

Turning Routine Retrofits into Strategic Resilience Investments

*How RiskFootprint™ Transforms Hazard Data into Actionable Decisions for
Commercial Real Estate*

What is the “problem” and how does RiskFootprint™ solve it?

Commercial buildings undergo routine retrofits every year—HVAC upgrades, façade repairs, plumbing replacements—all aimed at preserving asset value and operational continuity. Yet, many of these same buildings remain vulnerable to increasingly frequent and severe natural hazards: floods, wildfires, hurricanes, and extreme heat. The challenge for owners and investors isn’t whether to invest in resilience—it’s knowing when, where, and how much to invest, and whether those investments will yield a positive return.

Most hazard and climate risk vendors stop at “assessment to reporting.” They deliver data, maps, and scores—but leave stakeholders stranded at the decision-making threshold. RiskFootprint™ solves this problem by bridging the gap between exposure data and actionable insight, empowering commercial real estate (CRE) professionals to make better informed “go/no-go” decisions on resilience retrofits.

The Problem: Data Without Direction

Traditional hazard assessment platforms offer vast datasets but little guidance. They quantify exposure, but not vulnerability. They highlight risk, but not financial impact. And they rarely help CRE stakeholders answer the most pressing question: **“Should I invest in resilience now—and will it pay off?”**

This disconnect leaves owners and investors in a quandary. Without building-specific loss estimates or future climate projections, resilience planning becomes speculative, reactive, and often deferred.

The RiskFootprint™ Solution: From Assessment to Action

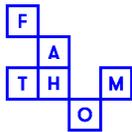
RiskFootprint™ transforms hazard data into strategic clarity by integrating:

AI-Derived Building Vulnerability

- Uses AI and machine learning from True Flood Risk to estimate first-floor elevation for every building in the U.S.



- Compares first-floor building elevations against mapped flood depths from Fathom/Swiss Re



- Reveals not just hazard exposure—but actual vulnerability to flooding

FEMA National Risk Index (NRI) Integration

- Incorporates Expected Annual Loss (EAL) scores for 18 hazards at the Census Tract level
- Quantifies potential damage in dollars and as a ratio of building value
- Enables ROI-based comparisons between risk and retrofit costs

Future National Risk Index (FNRI)

- Restores and enhances FEMA's FNRI methodology
- Projects future EALs for five climate-sensitive hazards: Coastal Flooding, Drought, Extreme Heat, Hurricane Wind, and Wildfire
- Models impacts under both lower and higher emissions scenarios
- Helps stakeholders anticipate long-term risk and justify proactive investments



If the RiskFootprint™ report shows that your building has a moderate to high risk for hurricanes, flooding, tsunamis, or earthquakes, and significant Expected Annual Losses (EALs), the RiskFootprint™ team can further quantify your building's vulnerabilities, potential damage, and loss using actual building plans, diagrams, and surveys, etc. This quantification is important for ROI-based decision making.

Why EAL-Based Risk Matters

Expected Annual Loss provided by the National Risk Index is the missing link between hazard exposure and financial decision-making. It translates abstract risk into concrete dollar values—enabling:

- **Portfolio Screening:** Identify high-risk assets across geographies and hazard types
- **Resilience ROI Analysis:** Compare future losses against capex/opex for mitigation
- **Insurance & Financing Leverage:** Negotiate terms with data-backed risk profiles
- **Occupant Safety & ESG Compliance:** Align retrofits with sustainability and duty-of-care goals

Climate Change: The “Threat Multiplier”

RiskFootprint™ doesn’t just assess today’s risk—it forecasts tomorrow’s. By integrating Future National Risk Index (FNRI) projections, the platform helps CRE stakeholders understand how climate change will amplify hazard impacts over time. This future-facing lens is essential for:

- Long-term asset valuation
- Strategic capital planning
- Regulatory compliance and disclosure
- Investor confidence and transparency

Conclusion: Resilience Is No Longer Optional

In an era of escalating climate risk, resilience retrofits must evolve from reactive maintenance to strategic investment. RiskFootprint™ empowers building owners and investors to make informed, data-driven decisions—turning routine retrofits into proactive protection for assets, occupants, and market value.

Watch the video: [“From National Risk Index to Hazus: Building Resilient Decisions with RiskFootprint”](#)