



Z-FIRE Overview

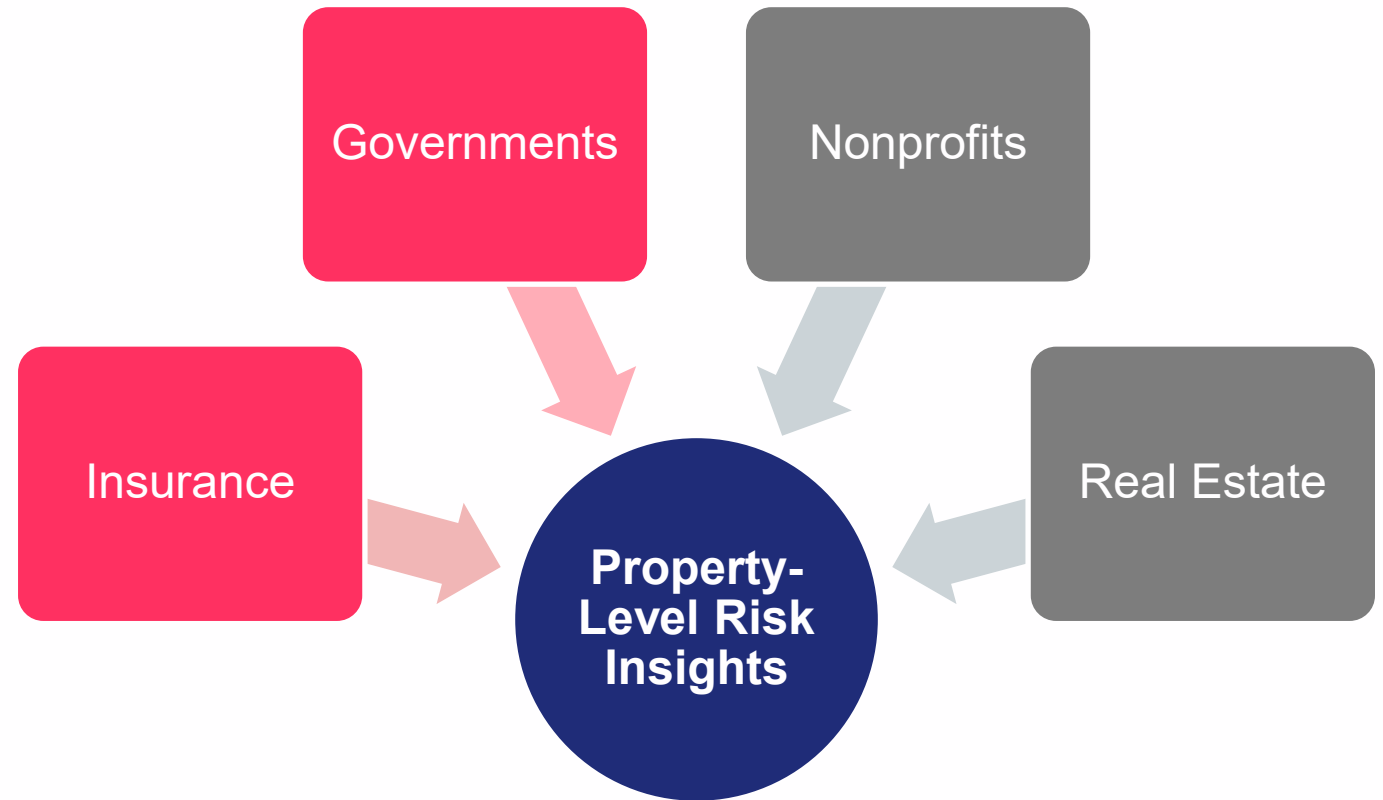
Bryan Rehor, Director, Regulatory Affairs

July 15, 2025

 zesty^{AI}

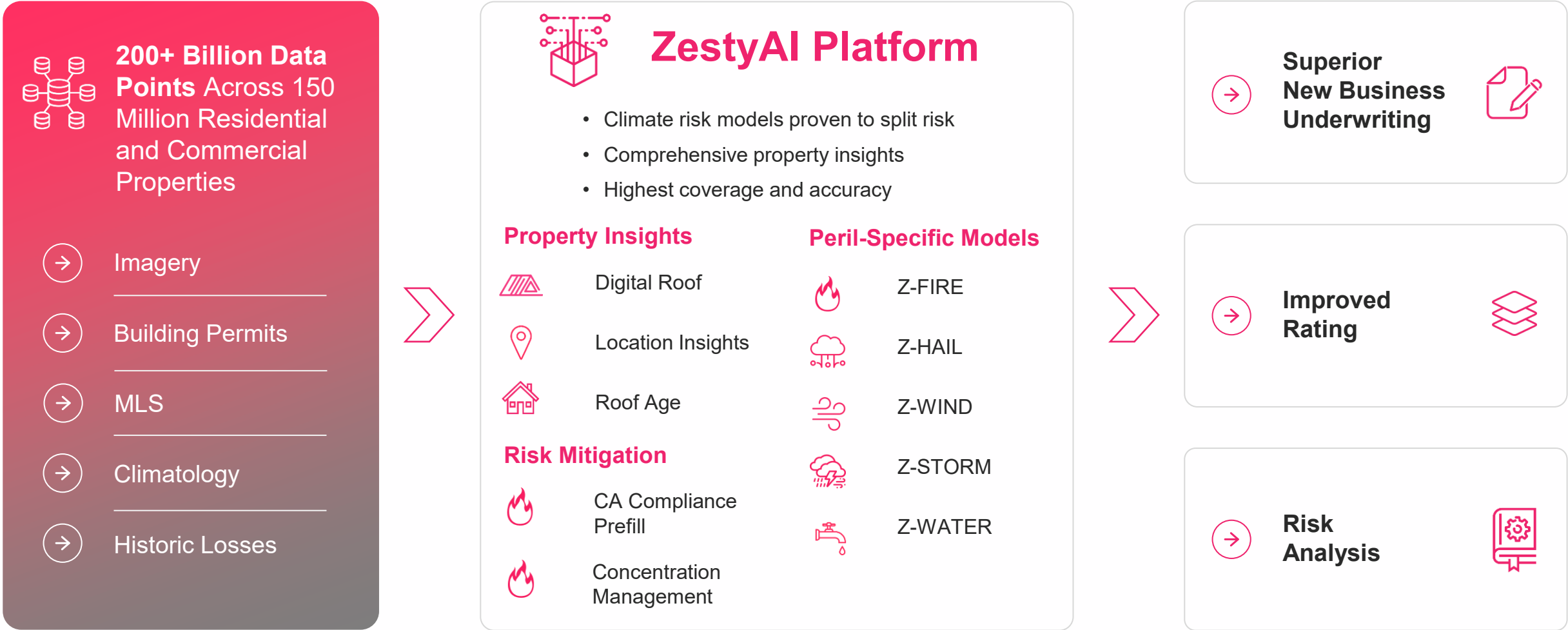
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Z-FIRE: Beyond Insurance



Harnessing the power of AI for smarter public action

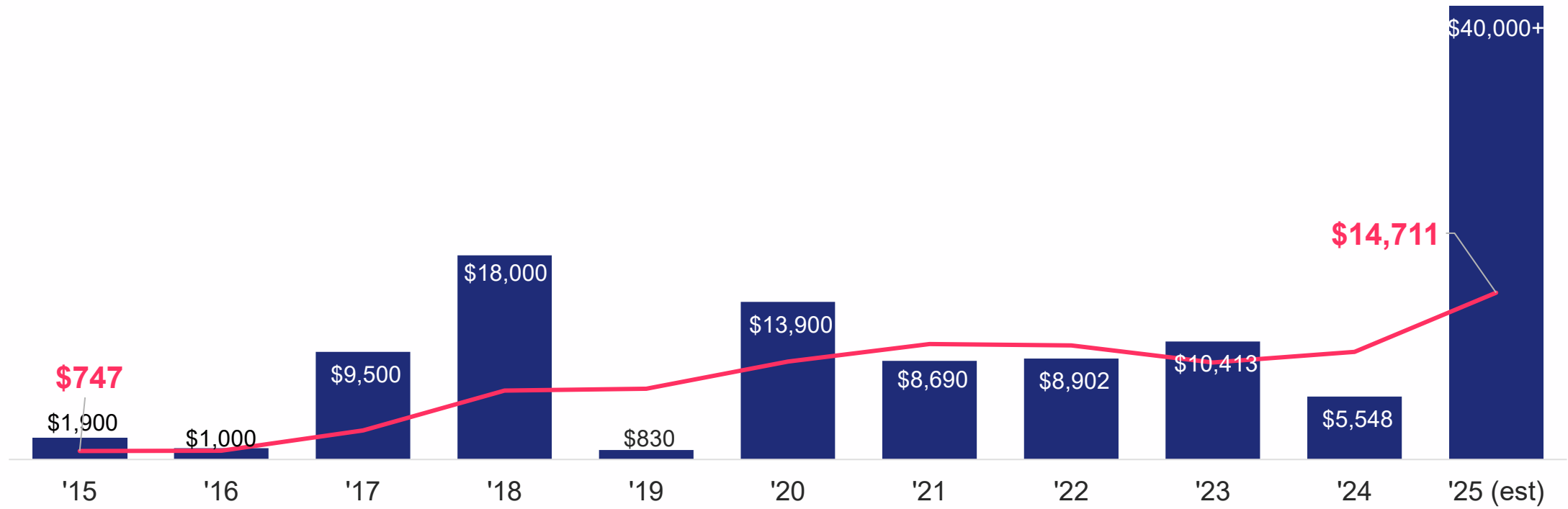
ZestyAI, the property and climate risk analytics platform



Maintaining the highest standards of compliance and transparency

Wildfire losses have grown 35% annually over the past decade

US Insured Wildfire Losses, Annual Total and 5-Year Moving Average (\$M)



Source: [Insurance Information Institute](#)

- Population Growth
- Expansion into the WUI
- Inflation
- Drought

High Fire Hazard Zones

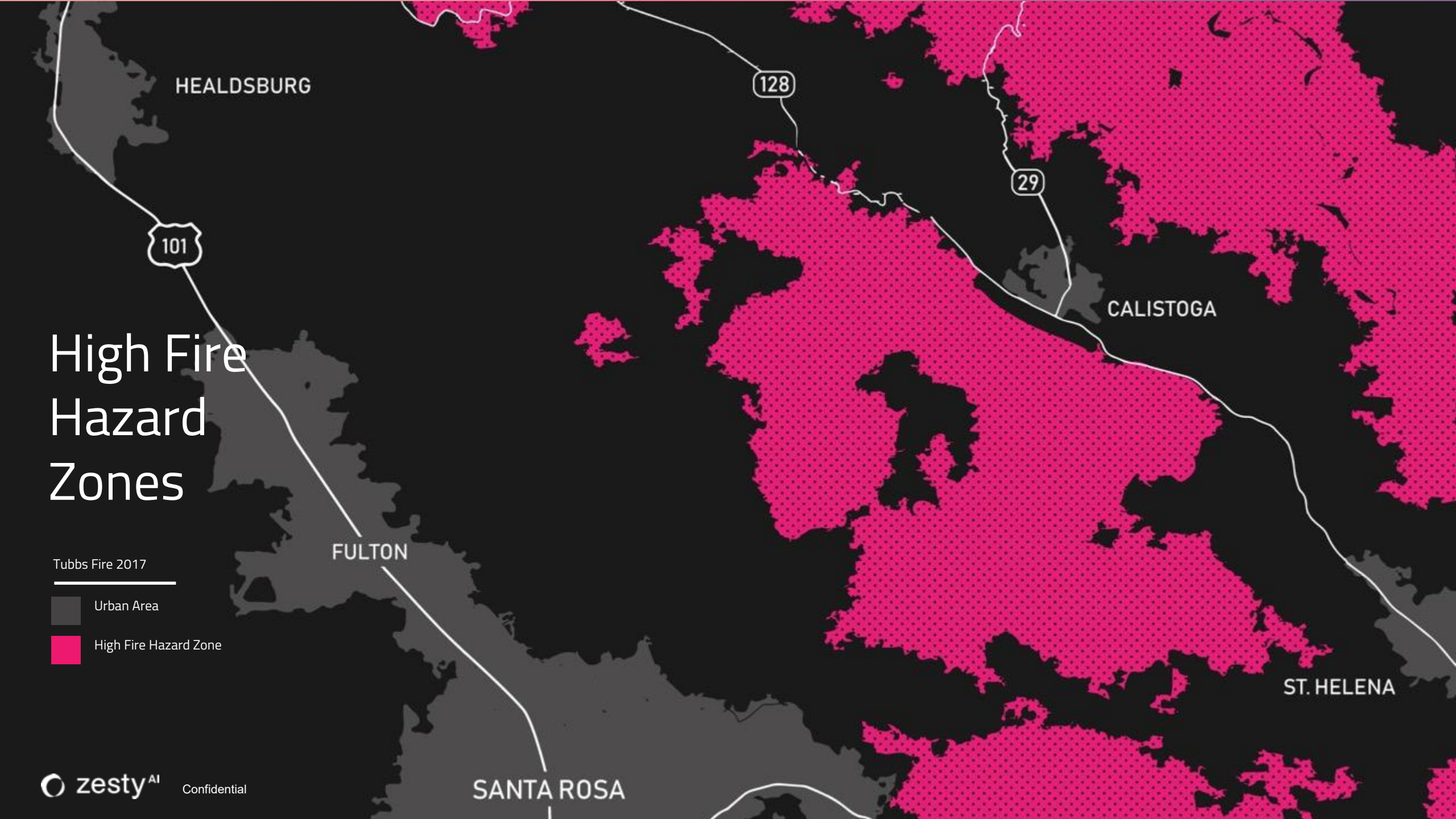
Tubbs Fire 2017



Urban Area



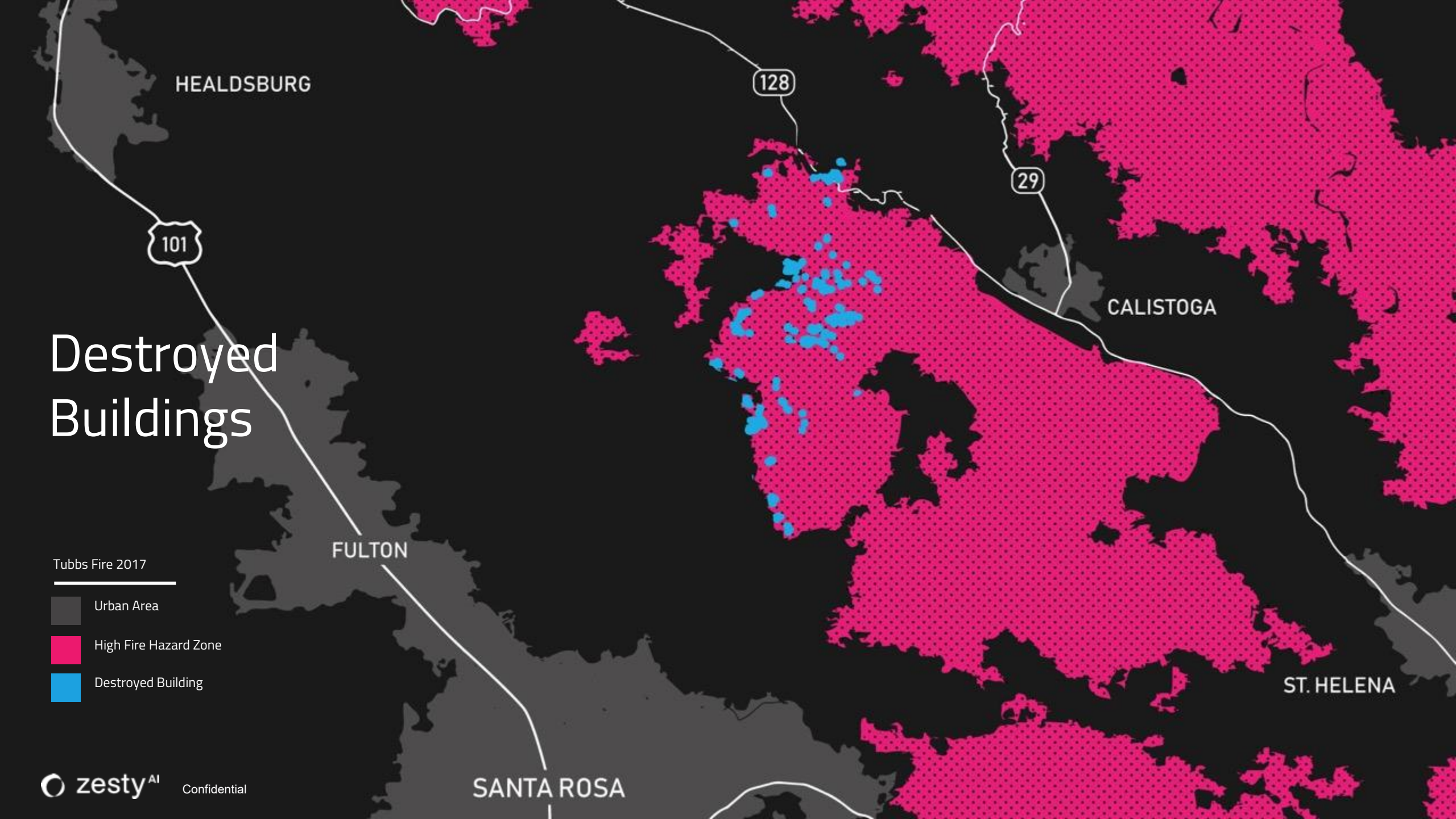
High Fire Hazard Zone

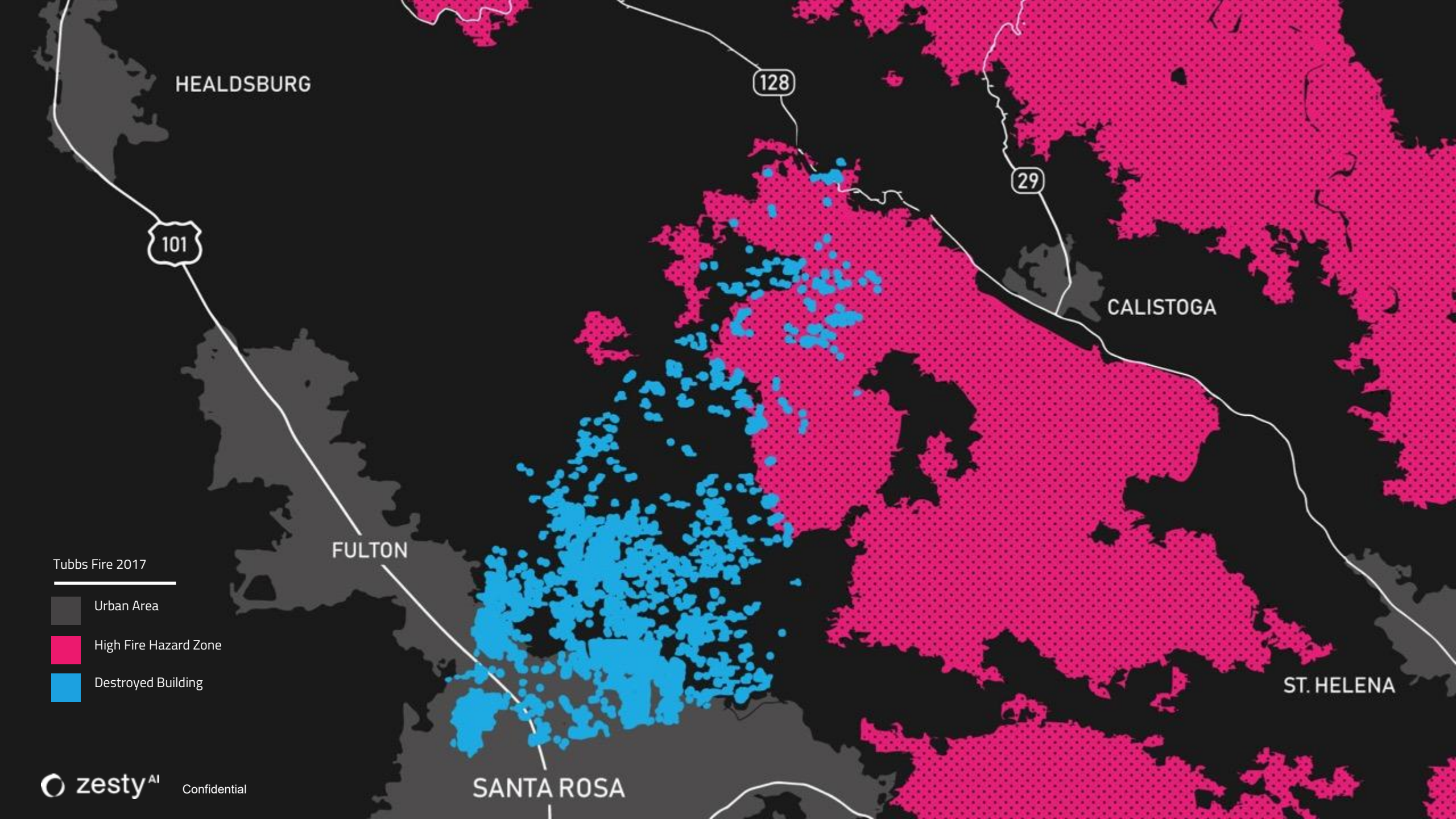


Destroyed Buildings

Tubbs Fire 2017

- Urban Area
- High Fire Hazard Zone
- Destroyed Building





HEALDSBURG

128

29

101

CALISTOGA

FULTON

ST. HELENA

SANTA ROSA

Tubbs Fire 2017

- Urban Area
- High Fire Hazard Zone
- Destroyed Building

Z-FIRE - The World's Largest Wildfire Loss Database

1500+

Wildfire Events Across
North America



20

Years of Wildfire History
in North America



100

Years of Wildfire History
in California



10

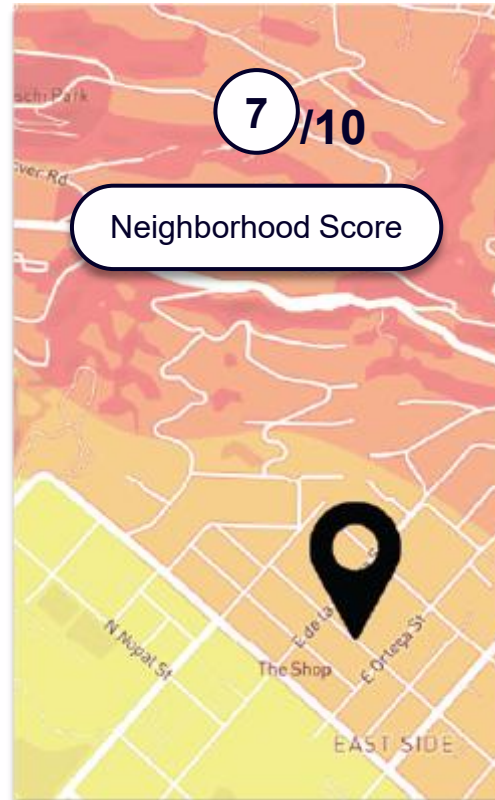
Years of Damage Data
within Fire Perimeters



Z-FIRE

A Granular Approach to Wildfire Risk Scoring

Two Property-Level Risk Scores and Risk Modifiers



Score indicative of the **annualized probability** of being involved in a future **wildfire event**

Each Property receives a score of **1 to 10**

Up to **3 risk modifiers** listed (e.g., slope, wildfire history, precipitation, temperature, etc.)



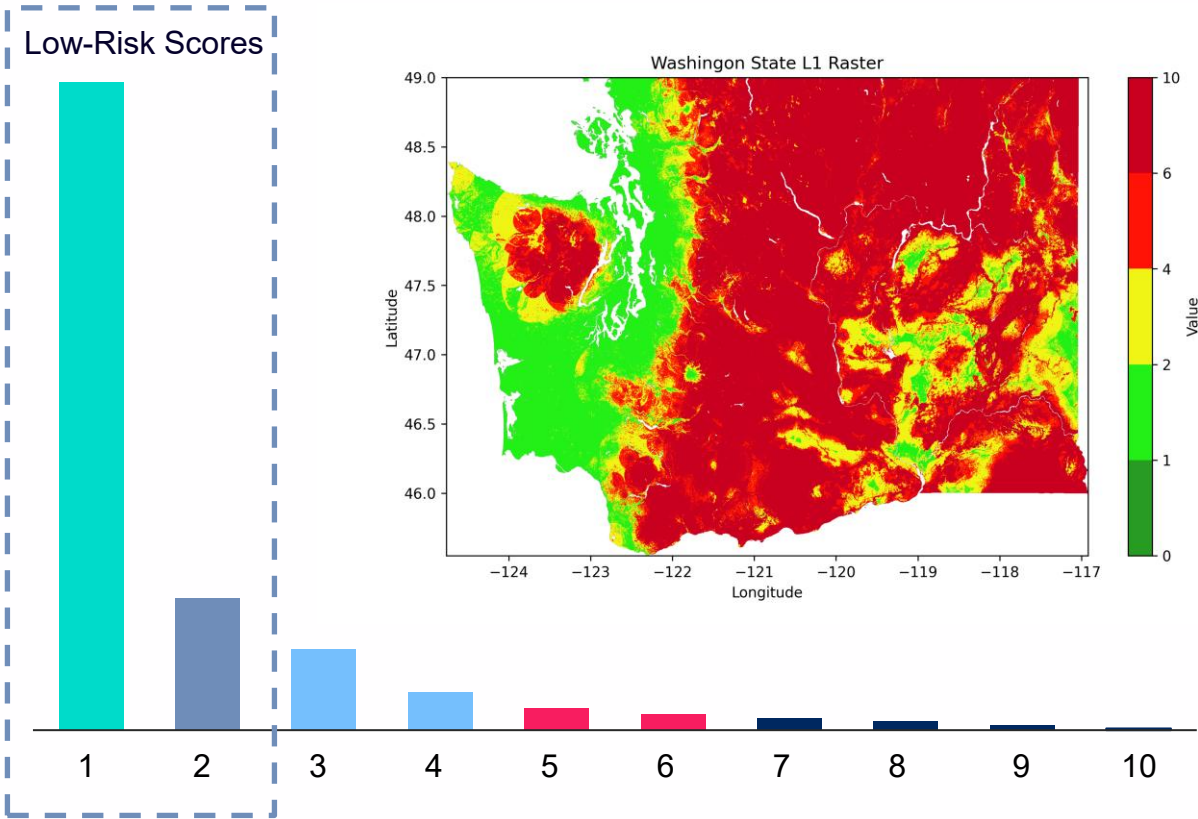
Conditional probability of a property being damaged, were the property to be involved in a future wildfire event

Each Property receives a score of **1 to 10**

Up to **3 risk modifiers** listed (e.g., roof material, vegetation density in multiple defensible zones etc.)

Level 1 Scoring: Distributions and Associated Probabilities - Washington

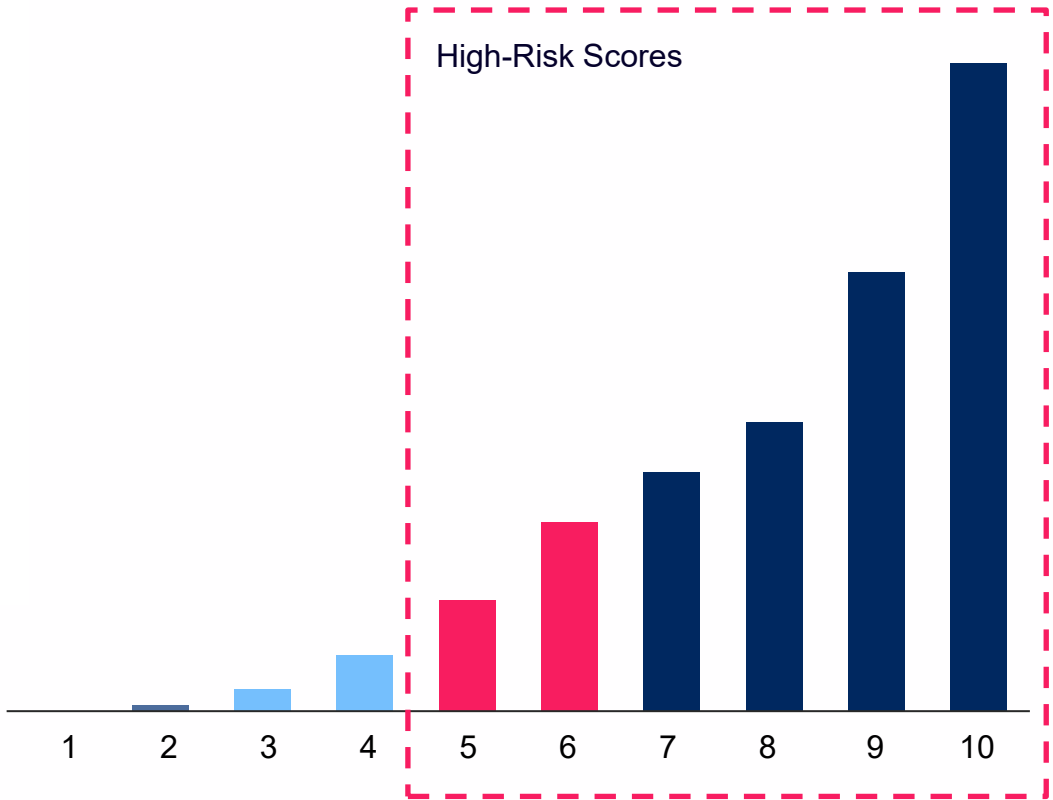
Distribution of all WA properties by Z-FIRE™ L1 score
N=2.3M Residential Properties



86% of Washington homes are at very low or low annual risk of being involved in a wildfire

Very Low Low Medium High Very High

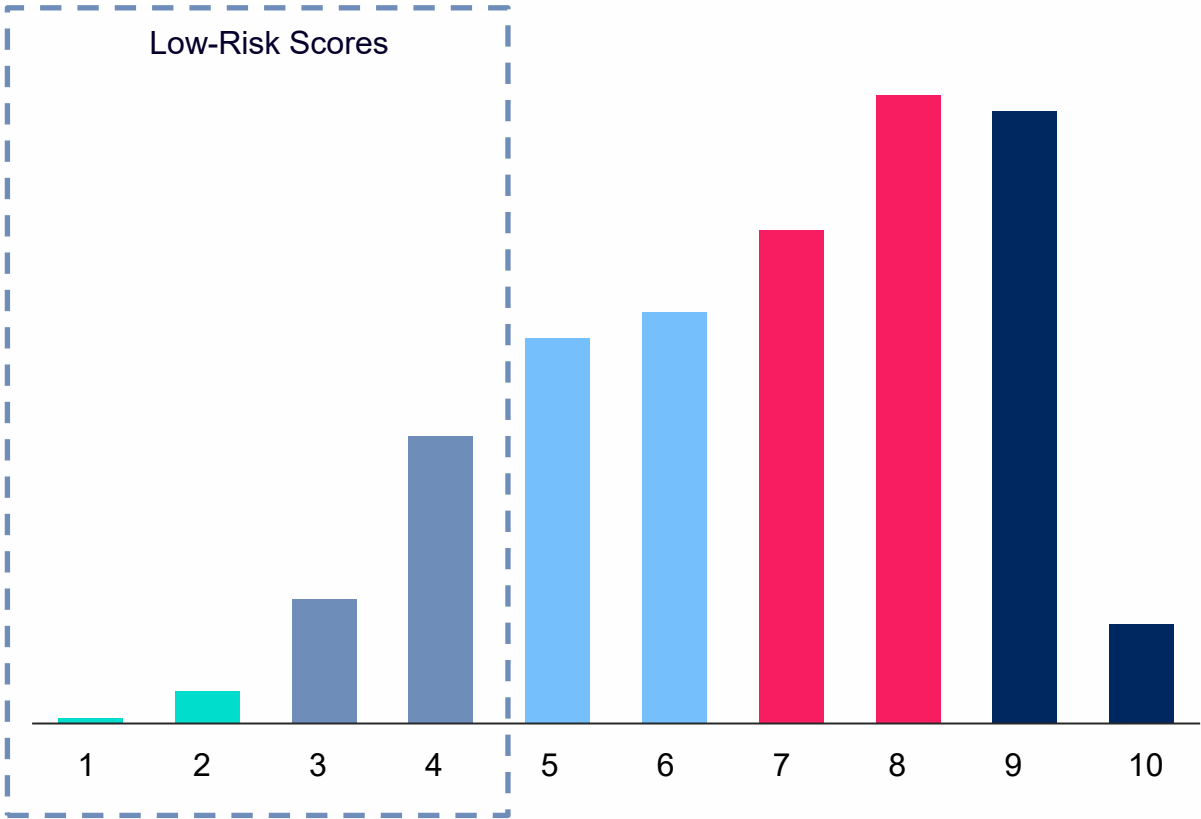
Probability that the Property will be involved in Wildfire Perimeter – Annualized



Risk of inclusion in a wildfire perimeter increases above a score of 5

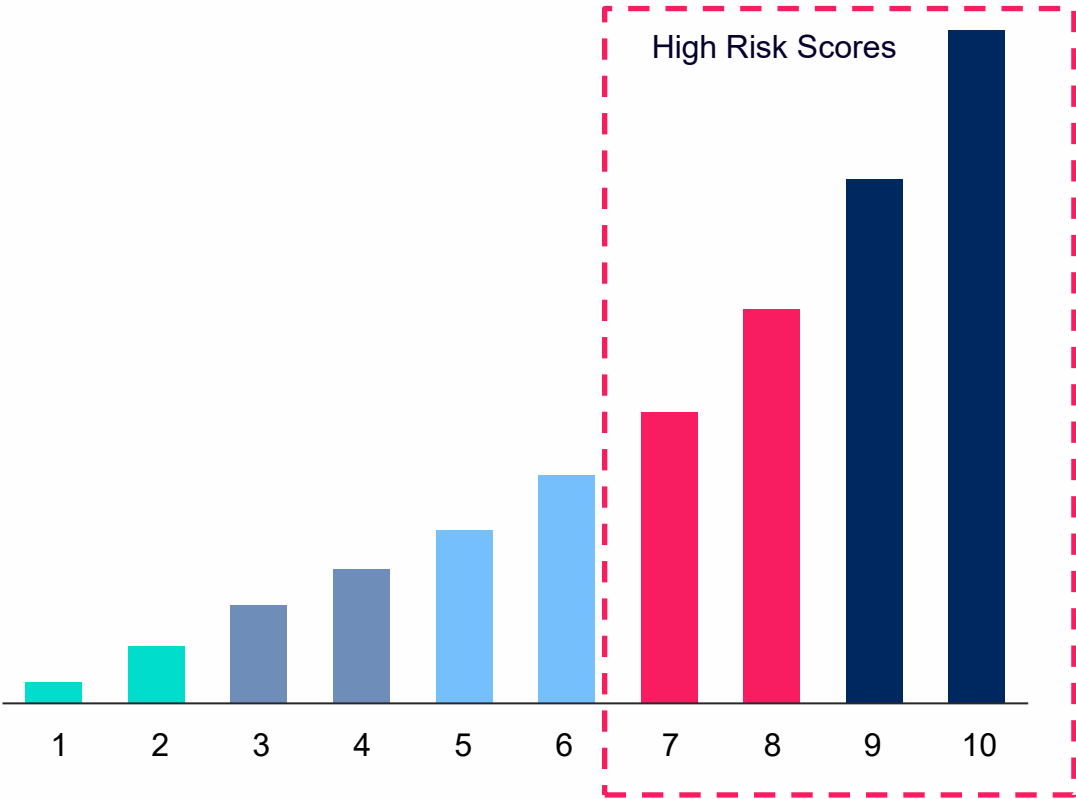
Level 2 Scoring: Distributions and Associated Probabilities - Washington

Distribution of all WA properties by Z-FIRE™ L2 score
N=2.3M Residential Properties



15% of Washington homes are at very low or low annual risk of being damaged if involved in a wildfire

Probability of Structural Damage to the Property if involved in a Wildfire

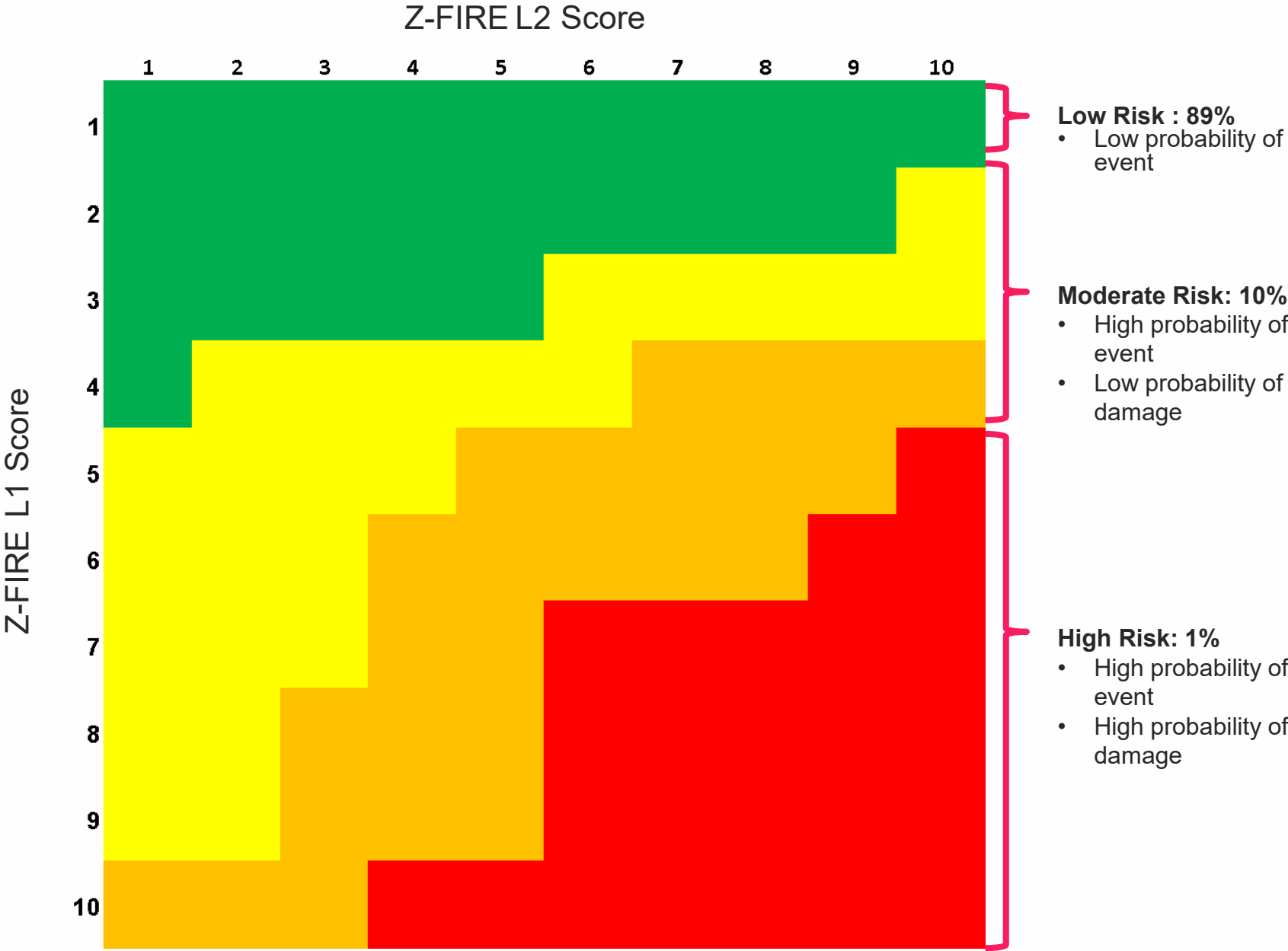


Expected damage rate increases for higher L2 scores

Very Low Low Medium High Very High

Z-FIRE

Granular Risk Assessment



Represents Washington Residential Market

Partnering with ZestyAI

A Data-Driven Path to a More Resilient Washington

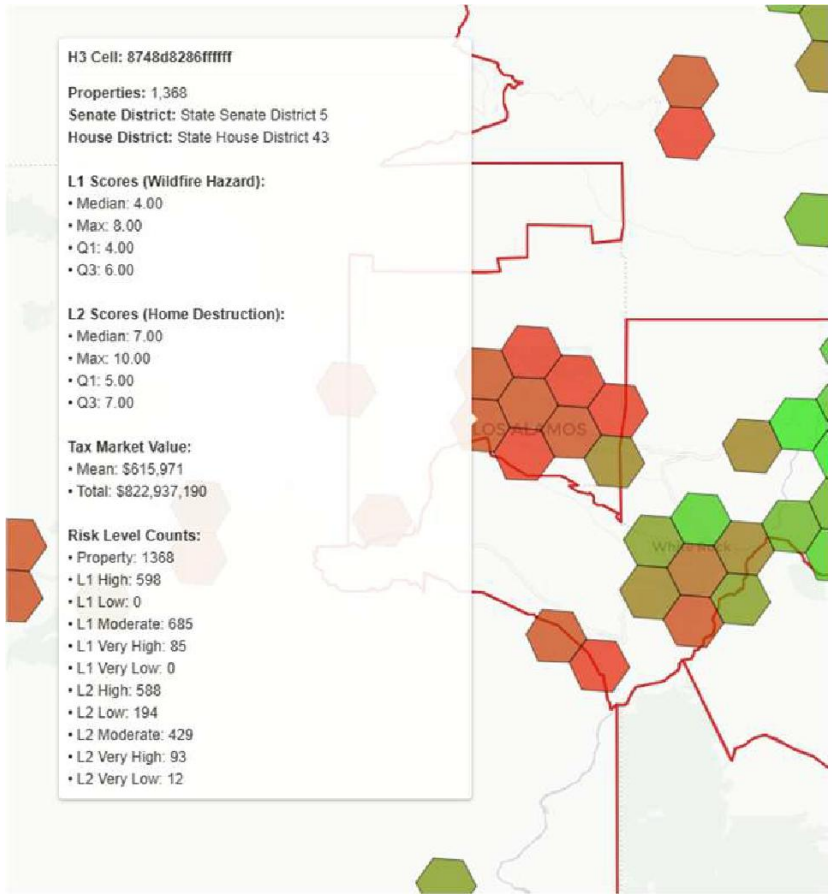
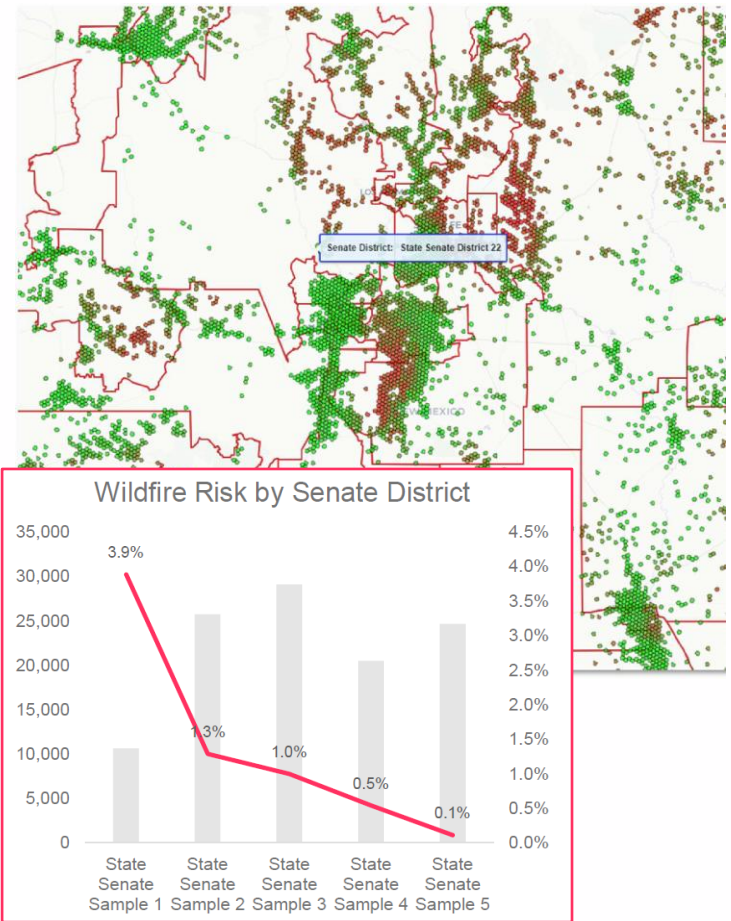
Z-FIRE for Public Sector Impact

Step	Action	Outcome
1	<i>Map and measure wildfire risk at scale</i>	<ul style="list-style-type: none">• Identify high-risk areas using geospatial analysis• Overlay with legislative and fire protection districts• Assess property-level exposure and vulnerability
2	<i>Target and incentivize mitigation</i>	<ul style="list-style-type: none">• Remodel scores to reflect mitigation• Prioritize funding based on risk and reward• Guide insurance and emergency planning strategies
3	<i>Support transparent risk-based pricing</i>	<ul style="list-style-type: none">• Streamline insurer adoption of wildfire risk scores for pricing• Foster availability and affordability of insurance in high-risk areas• Incorporate mitigation with clear, explainable risk scores



Harnessing the power of AI for smarter public action

Step 1: Map and measure wildfire risk at scale



Grid analysis highlights clusters of concentrated wildfire risk at both the community and property level.

Identify high-risk areas using geospatial analysis.
~5 sq. km grids reveal where wildfire risk is concentrated for targeted action.

Overlay with legislative districts.
Aligning risk with political boundaries helps inform policy and resource allocation.

Assess property-level exposure and vulnerability.
Detailed scoring highlights which properties are most at risk and why.

Step 2: Target and incentivize mitigation



Property-level resolution reveals a patchwork of risk levels within one neighborhood



L2=8

Before vegetation removal



L2=5

After vegetation removal

Mitigation can be simulated within risk scores.

Prioritize funding based on risk.
Directing resources to the highest-risk areas maximizes impact.

Incorporate mitigation activities into updated risk scores.
Capturing changes ensures mitigation is recognized without manual review.

Guide insurance and emergency planning strategies.
Up-to-date risk data supports fair pricing and better preparedness.

SBP Wins IDEO's 2023 Climate Resiliency Challenge

ZestyAI partnership delivered mitigation aid to three vulnerable communities



Climate Resiliency Challenge

Sponsored By



CSAA Insurance Group,
a AAA Insurer





43%

Reduction in
destruction risk

8.5%

Reduction in homeowners
insurance premiums

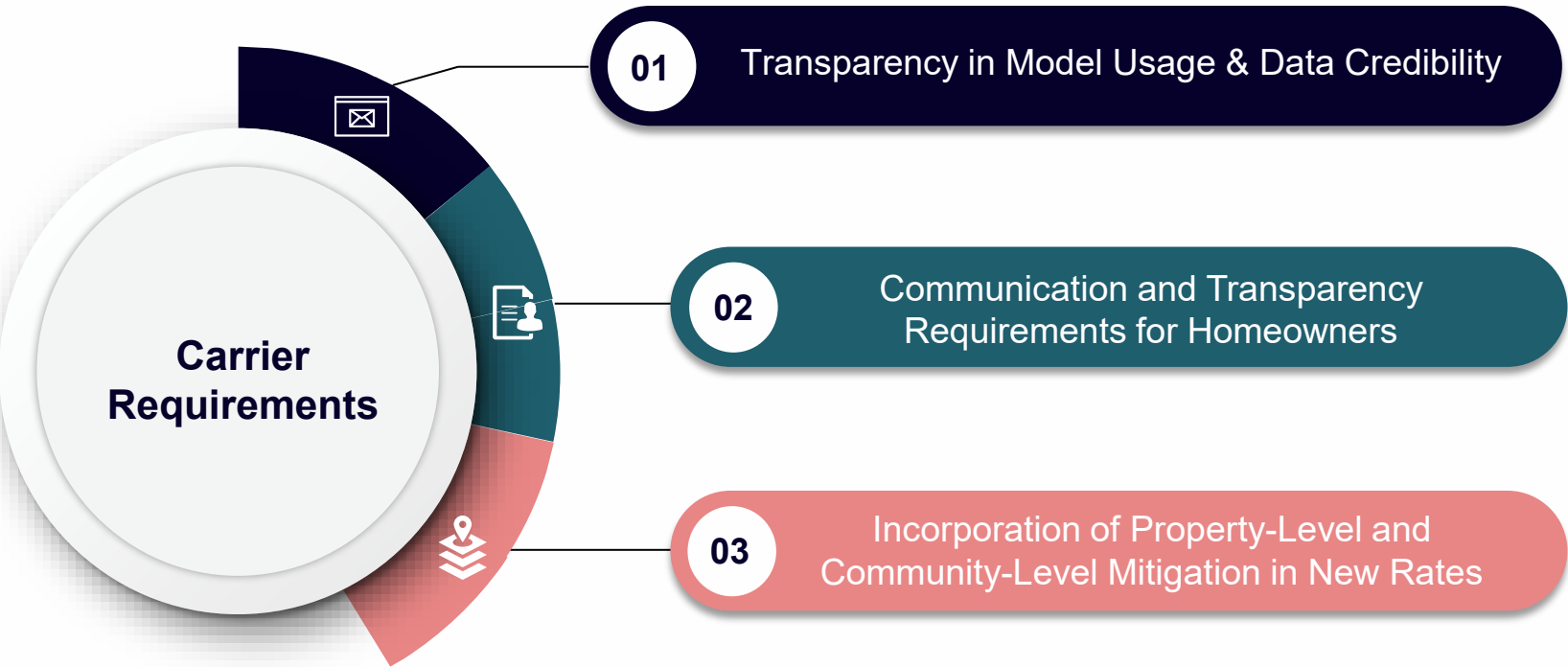
\$164M

Savings in rebuilding costs
over 5-year period

Link: <https://zesty.ai/news/partnering-with-sbp-answer-call-from-csaa-and-aon-to-empower-vulnerable-communities>

Step 3: Support transparent risk-based pricing

California law provides an example of transparent risk models



Streamline insurer adoption of wildfire risk scores for pricing.
An established model review process simplifies rate filings.

Foster availability and affordability of insurance in high-risk areas.
Help insurers confidently write in challenged regions by aligning rates with actual risk.

Incorporate mitigation with clear, explainable risk scores.
Transparently reflect property-level risk reduction so actions are recognized.

Putting ZestyAI Insights into Action

Recommendation

Use grid-based spatial analysis to identify where wildfire exposure and vulnerability are most concentrated.

Analyze Risk Concentration

Focus resources and planning where they will have the greatest impact on reducing wildfire risk.

Target Mitigation

Support insurers with transparent, mitigation-aware risk scores that streamline filings and promote coverage in high-risk areas.

Enable Risk Based Pricing

Safer and More Resilient Washington



Thank You

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