GIS and logistics service providers

Term Paper for CRP-514

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Objective

To examine opportunities for GIS to add competitive advantage in marketing and planning for companies on the supply side of logistics. i.e. the companies that provide logistics services such as contract distribution, freight forwarding, express parcels, international sea shipping and all cargo aircraft.

GIS in Business

The development of the GIS market

Until the early 1990s, geographical information systems were
Complex,
They used proprietary database management systems,
The components were expensive.

The major commercial uses were to maintain land inventory records for local and national government departments and utility companies.

GIS in Business

The development of the GIS market

Technical barriers to the widespread use of GIS in business have been decreased in the 1990s by five factors:

Reduced cost of computing power,
Increased availability of digital map data,
Availability of software component technology,
Integration with corporate databases, and
Growth in use of the Internet for sharing software and data.

Opportunities for GIS in logistics

There is a strong logistics focus including route planning, optimization, modeling, network maintenance, fleet management and delivery assessment.

Logistics service companies and GIS

Amongst companies providing logistics services the term ‘geographical information systems’ (GIS) is either not recognized or considered to include any software capable of displaying digital maps.

The greatest use of software packages with GIS technology is at an operational level e.g. routing, scheduling, tracking, tracing or navigation.

Logistics service companies and GIS

Lack of use of GIS packages to support higher-level Logistics decision-making may be for a variety of reasons:

- a lack of involvement of contract distribution companies in these decisions
- The availability of centralized resources for planning;
- difficulty in justifying the cost of buying and supporting a mapping package;
- the perception by software companies that logistics services is not a target market

GIS future in logistics service industry

Companies may make greater use of GIS tools as: they take on more responsibility for clients e.g. by becoming ‘lead’ logistics companies; or are exposed to consultants using these tools.

The greatest use of GIS packages appears in two areas: companies with large numbers of customers, large networks of facilities and a large geographical spread e.g. express parcels companies (these companies may have marketing strategies which encourage the use of GIS for analysis). Also logistics consultants involved in strategic levels of logistics decision-making.

Conclusion

logistics service providers will become increasingly exposed to GIS Technologies in a variety of forms.

Given the inherently geographical nature of much of the analysis that supports logistics decision-making it is likely that the use of these packages will grow within this sector.