



# Technology, data and analytics

Could the insurance sector finally be ready?

In association with





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Introduction
The idea that vocations rarely break beyond their stereotypes is an old adage that the insurance industry and in particular the London market has become used to

hearing.

For the brokers, underwriters and claims professionals of EC3 and beyond, this atypical association was perhaps best summed up by former Willis chairman and CEO Joe Plumeri, who joked with an audience at Lloyd's in 2004: "What are you doing with all those files under your arm? What if it fell in a puddle?"

He was of course right, but the individual to whom he referred was also doing what the London market is best known for – heading for some face time in order to get the job done.

As it turns out, Plumeri's complaints were about to be quashed by a market that was beginning a quiet revolution. The very next year the London Underwriting Centre launched its first open Wi-Fi network delivering connectivity for mobile devices. And now nine years on, the market's unique face-to-face relationships continue via portable technology that provides

access to all the workflows, secure files and mobile applications that the modern insurance professional could ever need.

The insurance community of 2014 is therefore used to instant connections and now it is beginning to feel the market catching up. The march of reform is gathering pace with initiatives like the Lloyd's Volume Claims Service (VCS), which has enabled up to 85 percent of cases to be channelled through an efficient system governed by claims workflow triggers.

For example, there is a defined period of hours within which an adjuster operating through VCS has to accept a claim into service. This has been automated so if it matches the relevant criteria the system automatically accepts that claim instantly without being touched. This removal of friction and cutting down on decision-making time allows the adjuster community to really add value at the more complex and resource-hungry end of London market claims work, where it is needed most.

However there remains an elephant in the room in the form of data and analytics. "Big data", "open source", "structured", "unstructured"; the



terminology is almost as varied as the information itself. While some evidence suggests that insurance companies are already applying increasing amounts of data within the field of predictive analytics, the jury is still out on whether claims data is being truly put to good use.

This report considers some of the latest thinking on communication technology, mobile applications, data and analytics to further that debate and consider how claims can provide the window on a world of risk.

#### **Data and analytics**

There can be no doubt that claims are one of the richest data environments available for insurance professionals. Our industry collects information on an increasing basis and applies it for clients in a variety of ways. For example, in the US we apply data analysis to workers' compensation programmes by assessing past history and predicting outcomes in the future. Meanwhile, at the vanguard of new technology, geolocation has become an increasingly common data field that our adjusters generate while actively handling claims around the world.

### Using data to improve operational efficiency

In view of the increasing amount of data we as claims handlers generate, it is worthwhile considering a specialised claims adjusting group that focuses on large, complex and technical losses and exploring the ways it can use its proprietary database to assist with claims. This in turn can deliver better services to clients. The adjuster database collects large amounts of data worldwide from a broad range of losses – we should know from a claims environment the outcome, spread, time taken to settle, reserve movement over time and so on.

Types of claims in the database could range from flooded electronic component factories in Thailand (property and business interruption claims) to online business interruptions due to distributed denial of service attacks against internet servers to a professional indemnity claim against a software manufacturer for development of a custom application that was alleged not to perform as originally specified.

Claims coming in are assigned to the right adjusters based on analysis that combines characteristics of the client, claim, claimant, loss, location, adjuster load, adjuster specialty and level of expertise with the objective of optimising outcomes such as quality of service and cost.

The database can also measure and track claims volumes per country, region, industry sector, product line and peril and then provide statistical forecasting on claims volumes.

#### Using predictive analysis for client and product insight

It is not a significant leap of the imagination to understand how data analytics is also extremely useful in scrutinising emerging client needs.

Fitting a product offering to a market's needs has been done for as long as business has existed, but newly available data and technology allows for evidence-based models that complement expert intuition and, in some cases, uncover opportunities never considered before.

## Open source data and new applications

The pace of change in technology and its use by insurance professionals has accelerated over the past three to four years. For example, it's been fascinating to watch as the insurance industry acknowledged, accepted and ultimately embraced online communication networks and social media. This embracing of technology, particularly mobile applications, is now offering a glimpse at the answer to a huge variety of intractable problems.

Marketing web site The Drum recently published an infographic revealing social media's impact on natural disasters, showing how in just a few short years social networks have evolved into "hubs for recovery". For example, Facebook pages dedicated to lost and found items following the 2013 Illinois tornadoes quickly generated 14,000 likes, while YouTube had almost 5,500 unique videos capturing news and information within 48 hours of Oklahoma City's devastating twister last year.

#### **Convergent technologies**

Elsewhere, private companies are taking

advantage of "convergent technologies", such as geolocation and video blogging hosting services like YouTube, to present compelling pictures of a post-catastrophe scenario.

In the UK the ESRI Disaster Response Programme has used open source data from the Environment Agency and other organisations to create a UK Flooding Social Media Map. This map provides users with a real-time feed of information created by individual sources on the ground taking pictures, video and sharing newspaper articles relating to the situation at hand.

While largely unstructured, the use of tagging and common elements (the Twitter hashtag #ukfloods being the most obvious) for each piece of content published makes the data contained within it a rich source of information for anyone analysing it. By default this data typically includes time stamps, geolocation information, peripheral viewpoints and alternative camera angles of events.

The question is; how can these applications be deployed in a business context? Here at Crawford & Company, we frequently take our inspiration from adjusters on the ground, who experience claims first hand and know what technology, deployed in the right way, could do for them and our customers.

The company is currently piloting a range of new proprietary applications, including tools that we hope can deliver an increasingly accurate pre and post-loss picture for adjusters. This is



particularly useful when assessing wide area damage after catastrophe events or where devastation is simply too severe for a clear picture to be created. How many times have we seen a before and after shot depicting a narrow view that really tells us very little about the full and true extent of a loss? What is going on outside the frame of that photograph?

As technology develops and open source data becomes more accessible, we will see convergent technology bringing adjusters in touch with sources that they can access on mobile platforms, enabling faster response, more accurate reserving and swifter settlement.

Similarly, voice recognition and dictation solutions are revolutionising the way our adjusters write and produce reports, while wearable technology like the prototype Google Glass system has significant potential for an adjuster on the move. Provided a satisfactory 3G/4G connection is available, relevant parts of a claims file could be transmitted onto the display. This enables video footage, photographs and dictation to be recorded and transmitted.

If a client demands a response after half an hour and a report emailed to their inbox, why not deliver them what they want? These systems are just around the corner and one cannot help but be reminded how much more productive we have become with the help of technology. When deployed for the right reasons and with a solid business case, it can represent the

difference between waiting for the developing fluid to do its work or getting back on the road to the next customer.

#### The internet of things

At a May 2014 conference in San Francisco, technology trends chronicler Tim O'Reilly said: "You know the way that advertising turned out to be the native business model for the internet? I think that insurance is going to be the native business model for the internet of things."

What the speaker meant by this statement is clear; the installation of technologies into property and objects so that they can network and communicate via the internet represents one of the largest potential changes the insurance industry may ever see.

The possibilities are numerous, but a recent article by XL Group's senior marine risk engineer Pascal Matthey and chief underwriting officer for global marine and offshore energy Lee Meyrick sums up one application succinctly. They explain how covert e-tracking of property can save cargo and market share: "In 10-20 years, e-trackers will record even more data, and cost as little as a penny per chip. They'll be nanosized—woven into fabric, mixed into paper pulp and welded into metal. They will be used for inventory as well as security.

"Only 5 percent of businesses use e-tracking, despite at least a 90 percent theft recovery rate. Short-term balance sheets put businesses off the investment, but beyond lower insurance premiums, e-tracking can preserve long-term market value."

#### **Turkeys voting for Christmas?**

Of course, Matthey and Meyrick neglected to point out that without theft there is no insurance requirement, and just as motor insurers have predicted that telematics could potentially reduce accident rates to zero, the internet of things has conceivably the same goal in mind.

From our perspective as claims professionals, this possibility remains a long way off and connected devices will have a role to play in the delivery of services for some time to come.

The experiences of adjusters supporting complex claims in post-catastrophe areas have opened up a number of new applications for web-enabled devices. For example, earthquake-hit regions with property on the borderline between repair and demolition can benefit significantly from monitoring technology that interfaces with insurer systems. Adverse claim development can be calculated with every aftershock or ground movement, while subsidence risk can now be assessed remotely – saving a substantial amount of time and effort.

Meanwhile, the insurance industry is increasingly considering its role as provider of protection for assets affected as a consequence of claims events, namely the price of economic loss. As Swiss Re Corporate Solutions' head of EMEA Tony Buckle told delegates at the

Aon International Growth Seminar in March: "One of the key problems is that people think insurance has to be for a property or a physical asset. What if you are a luxury goods shop in Manhattan, or a hotel chain? You've got no physical damage to your property, but do you think there will be any customers to speak of? All that economic loss remains uninsured and we as an industry need to think about all the types of exposure that we can absorb so that business is more resilient and able to take more risk."

Manhattan after Superstorm Sandy was not an isolated case. Thailand, Japan, New Zealand – these are the situations where the force of economic loss has left people and businesses underinsured.

Technology, data and analytics could provide a means for the insurance industry to begin answering the latent need for business not only to be put back on its feet physically, but to cushion against economic loss. Contingent business interruption claims data can be put to better use so that economic losses arising from catastrophes are properly insured. Therefore, the big question for our industry will be what types of data can we use (structured/unstructured/open source) and how can we apply them to inform our decisions?

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