John Foord
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Using data analytics to establish accurate replacement costs for property damage

1. Changes in the approach to insurance valuations

As we continue to operate in a challenging environment for the insurance sector, the relevance of accurate sums insured for property damage cover is more important than ever.

Insurers need to have confidence that their exposure (and premiums) are built on sound understanding of values at risk while asset owners want to have the certainty that they are properly managing risk by being fully covered in the event of a loss.

While asset valuers have long recognised the impact of data on the quality of insurance valuation approaches and reports, the wider use of technology has been hampered in the past due to limitations on efficient technology solutions, limited access to large volumes of data, constraints on publicly available data and concerns about sharing information.

However recent technology advancements, allowing better and faster access to “big data”, combined with sophisticated algorithm techniques are providing an opportunity to rethink the way in which current replacement costs are assessed.

The traditional site inspection and cost “build up” method based around sampling of major components, traditionally used to arrive at replacement costs, is being transformed to include analysis of entire populations of relevant cost data. Using intelligent analytics, valuers are now able to deliver a higher quality of valuation and more understanding on the drivers that can influence costs.

Big data and analytics are also enabling asset valuers to better identify historic cost anomalies, cost trends, breakdown of values and factors that materially change replacement costs for facilities.

2. Data analytics and insurance valuations

Today John Foord are making significant progress and seeing material benefits in the use of data and analytics in the assessment of replacement costs for client's portfolios. However, we recognise that this is an ongoing process as modelling techniques improve and as expectations on what can be achieved change.

While traditional valuation data is mostly quantitative and structured, big data also includes unstructured and semi-structured information that offers more supporting evidence and detailed intelligence. Given the complex nature of modern business transactions, asset valuers need to assess various types, and huge volumes, of pricing evidence.

3. Transforming Asset Valuations

The techniques used to build complex properties and facilities have changed significantly over the last 30 years. Computer modelling of structures and sophisticated construction techniques, combined with different procurement and financing approaches, have radically changed the construction process for large facilities.

These new techniques have a direct impact on replacement costs and modelling allows for these factors to be incorporated irrespective of the original construction methods. Significantly valuation analytics allows for different approaches to be applied and the subsequent impact on values to be assessed.

4. Implications for Owners

A significant barrier to regular asset valuations is the perception by owners of the cost and disruption to operations by having valuers visiting facilities. Although the period spent on site has fallen radically over the years as valuers have applied different techniques, the fear of disruption remains a barrier.

Data analytics allows valuers to concentrate on key areas of concern and so removes the need for detailed inspections across a whole portfolio, so easing owners' anxieties.

Analytics also has an added benefit of delivering more detailed analysis quicker so owners have more time to reflect on the values and can get more comfort on the results.

5. Implications for Insurers

Analytics allows for a very high level analysis of large portfolios of properties or locations, enabling insurers to assess their risks in a way previously not available. By analysing costs across industries, locations, facility size, etc., and matching these figures to historical loss data, insurers can build up a much better picture of their risks.

Rather than reviewing every risk, these big data analysis techniques will enable insurers to highlight outliers within portfolios that warrant more detailed research and analysis so reducing costs. Insurers will also have more comfort that values are accurate and that premiums reflect true replacement costs.

6. Implications for Brokers and Advisors

Similarly for brokers and insurance advisors, rather than having to identify particular high risk locations or facilities, analytics will enable them to deliver better information across their portfolio of clients, at low individual cost.

By processing large volumes of data this approach can swiftly identify locations or assets that are insured materially different from similar facilities, allowing the broker to drill into areas that need further investigation before the risk is placed.

Not only does this mean that the owner sees additional value from the broker's service but it also ensures that the broker is more protected against possible future negligence claims should the owner suffer a loss.

Conclusion

Access to increased computing power, sophisticated algorithms and large volumes of data have driven the development of the current data analytics models for replacement cost assessment. However, analytics continues to evolve and we believe that the use of artificial intelligence, drones, machine learning and augmented reality will be adopted to facilitate better analysis.

At John Foord, our goal is to create a comprehensive data analytics platform where we are not only assessing current costs quicker and more accurately, but we are able to deliver for clients predictive analysis where, in real time, we can identify factors or movements that could shift replacement costs outside of pre agreed thresholds for clients' portfolios. One example would be to be able to quickly highlight when steel price movements could mean replacement costs for a building move outside of set parameters.

The technology and data to accomplish this vision for predictive analysis is still in its infancy but in the interim John Foord are processing large volumes of information to produce increasingly accurate and detailed replacement cost insights for our customers.

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