

AIR's Global Resilience Practice

AIR Can Help You Prepare Before Disaster Strikes

AIR has developed a comprehensive suite of models widely used by the insurance industry to understand and manage extreme event risk. These tools are increasingly being adopted by state, local, and federal governments to gain meaningful insight into the potential frequency, location, and impact of future extreme events.

Our Global Resilience Practice can help you with hazard mitigation planning, managing financial risks, and identifying effective mitigation strategies before disaster strikes.

Data-Driven View of Risk

AIR's state-of-the-art analytics provide a data-driven view of risk based on the latest scientific understanding of extreme events and how they impact the built environment.

We simulate a wide range of plausible scenarios, not only events that have occurred historically. The illustration below represents AIR's basic modeling framework.

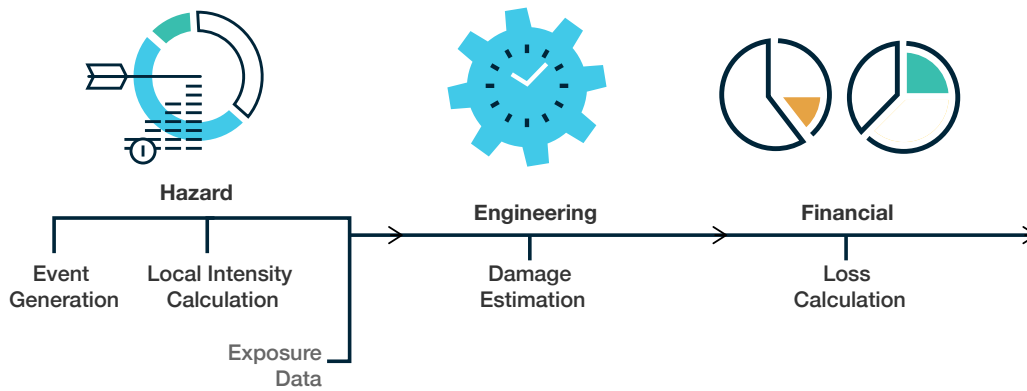


AIR models enable high-resolution risk modeling at any level of geography

Fast, Cost-Effective Solutions Without On-Site Assessments

Unlike traditional risk assessment strategies, such as on-site engineering studies and custom model development projects, AIR's solutions are fast and cost-effective, and can provide a comprehensive analysis of potential losses from a single peril or across multiple perils.

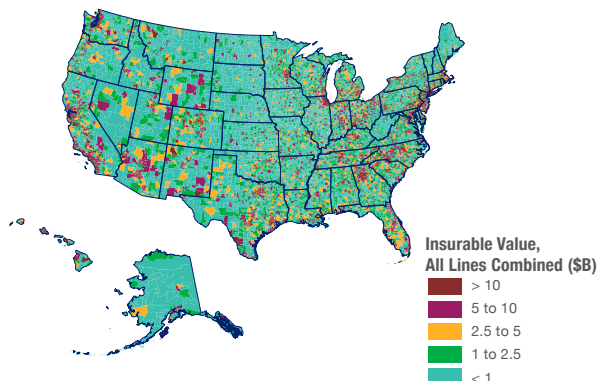
AIR has developed a global suite of high-resolution models that can be used to calculate loss estimates from individual locations or all locations in a city, state, or entire country.



AIR's modeling framework

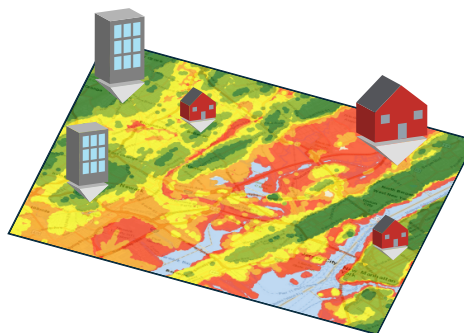
Leverage Unique, Proprietary Property Databases or Input Your Detailed Exposure Data

AIR maintains databases of commercial and residential properties across the globe that enable near real-time risk modeling without requiring inspections or additional data from clients.



Insurable value in the United States according to AIR's industry exposure database.

We can also model your data to provide a customized view of risk specific to your geographic area. AIR models incorporate a wide array of building types and descriptive features to allow damage assessment to be tailored to specific assets.



Example of flood hazard map and modeled locations.

Quantify Risk for Your Geographic Area

AIR's models provide estimates of loss across thousands of realistic scenarios, providing a robust distribution of potential outcomes. The results include annualized losses, as well as estimates for both high frequency (e.g., 20% annual probability) and low frequency (1% annual probability or less) events.

An example of loss metrics from a multi-peril analysis is shown in the table below.

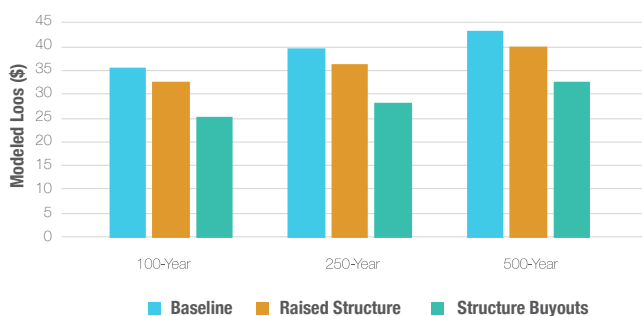
Exceedance Probability (Return Period)	Tropical Cyclone	Inland Flooding	Winter Storm	Severe Thunderstorm	All Perils
Average Annual Loss	\$409M	\$269M	\$15M	\$11M	\$704M
5% (20-Year)	\$1,716M	\$1,188M	\$64M	\$21M	\$2,519M
2% (50-Year)	\$3,360M	\$1,987M	\$106M	\$38M	\$4,129M
1% (100-year)	\$5,077M	\$2,562M	\$141M	\$258M	\$5,872M
0.2% (500-Year)	\$10,049M	\$4,943M	\$392M	\$1,225M	\$10,900M

Measure Cost-Benefit Mitigation Strategies

The models incorporate a broad range of secondary risk characteristics—details of individual locations that can either mitigate or worsen loss outcomes. Examples of mitigation features include:

- Elevating or relocating buildings at risk from flood
- Installing hurricane shutters and straps
- Seismic retrofits (e.g., “brace and bolt” foundations)

Comparing model results with secondary risk characteristics to the baseline risk result provides a direct measure of the benefit from mitigation activities, as shown in the chart below.



Example comparison of the reduction in losses for different mitigation strategies

Simulate Future Climate Conditions

AIR's models incorporate the most recent historical weather data to provide an up-to-date view of risk under today's conditions.

AIR scientists are actively engaged in researching the impact of a changing climate on the built environment. We can customize analyses to simulate potential future conditions.

A Trusted Partner

By working with AIR's Global Resilience Practice, you can develop effective emergency plans; prioritize mitigation investments that have the greatest return; study the impact of building code changes; design risk financing instruments to ensure quick access to funds after a disaster; and much more.

To learn more about our consulting service, please visit www.air-worldwide.com/Consulting-Services/Global-Resilience-Practice/ or email us at globalresilience@air-worldwide.com.

ABOUT AIR WORLDWIDE

AIR Worldwide (AIR) provides risk modeling solutions that make individuals, businesses, and society more resilient to extreme events. In 1987, AIR Worldwide founded the catastrophe modeling industry and today models the risk from natural catastrophes, terrorism, pandemics, casualty catastrophes, and cyber incidents. Insurance, reinsurance, financial, corporate, and government clients rely on AIR's advanced science, software, and consulting services for catastrophe risk management, insurance-linked securities, longevity modeling, site-specific engineering analyses, and agricultural risk management. AIR Worldwide, a Verisk ([Nasdaq:VRSK](https://www.nasdaq.com/markets/stocks/VRSK)) business, is headquartered in Boston, with additional offices in North America, Europe, and Asia. For more information, please visit www.air-worldwide.com.