

# MARKETING PROPOSAL

*Presented to Harbour Enterprise Liability & Property (HELP)*

By:

## CATASTROPHE INSURANCE TECHNOLOGY (C-IT)



**Our mission:** We're an actuarial consulting firm focused on helping our clients grow through the most accurate analysis of their risk portfolio using the most cutting-edge technologies, grounded in fundamental actuarial science principles.

**Our vision:** We want to help catastrophe insurers grow their companies through well-informed, research-driven reports.

### Storms are getting stronger.

According to the United States Environmental Protection Agency, cyclone intensity has risen dramatically over the past 30 years.

With these increased costs, HELP needs a **rigorous** and **transparent** method of analyzing its risk portfolio - one that enables **regional expansion** and **product diversification** without compromising the longstanding loyalty of its customer base.

**~5% increase**

per decade in the probability that a hurricane increases to a major category 3-5 storm since 1985.

Correction for Kossin et al., Global increase in major tropical cyclone exceedance probability over the past four decades, Proc. Natl. Acad. Sci. U.S.A. 117 (47): 29990-29990, <https://doi.org/10.1073/pnas.2021573117> (2020).

### C-IT can make strong storms feel weak.

C-IT has helped dozens of companies grow from mid-sized firms to large firms.

We will build HELP a model that weighs heavily on tried and proven CAT models from the hurricane insurance industry, while incorporating cutting-edge machine learning techniques **with the level of rigorous aptitude that an actuary demands.**

### The actuarial advantage: data-driven, risk-minded.

When hurricanes hit, HELP needs more than hype, they need actuarial clarity.

- **Laying the guardrails:** Drawing clear lines for risk through techniques supported by statistical significance plays a key role in catastrophe modelling to provide meaningful coverage to customers when they need it most.
- **No further explaining needed:** Building our methods based on tried and true white box methods means your outputs are calculated directly from the predictors you provide.
- **Placing Real Value on the Customer:** Clear modelling allows us to conduct customer purge analysis seamlessly that ensures you are able to expand your market and try new models, all while keeping your loyal customers happy.

#### Some of our previous clients



# What We Will Produce

## No on the job training needed.

We've refined our approach through working with countless clients using our proven methods for producing quality actuarial risk reports.

- **Multiple models, one result:** We use ensemble models that let us combine the best attributes of models from all disciplines, assigning greater weightings to models that are proven, while including results from machine learning models with a lesser weighting, ensuring they are tested for reliability before their full implementation.
- **Robust and transparent algorithms:** We train white box models such as General Linear Models (GLMs), Tweedie Regressors and Catastrophe (CAT) models among others that leverage both rigorous mathematical knowledge and a proven track record in the hurricane and tropical storm insurance industry.
- **Training for the right event:** Calculating annual metrics is important, though we also possess the ability to train models when the storm arrives at your doorstep. Being able to nowcast to predict losses from ongoing storms is key to ensure you are prepared to provide coverage when your customers need it most.
- **Preparing for all scenarios:** A hurricane striking the same property twice is one of the risks we have to consider. Being prepared for the ensuing reinsurance price shock is key in keeping your business running smooth in times of rapid change.



### Preparing the data

We rigorously inspect the data before performing our analyses.



### Training the model

We train on transparent and robust models.



### Consult with the client

We communicate with the client to make sure the results meet business needs.



### Analyze the premiums

We calculate change in premiums models produce, and the impact on the customer.

## Our Pledge

## We connect clients with business realities.

Reaching new audiences can be risky, that's where actuaries come in. Guided by law and ethics, being an actuary means ensuring the realities of business don't get lost in complex models of data analysis. An actuary can cut through the noise and reduce the variance when it's time for your business extrapolate to new environments.

## Let's chat!

We're excited to bring our expertise to HELP. We love what we do, and we want to share our insights with you.

Sincerely, the C-IT team.

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