to link geographical data to other information to support changes in health service and education. The current government is keen to increase local accountability and funding for these services and needs supporting information systems.

On a European scale, in 1990 the European Environment Agency (EEA) was founded. This has fostered the development of a common GIS used by some 500 EC scientists. The European Commission's information market policy actions committee thinks that GIS might play a strategic role in developing the information services market. In October 1990, it held a workshop in Brighton in the UK to discuss standards and the idea of a European Transfer Format for geographic information. UK organisations such as the Ordnance Survey government mapping body and the Automobile Association are participating directly in an EC joint venture to build a vehicle navigation database.

Utilities face similar pressures as those confronting local government, in proving that they are managing their resources efficiently. Recent privatisations in areas such as water and electricity have given utilities the incentive and the money with which to improve their geographical information management. Some utilities, such as water and gas boards, have to support considerable maintenance programmes in keeping up aging pipes and pumping equipment.

They see GIS as a way of better organising such maintenance and of providing audit trails to show that maintenance has been properly carried out.

The UK oil sector is fairly buoyant and, unlike US oil companies, Europeans are large purchasers of software products, in preference to developing software in house. Niches such as geophysical mapping offer GIS opportunities. The UK provides a better opportunity than other European countries like France and Germany because it has about twice as many potential users in major oil companies and oil industry consultancies.

The Association for Geographic Information (AGI) reflects the high level of interest from utilities and local government in the UK. It was founded in 1989 and has 500 members. It includes 24 computer systems suppliers, individuals and other organisations. Most of the user organisations are utilities and local government bodies and this disposition is reflected in GIS purchasers. Recent GIS sales include McDonnell Douglas at Sandwell Council, and Intergraph at Yorkshire Electricity.

5.4 Implications for Canadian Companies

The UK market for GIS software products is fairly open, with overseas suppliers figuring largely. There are few explicit barriers to overseas suppliers but some customers may expect long-term assistance in developing information bases, and so will require associated services. Overseas suppliers will also be at a disadvantage where value-added GIS are concerned. It is difficult for them to identify and support GIS applications and packages that contain public domain information relating to the UK.

Nonetheless the UK offers better opportunities than comparable European countries among newly privatised utilities, government (especially local government) and the oil industry. Government and utility opportunities are partly the result of local political changes (described above). Overseas suppliers should try to understand these when selling to the relevant sectors.

Another factor in the UK GIS market is the Ordnance Survey (OS) cartographic system. OS maps, which cover the whole of the UK, have now been digitised