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Mapping Customers

Is GIS fated to be a “nearly” technology for marketers? Robert McLuhan explores today’s applications for spatial analysis.

A few years ago, GIS (Geographical Information Systems) looked like the next big thing for marketers. Spatial analysis would allow yet more information to be derived from customer and prospect databases, with its applications ranging across the whole spectrum of marketing. But although GIS is reasonably widely employed at larger retailers and in a number of suppliers, there appears to be little recent expansion in its penetration of marketing applications. There is some way to go before these systems reach their full potential.

What’s it for?

Recent research suggests that spatial analysis techniques are still seen by companies as limited mainly to store location planning and building gravity models for catchment analysis. In a recent survey of users by GeoBusiness Solutions, only 28 per cent thought their boards fully understood its operational and marketing benefits, while the perceived high cost also emerged as a barrier.

But companies are missing a trick if they ignore the potential of business geographics for wider

applications, including the identification of prospects for direct marketing initiatives. “With GIS, marketers can answer any question that has a ‘where’ element in it,” says Theresa Barlow, sales manager at Kingswood MapMechanics. “For instance ‘where am I doing badly, and how can I do better?’ or ‘where am I doing well, and how can we replicate that?’”

For instance, distance or drive time to the nearest outlet is a key consideration when planning who to target for retail networks, which makes geomapping indicators an essential ingredient in customer and prospect databases in these sectors. Maps can provide insights beyond anything that spreadsheets alone can offer, sometimes merely by providing visual clues through straightforward visualisation of customer or outlet locations rather than any complex analysis. One bank solved the riddle as to why certain of its ATM machines were rarely used when their locations were overlaid onto aerial photographs. It turned out all were in pedestrianised areas, indicating that customers preferred roadside machines that they could access in their cars.

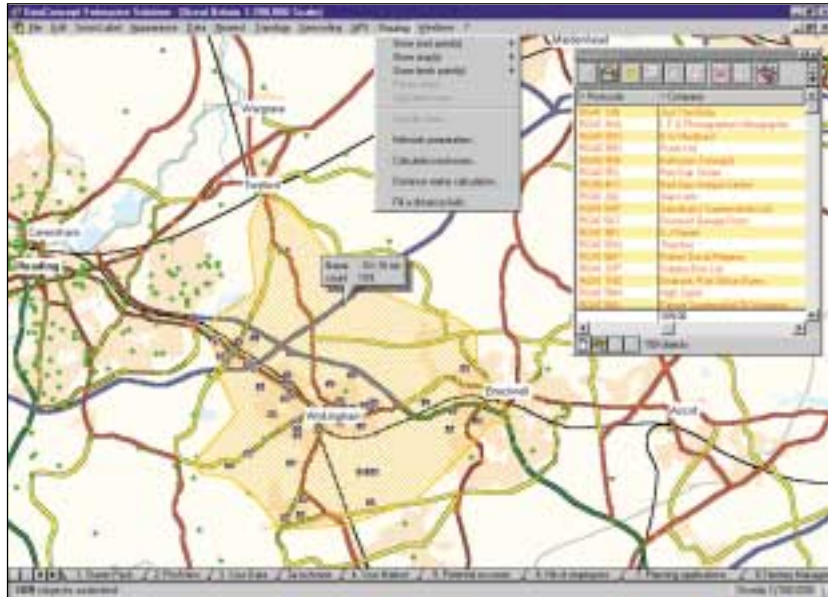
The potential is all the greater since the release



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Steven Halsall, director, GeoBusiness Solutions.

earlier this year of 2001 census data. This provides detailed geodemographic breakdowns of localities by such characteristics as ethnicity, home ownership, and the presence of children as well as students – which this census has revealed in detail for the first time.



Swift and accurate optimisation of journey routing is just one sales and marketing application of geographic analysis.



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Charles Neilsen, planning and IT director, Circular Distributors.

Broad population characteristics show up instantly on a map and provide marketers with a clear focus for campaigns. For instance, religion and ethnicity are major drivers in gambling, which is hugely popular with Chinese but shunned by Muslims, an important consideration for casino operators. Mapping can also be useful to mail-order companies, who may use it to target or avoid the catchment areas of bricks-and-mortar rivals, and to segment certain products by geodemographics.

“Seeing information expressed visually helps make associations that weren’t previously apparent,” says Martin Bradbury, client services director at EuroDirect. That might relate to the geographical distribution of customers, he suggests: one double glazing company confirmed from a map projection that its customers were grouped along busy main roads, which provided the basis for future direct marketing initiatives. Mapping might also provide clues as to the effectiveness of campaigns. For instance if it shows leads failing to be converted in a single area it might suggest that an individual sales representative is at fault rather than the marketing approach itself.

Any business that has a varied local pattern to its customer distribution is likely to benefit from adding location-based data and spatial analysis to its direct marketing planning, Bradbury suggests. That could apply to auto dealers, particularly in communicating with likely buyers of luxury cars,

which are not uniformly available across the whole dealer network.

Proximity is a key factor in identifying likely concentrations of new customers. EuroDirect supplies geographical data analysis for the Real Meat Company, helping to target local butchers with information about potential buyers of organic meat that live within five minutes of the outlet. For a large coach tour operator, it matches direct communications to the areas immediately surrounding pick-up points, which travellers will naturally wish to take advantage of. And GIS is useful for smaller companies too, such as a south coast pizzeria which uses it to identify areas to leaflet.

Finding the way

Another EuroDirect client is Thomas Cook, which uses mapping for marketing as well as store location planning and business efficiency. The company targets different demographic segments through its mainstream tour operations brands Thomas Cook, JMC and Sunset, as well as specialist brands such as Club 18-30, Cultura, and Neilson. GIS helps identify the geographical concentrations of customers interested in certain types of holidays.

“Since September 11, identifying the opportunities for improving performance are very important, and more and more we are looking to increase return on investment from data and mapping,” says senior business metrics analyst Keith Widdop. “Being able to visualise performance and variances can provide some very powerful conclusions. With the new generation of GIS tools using updated census information, we can understand the statistical distribution of different performance metrics.”

The tools that Thomas Cook uses are highly sophisticated and the extra understanding of customers and markets that they bring to the company’s decision-making is extremely valuable. But though the cost of this type of set-up is considerable, Widdop points out that the government’s National Statistics website is also a valuable source of free information which should not be overlooked.

A classic spatial analysis application is in route planning: optimising large numbers of field sales calls is simply too complex to perform manually. Johnson Service Group has recently restructured some of its delivery and collection routes, and has been using Kingswood’s GIS TruckStops and GeoConcept software to maximise their business potential.

By modelling the routes and superimposing bought-in business data, it hopes to identify potential new clients by standard industrial classification, as well as mapping existing market penetration. “The tools enable us to manipulate significant

amounts of data quickly and efficiently and give enormous analytical power when used intelligently," says director Simon Moates.

A similar approach has been followed by Thirsty Work, a supplier of quality mineral water, which maps prospective customers by "cooler opportunity". This involves segmenting the market by type of business and likely number of coolers per site, and omitting types known to be poor prospects. After mapping prospect data to geographical locations, it overlays its existing customer base to find areas with the greatest potential.

Introducing a visual element to planning in this way has made all the difference, according to national operations manager Gavin Brice. "You always get an amazing response when you show a chief executive a map," he says. "It really does stimulate great debate, and raises all the right questions. Also, it performs calculations in moments that otherwise would take weeks."

Companies such as these have been making full use of GIS, but there are many more that rarely go beyond identifying customer distribution and market penetration. "Some use it for standard applications and others don't seem to have heard of it all, which always surprises me," says Kingswood's Barlow. Size is not an issue, she adds; some large companies have never used GIS, while quite small ones not only profit from it but are stretching the boundaries in its application.

For instance, a common way of determining which prospects to email for a new supermarket opening is to identify all those within a 20 or 30 mile radius. But that assumes that the drive time is simply a matter of distance, which is not at all the case; a more complex spatial model would take into account the quality of the roads and other transport networks, the position of competitors, and adjust accordingly. At the most sophisticated level, data from positioning systems can help determine the actual speed of traffic on particular roads at certain times of day. That is likely to provide a more accurate list of potential visitors, including some who live outside the immediate vicinity and might otherwise have been excluded.

Targeting cinemagoers

"Retailers spend a lot of time understanding catchments, but this is only one part of the process," says Steven Halsall, director of GeoBusiness Solutions. "They also need to know where people are prepared to travel to, and where their competing destinations are." On a basic level companies can simply visualise where they have mailed and marketed to, but will achieve more if they identify some of the geographic variables in their data. That is an approach increasingly being used by Odeon, which has been

creating gravity models that help identify the likely catchment of a competitor's new cinema, and that allow early use of direct marketing to combat loss of market share.

More recently, Odeon has been building propensity models to determine which customers are likely to book online. This forms the basis for a national direct mailing campaign, driving customers that have not booked online in the past three months up the value chain. It involves analysing transactional information overlaid with geographical factors – such as the distance to the nearest cinema and to the nearest Odeon, and the distance between them – and linking back to census data.

"Studies that show you are more likely to book online if you live further away," Halsall explains. "We also take into account the demographic skew towards younger people in Internet use, and the geographical dispersion of broadband access."

The popularity of particular films can also be indicated visually, and useful conclusions drawn, Halsall adds. For instance, analysing the geodemographics of people who watch a particular film can be useful when planning promotional direct marketing for the sequel.

When it comes to door-to-door campaigns, geographical analysis is essential to determine where the focus should be, with transactional data used to analyse spend and identify the most valuable areas to target for the store. Circular Distributors uses geodemographic data sets provided by Experian to indicate what proportion of consumers are most likely to shop in a particular area and for what. By loading all the relevant data onto a GIS, door drops can be planned in terms of demographics, estimated market catchment, or by the location of known customers.

"Most retailers don't know where their customers live, as unless there is a loyalty card it can't gauge its catchment area," says planning and IT director Charles Neilsen. "But when you look at things spatially you can see there is a huge swathe of demand in a particular area. And while a report will tell you which sectors are important, the map will show the physical features that explain why they are valuable."

The system can also be used in reverse, where the user decides independently of the data that certain districts are to be excluded. "You might decide that people are unlikely to travel through the Mersey tunnel from Birkenhead, so would select those out," Neilsen explains.

Visualising target areas enables rounds to be planned so that they are physically within the capabilities of individuals or teams. This is increasingly accurate now that Ordnance Survey provides a boundary file for postcodes, enabling obstacles be



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identified. Adjacent postcodes are grouped in such a way as not to cross major barriers, with data overlaid onto raster maps or digital photographs of the street network. A visual view of the target area is important, not just for the convenience of leafletting teams but also to avoid problems that might arise from the arbitrary divisions of postcodes. If leafletters respect a boundary that runs down the middle of a street, householders on one side might wonder why they have been denied the discounts offered to their neighbours on the other, and this could damage their perceptions of the brand.

If companies are being slow to take advantage of GIS, this may have much to do with the perceived cost of implementing the technology, buying the reference data sets and acquiring the specialist skills. Buying MapPoint for £99 can be adequate at entry level, but sophisticated geo-analysis will require a high-spec system well populated with multiple data sets that can easily be updated – this is not possible with MapPoint. This could cost £15,000 or more, much of it consisting of annual licence charges by data owners.

However prices have dropped considerably over the past few years. Ordnance Survey, one of the major suppliers, recently reduced its pricing, while desktop software is becoming less and less expensive. The flow of new data from satellite navigation has also helped bring costs down. "Work that used

to be priced in hundreds of thousands now costs only tens of thousands," Nielsen says. "You can have a good reference for every household or even postcode, which was unthinkable only a few years ago."

Returns on investment

How much companies invest in their own mapping capability will depend on how much they expect to save as a result. "If a retailer is risking millions of pounds on a new store or national campaign, a £30,000 investment in a GIS would be reasonable even to avoid one poor decision," argues GeoBusiness Solutions' Halsall. The payback can be striking: he cites the case of a bingo operator which originally planned a national door drop of six million, but was able to cut back by a third once it had learned where bingo players were concentrated and to what extent they had access to outlets.

One key finding of GeoBusiness Solutions' survey is that users of GIS are not paying enough attention to return on investment. A mere 14 per cent of respondent companies were able to demonstrate real returns, and Halsall believes this failing needs to be addressed if the technology is to achieve mainstream status. But he is in no doubt that this will happen, as companies gradually understand the power of spatial analysis to increase the value of customer data and achieve bottom line results. ■

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