

The Power of Visualisation: An Insurance Perspective

By Yvette Bevis, Esri South Africa

Major catastrophic events around the world caused losses totaling US\$330-billion in 2017.¹ South Africa wasn't immune to the devastation last year, with the Knysna fires and the Durban floods causing widespread damage. Insurers paid out US\$275-million for the Knysna fires alone; not an insignificant sum.²

After taking such a big hit, insurers and the organisations that insure them, the reinsurers, are not going to want a repeat experience. But how can they better manage exposure to seemingly unpredictable disasters?

While these organisations cannot prevent natural disasters, insurers and reinsurers can work on better understanding their risk by using visualisation techniques to holistically analyse the untapped information stored in their databases. Hauling out the Excel spreadsheets and the statistics for analysis isn't going to do the trick though. It is far quicker and more efficient to use a location intelligence platform to create maps and other location focused visualisations which will instantly reveal previously hidden patterns and trends in the data.

To conduct a risk analysis of their exposure, insurers and reinsurers can map out their risk geographically. A quick glance at the resulting image will reveal whether the company has opened itself up to high risk exposure in a small geographical area. If the picture reveals high exposure in a small area, mitigating efforts need to ensue. If the map reveals urban areas where there is little or no risk, this could potentially be a lead for sales teams to pursue.

Another useful data visualisation would be to generate map viewers of historical claim patterns in order to identify which claims occur most frequently in a particular area. While knowing that the highest claim incidence in a particular area is for fire or flash flooding doesn't seem useful after the event, the past can often be a reliable indicator of future events. This allows the insurance company to take steps to ensure that it is not over exposed to claims of this nature in this specific area.

Turning to different forms of imagery can be useful when seeking to minimise risk or to confirm damage. Flood zone data provided by municipalities and mapped against the insurer's risk will reveal more detailed and accurate peril ratings. Satellite imagery has become more accessible and easier to interpret, and it is now possible to obtain imagery of targeted areas without laying down significant sums of money for huge datasets. A quick glance at a satellite image of a particular farm will reveal whether the crop has indeed been destroyed by hail allowing the wheels to be set in motion for the payout of crop yield insurance.

New technologies have facilitated the prediction of some disasters with live fire feed imagery from MODIS being a case in point. MODIS satellite imagery can provide insurers with the opportunity to warn clients of impending fire risk enabling them to take preventative measures to avoid damage and major claims.

Visualisation techniques coupled with location intelligence technologies are able to provide strategic information to the insurance and reinsurance industries. Companies taking advantage of this knowledge can lower their exposure to needless risk and improve their bottom-line.

Notes

1. Munich Re: <https://www.munichre.com/topics-online/en/2018/01/2017-year-in-figures>

2. Source: Aon Benfield, Weather, climate and catastrophe insight, 2017, Annual Report.

<http://thoughtleadership.aonbenfield.com/Documents/20180124-ab-if-annual-report-weather-climate-2017.pdf>

ABOUT

Yvette Bevis is a GIS specialist at Esri South Africa. She specialises in geospatial solutions for the insurance and banking sectors. Esri South Africa has been the primary geospatial industry software provider in southern Africa for the past 28 years. Established in 1989 and with headquarters in Midrand, Gauteng, Esri South Africa has offices nationwide, enabling the company to offer professional, individual client services to its growing user base. The company believes in making a difference by simplifying decisions through spatial solutions, enabling its clients to make responsible and sustainable decisions.