



Fighting wildfire with innovation – a new insurance solution

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Escalating impacts from climate change are being felt the world over. The US has been heavily impacted by wildfires. Longer dry seasons, with climate change a contributing factor, are becoming more common, especially in California. This can fuel extreme wildfire events. Damages from California wildfires alone cost \$24 billion in 2018 – with \$18 billion of that covered by the insurance industry.¹ In 2020, the area burned by wildfire in the state was over four times larger than the 2015–2019 average.

Growing challenges demand new strategies for insurers

Climate change creates a changing risk environment, which makes it difficult for insurers to effectively underwrite the wildfire peril based on traditional loss data. This leads to some carriers struggling to deal with outsized losses and a growing protection gap, with homeowners struggling to find

affordable insurance coverage in many of the higher risk areas.

In the face of climate change, we are building digital capabilities like Firebrand™ that allow us to be agile in our underwriting approach, with real-time insights on risk, price, and accumulation.

At Munich Reinsurance America, Inc. ('Munich Re'), we believe we can take on the changing risk environment by taking a page from the lean startup playbook. Successful startup companies don't execute on a lengthy business plan full of assumptions and predictions that may not materialize. They make a hypothesis about the customer and the problem, build out product features incrementally, ship the product to get customer feedback, learn from the data and refine the product further. This is key to minimizing risk as they build their venture.

We decided to take a similar, "build-measure-learn" approach in support of one of our E&S clients as they launched a new venture into the California homeowners market. Given the uncertainty of the wildfire peril and the shifting market, we wanted the flexibility to adjust the insurance product's guidelines, pricing, and accumulation controls in order to shape how the portfolio developed. That is why we built Firebrand™.

Firebrand™ is a digital underwriting solution that provides:

- High-definition wildfire risk scores and pricing based on a modern assessment of the hazard
- A dynamic pricing engine that allows for rapid changes
- Real-time portfolio accumulation monitoring to ensure spread of risk

Firebrand™ is a digital solution built using Munich Re's Wildfire HD Risk

Map and Munich Re's REALYTIX ZERO platform.

Firebrand™ allows us to deliver advanced analytics and risk appetite directly to our client's rate, quote, and bind system. We are tracking the exposures as they are quoted and bound, limiting concentrations automatically. And based on how the portfolio develops, we are working with our client to adjust pricing behind the scenes as needed without having to involve their IT resources. In short, Firebrand™ is allowing us and our client to adapt our risk appetite and implement it directly at the point of sale in real time.

Partner launch provides insight into Firebrand™'s value

Firebrand™ is already proving its value. The program launched in December 2020, with our traditional reinsurance support as well as the new digital capabilities of Firebrand™. Instead of waiting for quarterly bordereau reports, we are monitoring the growth of our portfolio in real time. What are we seeing? Strong demand in high wildfire

risk areas, as expected. Strong demand is good – but, as we also need geographic diversification for our program to be sustainable, it's also good that Firebrand™ is starting to apply automatic limits on accumulation. We have also identified early accumulations in areas with lower risk of wildfire. So, we are in consultation with our client about the circumstances behind the data and whether to make an early upward adjustment in pricing through Firebrand™, which would be much faster than would traditionally be possible.

Firebrand™ provides our clients a dynamic digital underwriting solution that responds to the rapidly changing risk environment posed by US wildfires.

Initial experience with Firebrand™ underscores the value of having 'real time' digital capabilities to closing the protection gap. Digital, data-driven tools like Firebrand™ enable us to underwrite the modern wildfire risk with greater agility. It is part of a broader commitment to developing

leading-edge risk management tools and building climate change resiliency.

For more information about our innovative, natural catastrophe risk management solutions, visit our website or contact Jay Rosario at jay.rosario@munichre.com.

¹Insurance Journal; <https://www.insurancejournal.com/news/international/2019/01/08/514206.htm>.

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