

## **F) Global Positioning Systems (GPS)**

Canadian companies are at the forefront of the development of GPS systems and in Colombia this technology is becoming an increasingly important part of the geomatics industry. Most major Colombian geomatics firms utilize this technology in providing their services to companies and government organizations. This market has been relatively ignored by Canadian companies. There are five major GPS systems in the Colombian market.

The main GPS systems in the Colombian market are Trimble (U.S.), LICA (Switzerland), TOPCON (Japan), ASHTECH (U.S.) and HEPES (U.S.). Some of the big firms that compete in this market are Magnavox and Motorola. Recently, a new Canadian GPS product was launched in the Colombian market and will be competing against these firms.

## **G) Consulting Services**

All of the Colombian geomatics companies interviewed had a consulting division. Due to the complexity of geomatics software and hardware and the constantly evolving technology, the provision of consulting services is becoming increasingly important. Installing, training, updating and maintaining geomatics software and hardware is what private users and public buyers of geomatics products now require. Customer service is also becoming increasingly important. The days of selling software or hardware, without post-purchase customer service are over. Besides, many Colombian geomatics companies are realizing that consulting services provide a larger profit margin than the 15% made on the sale of software and hardware products. On the other hand, private companies and public institutions are realizing out-sourcing services allows for increased organizational flexibility and lower costs.

### ***Key factors shaping future growth***

#### **A) Projected growth**

With the amount of investment in infrastructure projects being undertaken by the private and public sectors, there will be strong growth in the geomatics market for many years to come. See next section - Sectors where opportunities will emerge.

#### **B) Domestic capacity**

There are no Colombian geomatics hardware or software products. However, there are a number of Colombian geomatics companies with the ability to provide geomatics services to the Colombian market using foreign technology. Some of these companies need the help of foreign geomatics firms to furnish services, but generally these companies are operated by geomatics professionals educated in some of the best schools in the world with years of experience.