

# Using location to improve pricing and risk assessment processes within the UK property insurance industry.

WhitePaper  
September 2007



mapflow



## Executive Summary

From February to September 2007, Mapflow commissioned an independent market survey to discover the extent to which geographic location information, or 'location intelligence', is used within the UK property insurance industry. 'Location intelligence' is about understanding the risks associated with the precise location of a property to improve a range of insurance business functions and processes, including pricing.

Close to 90% of the UK property carriers were asked to contribute to the survey. The results of the survey confirm Mapflow's belief that the vast majority of insurers have either already committed to, or are seriously considering, implementing location intelligent solutions within their business.

## Key Survey Findings

- Location intelligence is a strategic priority for insurers (as indicated by the high response rate: 30%)
- Location intelligence is being adopted or considered by the vast majority of insurers: 95% of the survey respondents stated that they were either considering or had already committed to implementing location intelligent solutions within their organisations.
- Location intelligence is relevant to insurers of all sizes: We found no relationship between the size of company and the extent of location information usage – organisations of all sizes benefit from the effective use of location information.
- Location intelligence offers tangible and measurable value to insurers: There was a clear consensus around the business objectives driving the adoption of location intelligent solutions within insurance organisations. These are:
  - Improved risk assessment
  - Ensuring pricing reflects true risk
  - Improving underwriting results
  - Maximising auto-rated business

The top two external drivers cited for the implementation of location intelligent solutions were:

1. Climate change (and the associated increase in the frequency and strength of severe weather events)
2. The evident trend of new market entrants that are using location intelligent solutions to identify and aggressively target lower risk business

Perhaps surprisingly, regulatory initiatives such as Solvency II and Treating Customers Fairly were not found to be particularly influential.

The survey results confirm Mapflow's own customers' findings: insurers who have implemented location intelligent solutions have reaped significant and measurable benefits. If insurers who have implemented such systems have been able to reduce their critical peril exposure by as much as 40%, can other insurers afford not to take action?



## Background To The Survey

The UK property insurance market is worth £8.5Bn per annum. Traditionally flood and subsidence claims could cost the UK insurance industry on average £1.5Bn each year, however, the recent floods in parts of northern and central England have demonstrated how costs can escalate with an insured loss of over £3.5Bn.

The world is changing and the insurance industry is racing to keep up. Climate change is creating more severe and more frequent weather events globally. Areas that might have been expected to flood once every 15 years are now flooding every year; other areas are flooding for the first time.

The range and quality of independently produced, commercially available predictive risk models is improving. Sophisticated mapping databases are now available online. The commercial frameworks by which these complex maps and risk models are accessed are developing. The technological and communications advances of Web 2.0 are simplifying the delivery of complex, feature rich, end user applications.

In essence, location intelligent solutions are more readily available, more accessible and more important to insurers than ever before.

## The Responses

The responses to our survey came from organisations with property GWP ranging from less than £10m (new entrants) to £1bn+. The responses to our questions did not indicate any relationship between the size of the organisation and their adoption of location intelligent risk assessment.

Almost every respondent already uses location information somewhere within the organisation. Most respondents have introduced location into their business processes within the last few years. This relatively new interest has been driven primarily by recent changes in weather patterns. The recent catastrophic storms and floodings in northern and central England were cited as specific examples of these changes.

### Adoption of Location Intelligent Systems and Processes

The survey results demonstrate a broad range in the adoption of location intelligence within insurance organisations. This range can be described in phases:

- Phase 0: No use of location intelligence within the business

Insurer does not take location into account when writing business and only evaluates risk at a high level.

- Phase 1: Limited use of location intelligence within the business

Insurer is using location somewhere within the business, usually within the actuarial group, to help determine rates. Specialist GIS (Geographic Information Systems) personnel use desktop tools to perform spatial analysis such as risk assessment and claims frequency analysis.

- Phase 2: Use of postcode level location intelligence for underwriting

Insurer is using location at postcode level to help set rates and to drive declination and referral decisions at the point of sale. Location data is maintained and utilised at either postcode unit level (average 15 properties) or postcode sector level (up to several thousand properties).

- Phase 3: Use of building level location intelligence for underwriting



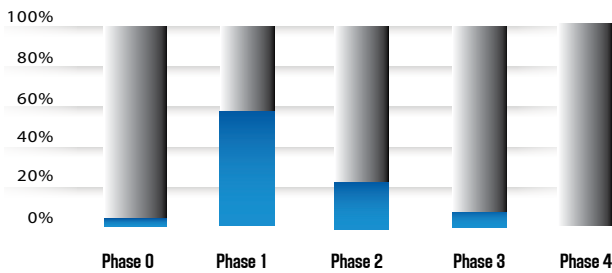
Insurer is using location at building level to help set rates and to drive declinature and referral decisions at the point of sale.

- Phase 4: Use of building level location intelligence within other functions

Insurer is also using location at building level to help drive revenue and further increase efficiency within their marketing and claims processing functions.

The chart below illustrates the breakdown of respondents across each of the above phases.

Adoption of location in each phase of maturity



The majority of respondents use location intelligence as an input to the rating exercise: 12% of respondents are using building level intelligence within their underwriting process. A further 24% use location to influence the applicable rate based on the postcode for a particular property.

While only a small number of respondents had deployed building-level risk assessment, a further 31% were actively working on projects to implement this capability during 2007.

Climate change is one driver of this adoption. A second, equally important, driver is the desire to transact more auto-written commodity business (see Key Findings, above). This sample are developing location intelligent solutions to support, simplify and scale the associated selling, underwriting and rating processes.

Insurers are only now beginning to consider how to use building level location intelligence within other functions such as marketing and claims: none of our respondents indicated they were actively using location intelligence in these areas. However, those insurers at the forefront of location intelligence clearly believe that this is the next stage in their implementation of location intelligence.

### Challenges

Two challenges cited by survey respondents when considering the adoption of location intelligent solutions were:

- The quality of their existing data (and the cost and time required to clean and process it)
- The implementation (and ongoing operational) costs associated with introducing location intelligence to their business systems and processes.

Both of these challenges can and are being managed and overcome.

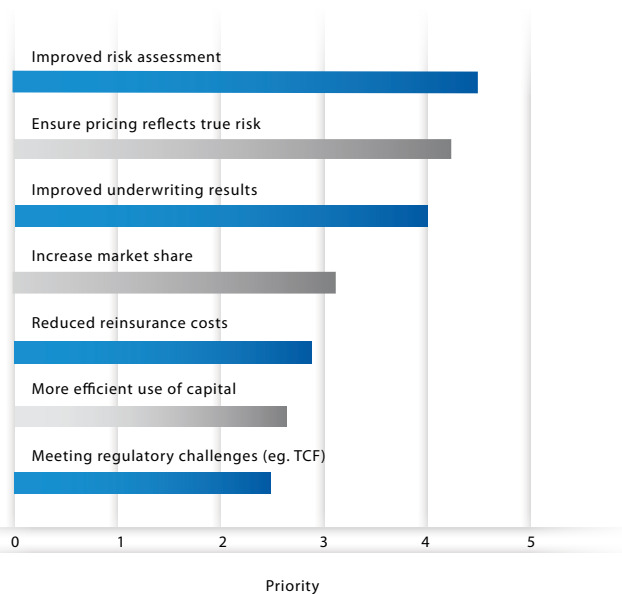


## Benefits Experienced and Expected

Respondents were asked to rate the benefits that they had experienced or were expecting to experience as a result of adopting location intelligence within their business processes. The results are shown in the chart below.

The majority of respondents see improvements in the way they assess risk as the biggest benefit of using location intelligence within the business. However, they also see location as a significant contributing factor to realising many other benefits including increasing the company's market share, reducing claim servicing costs and automating the underwriting process.

Benefits of deploying location intelligence within the business



## The Postcode Lottery

As discussed, a significant proportion of property insurers use postcode-level risk analysis when creating rating tables (Phase 2 adoption). The postcode model was originally introduced in 1959 as a way to easily direct mail. It is neither intended nor designed as a means to group geographic areas with similar risk attributes. Yet the property insurance market continues to rely on risk factors and models described and grouped by postcode.

Clearly, it makes sense to evaluate a property's risk exposure based on the perils associated with its exact location. Customers should no longer have to play the "postcode lottery" in which policyholders are effectively penalised if their low-risk properties are located in a postcode that also contains high-risk properties.

Building level risk assessment benefits the insurer on two fronts. Firstly, it enables insurers to better manage future exposure by offering terms and rates that reflect the nature of high-risk properties. Secondly, it enables the insurer to identify and competitively rate low-risk properties according to their true risk profile.

Desk-based assessment of higher-value business can be improved by allowing underwriters to see the property on a map, view aerial photographs and peril models, map local points of interest, etc. High-volume business can be evaluated automatically and the resulting risk exposure used to dynamically influence the premium quoted. Automatic risk evaluation supports the drive to increase the volume of auto-rated business without losing risk assessment and pricing controls.



## Conclusion

Without doubt, our survey has proven the importance placed on location intelligent risk assessment by the UK property insurance market. Irrespective of whether an insurer has a GWP of £50M or £1BN, there is a common set of business goals driving the adoption of location intelligent solutions.

We have seen that the recent UK summer floods have added further momentum to deploy and implement location intelligence solutions by both large and small players in the market.

This survey has identified a consistent location intelligent vision of future pricing, underwriting and servicing process needs. Finding the best solution provider to help realise that vision is critical. For more than 6 years, Mapflow has invested in products and services specifically targeted at the insurance sector. As a result, Mapflow has gained a unique insight into the needs of insurance organisations and has developed a solution set tailored and proven to meet those needs.

