STARR

INSIGHTS

STRIKES, RIOTS AND CIVIL COMMOTION

How to identify risks to vulnerable assets

FORECASTING FUTURE UNREST

In today's volatile global climate, civil unrest events, whether sparked by inequality, political division, or economic strain are on the rise. Insurance claims related to strikes, riots, and civil commotion (SRCC) have surged dramatically, forcing a shift in how risk professionals assess exposure.

At Starr, we're helping lead this transformation, bringing together underwriters, data scientists, and risk analysts to build tools that anticipate, rather than just react to, SRCC threats.

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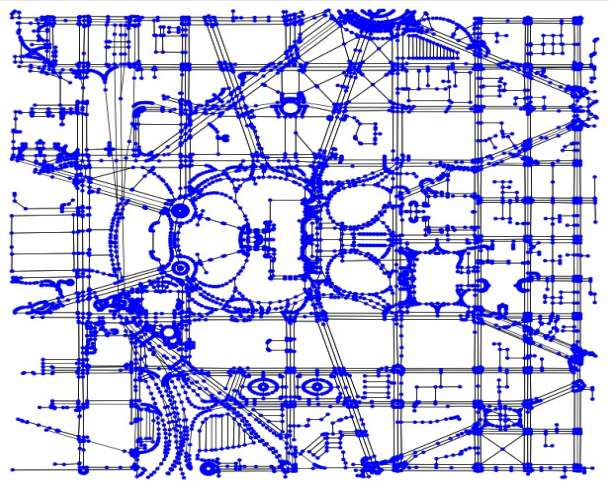
CIVIL UNREST ON THE RISE

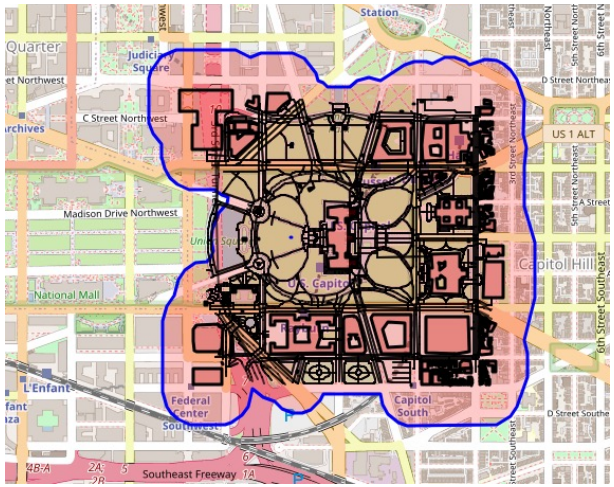
Global civil unrest events have risen by 55% between 2023 and 2024. Often, urban protests or mass gatherings have a cascading impact, damaging property and interrupting business.

Traditional assessment methods often fall short of capturing the dynamic nature of these risks. Insurers require ever more sophisticated tools to understand the potential accumulation of risk.

This is where innovative solutions like crowd modelling tools come into play. By simulating real-world scenarios, our modelling tools enable underwriters to pinpoint high-risk areas, identify vulnerable buildings and groups of potential target buildings. We then run tailored analyses of potential unrest which helps our underwriters to stay ahead of emerging risks.

OUR CROWD MODELLING TOOL





Starr Research Analyst, Matt Hopwood, has developed a unique Non-Natural Catastrophe Crowd Modelling Tool to enhance SRCC (Strikes, Riots and Civil Commotion) risk assessment. The model provides insights into crowd size and behaviour during riots or large gatherings.

It enables comprehensive assessment of risks to nearby infrastructure by analysing crowd formation and movement in urban areas. The model then overlays building footprints close to an event.

This analysis supports our team in preparing for civil unrest scenarios with data-driven insights to evaluate exposure effectively.

Our tool is the first step towards creating a probabilistic framework for Starr's SRCC risk assessment. In future, we will incorporate probabilistic methods to refine our risk predictions, enabling us to anticipate and prepare for an even broader range of possible events.

STEP ONE:

Crowd Model Development

We've built an initial crowd footprint model to simulate how crowds move during civil unrest events such as protests, strikes, and riots. This forms the analytical core for understanding unrest dynamics.

STEP TWO:

Probabilistic Method Rollout

Building on the footprint generated by the crowd model, we introduce a probabilistic simulation layer. For every simulated event, we build a corresponding loss distribution to estimate potential impacts. These distributions capture property damage and are customisable by event intensity, or region. This allows us to not only model where and when events may occur, but also what their likely consequences are.

STEP THREE:

Expand Event Coverage

The model can capture a wide range of civil occurrences. The result is a more comprehensive, forward-looking understanding of civil unrest and its ripple effects.

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THE METHOD:

WE LEVERAGE

We leverage open-source street network data

WE BUILD

Then build a mesh-work to analyse potential crowd density limits

WE ANALYSE

We widen the mesh's footprint to review the impact were a crowd to spill to a wider area

WE OVERLAY

We overlay with existing coverages to understand portfolio impact

THE BENEFITS:

APPROXIMATES CROWD FOOTPRINT AREA

Enables calculation of an approximate area a crowd occupies on a street network, revealing its potential impact on surrounding areas.

IDENTIFIES BUILDING RISK

Automatically highlights buildings within a defined proximity to the crowd, categorising them by risk levels based on distance and exposure.

PROVIDES CUSTOMISATION AND SCENARIO ANALYSIS

Adjusts parameters like crowd size, or can simulate unrest across multiple locations, helping to model complex, real-world scenarios with precision.

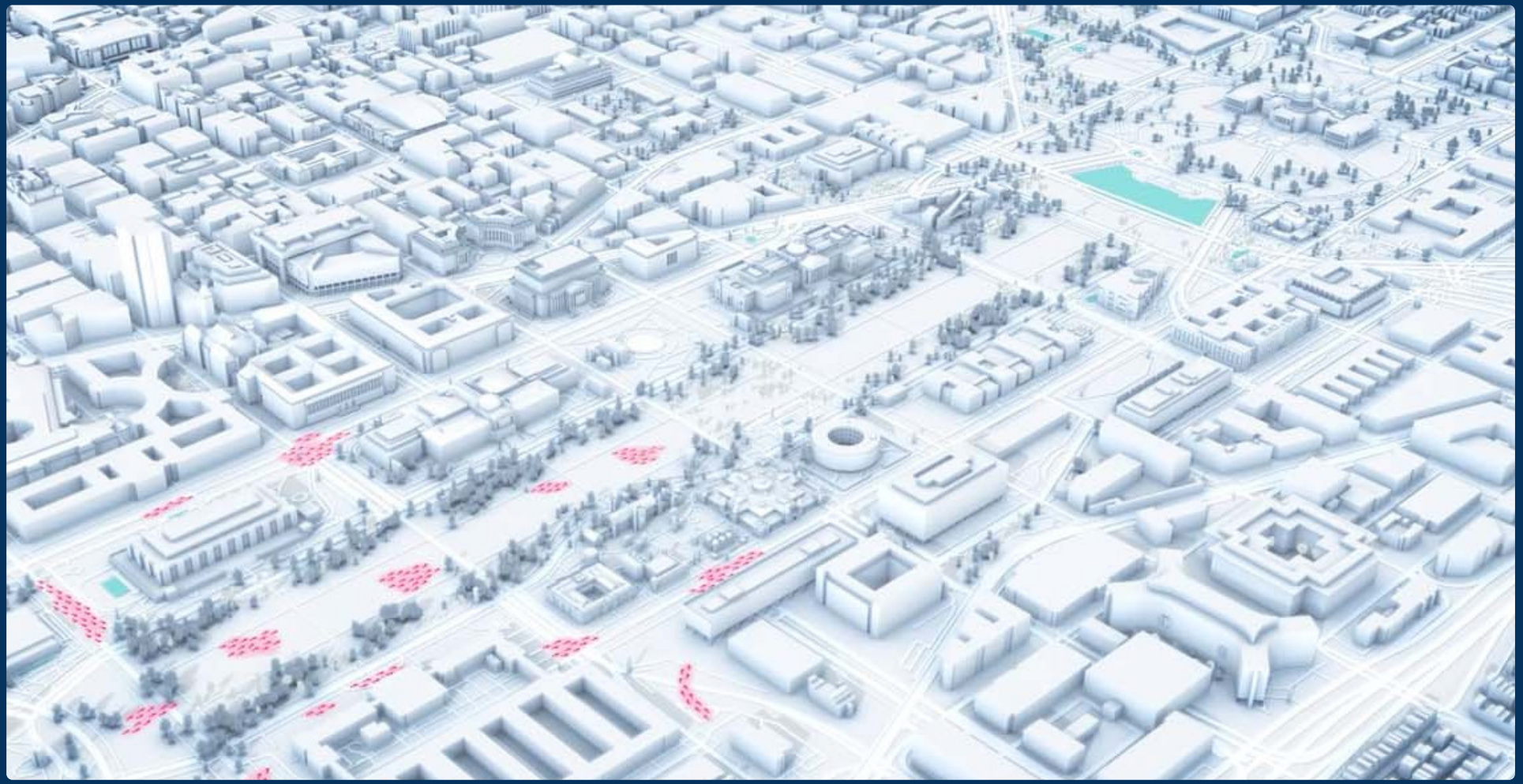
SUPPORTS SWIFT UNDERWRITING DECISIONS

The model is fast and efficient, generating a static footprint in seconds.

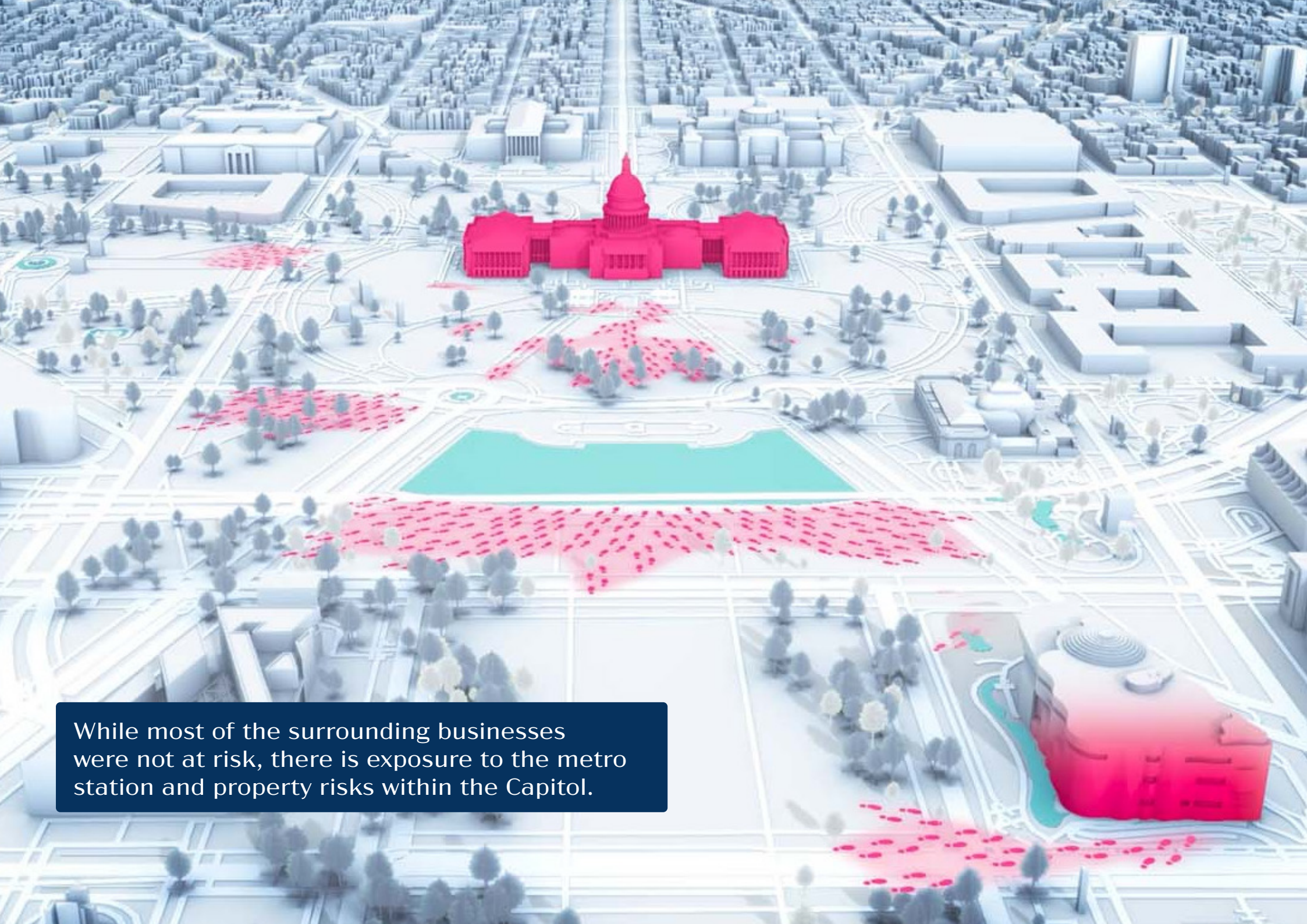
2021 CAPITOL RIOTS

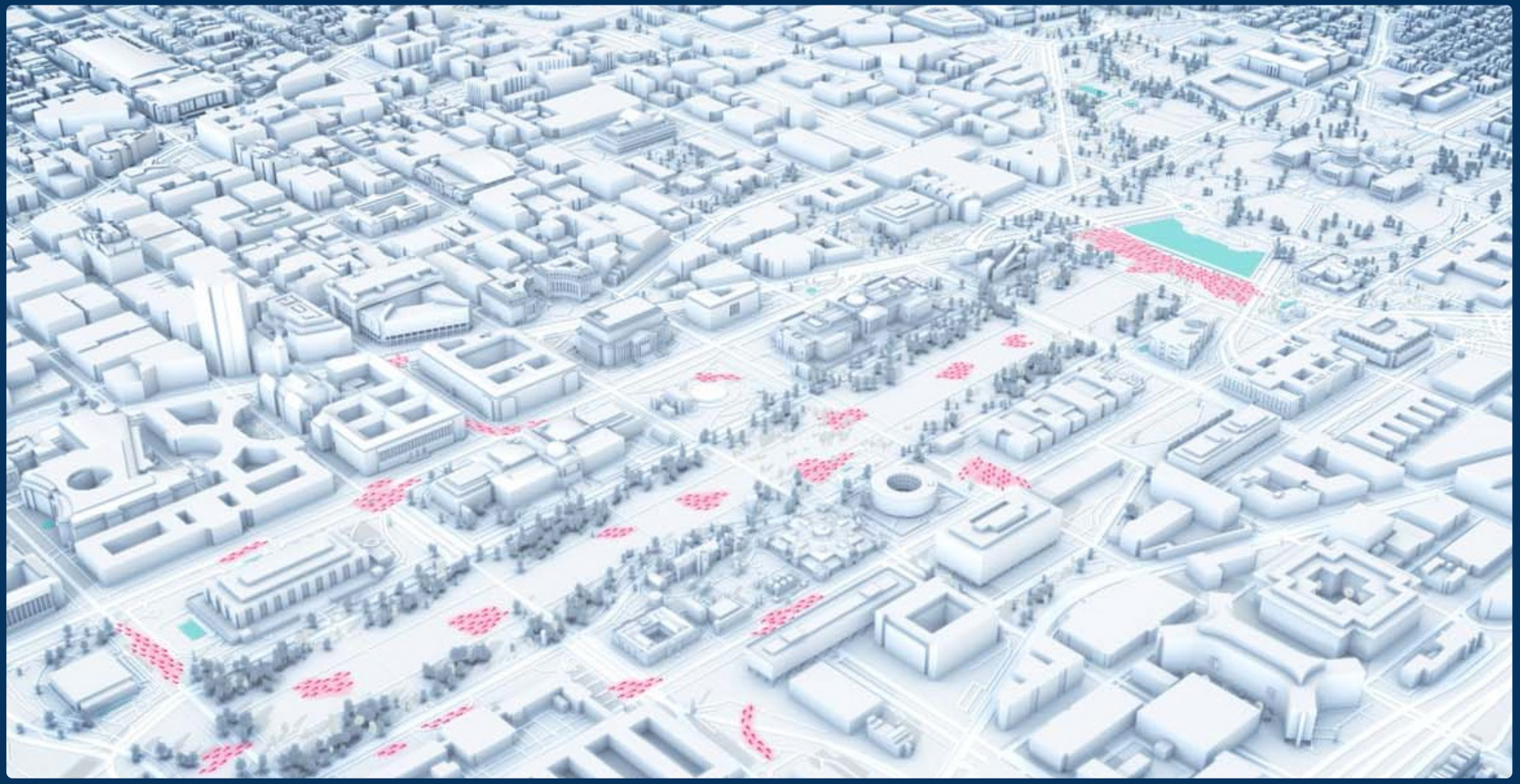
Let's look at a real-world example – the 2021 Capitol Riots. The model's capabilities are highlighted through this real-world scenario, demonstrating how it assesses risk and exposure.

By integrating advanced crowd dynamics data into underwriting, Starr's enhanced SRCC exposure model provides deeper loss insights. This innovation enables informed decision-making, early identification of high-risk properties, effective risk mitigation, and tailored coverage solutions.

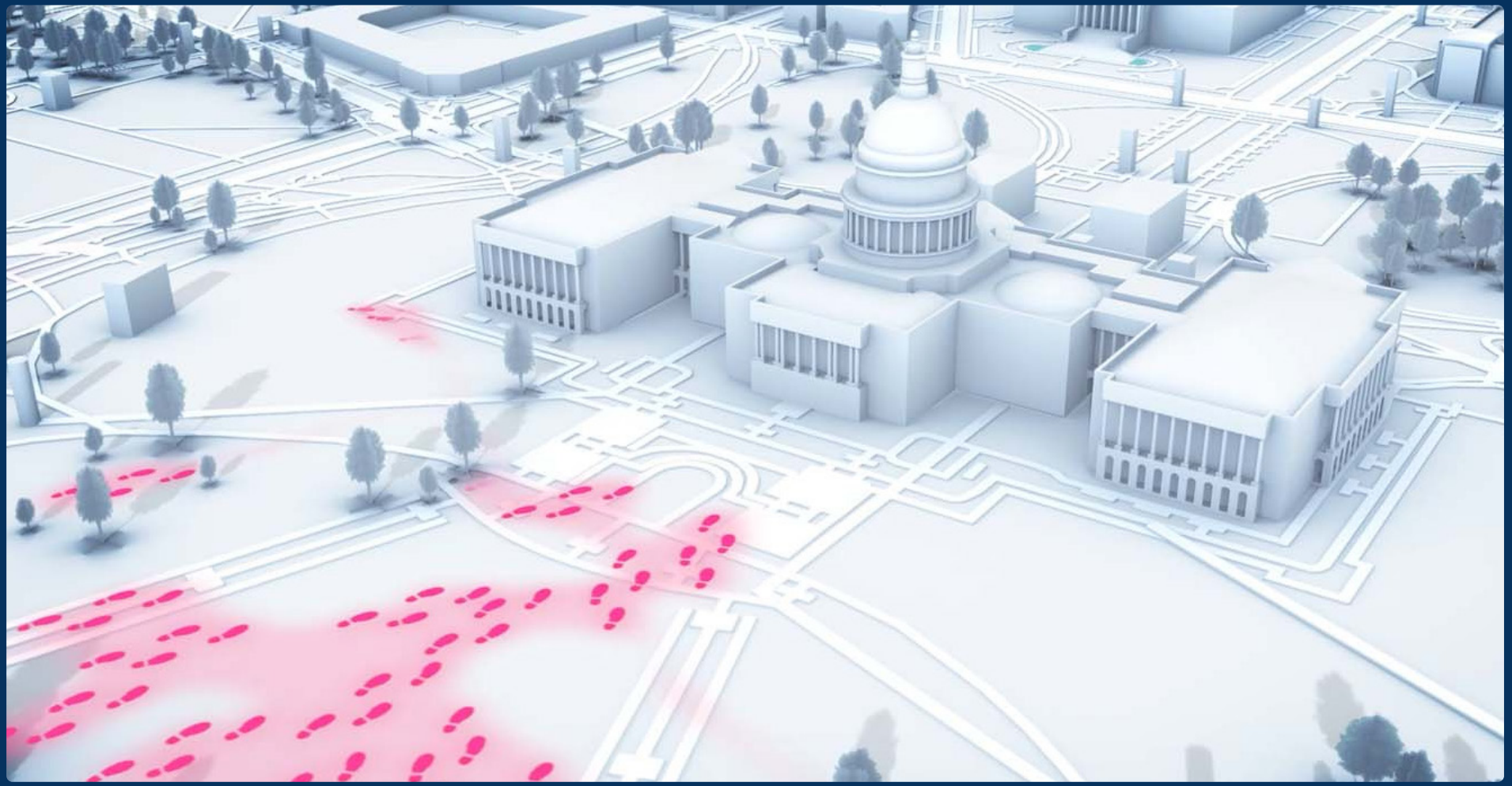


Most protests during the Capitol event were small and localised.

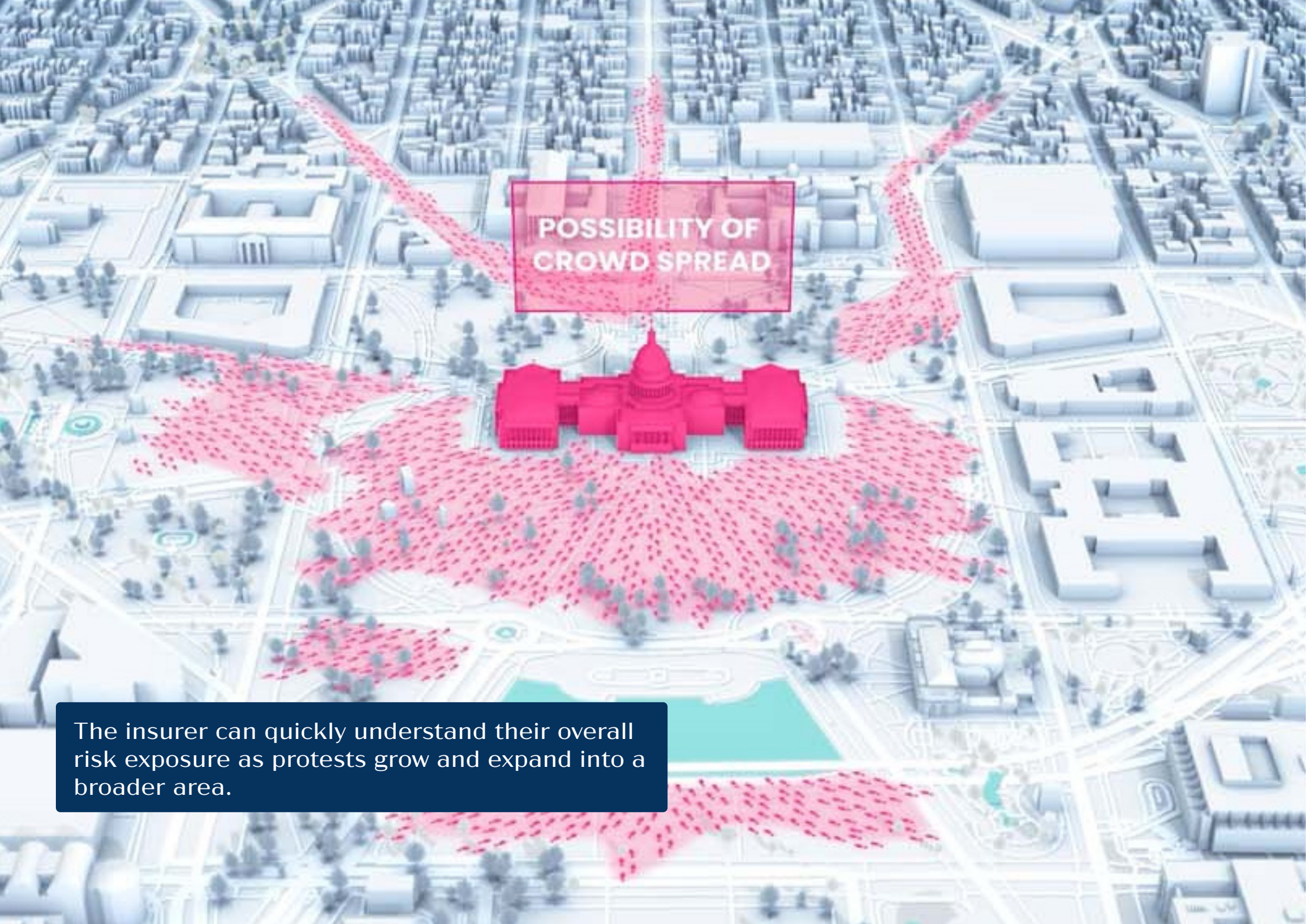

While most of the surrounding businesses were not at risk, there is exposure to the metro station and property risks within the Capitol.



With the exception of a larger crowd near the Capitol building itself.



Through counterfactual analysis, the tool explores the impact of the protest doubling or trebling in numbers, spilling into surrounding neighbourhoods, affecting further properties, transit hubs, or commercial areas.



The insurer can quickly understand their overall risk exposure as protests grow and expand into a broader area.

EMPOWERING BROKERS THROUGH CLARITY AND RESPONSIVENESS

For brokers navigating a broad range of property and specialty risks, Starr brings global capability and local expertise through its London and Lloyd's platform.

Backed by a strong balance sheet and a data-led approach, our underwriters are empowered to respond quickly, provide clear direction and deliver practical solutions.

We work in close partnership with brokers to remove friction, support confident decision making and help close business efficiently.

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DELIVERING CONFIDENCE THROUGH CLAIMS

Our claims team collaborates with not just brokers and clients, but with our underwriting and pricing teams to help enhance the claims experience. With claims at the forefront of our service proposition, we are empowered to make decisions and stay fully engaged from initial notification of a claim through to finalisation. Our claims team has extensive technical expertise in all classes of business for the benefit of our customers, ensuring a seamless service throughout the journey.

We meet the moment by delivering clarity where it matters most.

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