

Overview

Catastrophe modelling uses computer simulations to estimate the financial and economic losses caused by extreme events such as hurricanes, earthquakes, cyber breaches, and terrorism. Oasis Loss Modelling Framework (LMF) has led the field for over 15 years.

To meet evolving industry demands, Oasis partnered with fourTheorem to build a modern, robust, and globally scalable SaaS CAT modelling platform.

Challenge

Given the overall rise in catastrophic risk, partly driven by climate change, (re)insurers increasingly require the ability to:

- Run significantly larger and more complex catastrophe models
- Scale modelling workloads dynamically during peak periods
- Reduce infrastructure and operational overhead
- Improve time-to-insight for underwriting and portfolio management
- Maintain strict security and regulatory compliance standards

The challenge for the team was to deliver a world-class, multi-tenanted CAT modelling platform that could dynamically scale to meet the demands of disparate customers, each with highly variable compute demands – **within a single business quarter.**

Solution

fourTheorem worked collaboratively with Oasis to design and deploy the platform end-to-end, applying a structured delivery approach built on proven accelerators:

- **Foundation:** Secure, compliant multi-tenant AWS infrastructure was stood up rapidly using the **Landing Zone Accelerator** – establishing per-tenant account isolation and security guardrails from day one.
- **Model Execution:** The **Modelling Accelerator**, combined with the Oasis LMF framework, enabled full model execution within a matter of weeks.
- **Delivery:** The platform was ready for customer acceptance testing ahead of schedule, without compromising on security or enterprise-grade quality.

Platform Benefits



Scale to Zero Architecture: Analysis workers only consume resources when a model run is active. Eliminating the "idle cost".



Elastic Scaling On Demand: Compute resource scales in line with business needs, removing resource contention issues and capacity planning.



Blast-Radius Isolation: A dedicated per-tenant account structure ensures that each customer's data are fully isolated.



Seamless Integration: A fully authenticated, secured and authorized external API is provided for customer integration into the system.

Why (Re)Insurers use Oasis SaaS



Choice: Access to 300+ models from ~20 independent providers. 100% vendor neutral. Built by the market, for the market.



Profitability: Multi-model approaches deliver measurable advantages worth tens of millions annually for mid-sized insurers through superior risk selection.



Reduced TCO: Transparent insights into costs; optimise price/performance. No infrastructure or servers to manage.



SOFTWARE
AS A SERVICE

"Catastrophe modelling sits at the heart of how the insurance industry prices risk and protects communities. The market urgently needs a neutral, scalable platform where every modeller can be accessed on equal terms. Working with fourTheorem we have been able to build a highly performing, enterprise grade modelling platform in weeks. The speed and quality of the delivery by the combined team has been frankly remarkable!"

– Dickie Whitaker, Oasis SaaS Chair

fourTheorem Accelerators

- [Modelling Accelerator](#)
- [Data Platform Accelerator](#)
- [Modernisation Factory](#)
- [Landing Zone Accelerator](#)

Get Started

To learn more about this case study, contact:

hello@fourTheorem.com



- Advanced Tier Services
- AWS Lambda Delivery
- AWS ECS Delivery
- Migration Services
- Serverless Hero