LexisNexis® RISK SOLUTIONS | Insurance

WHITE PAPER

Get the Roof Right

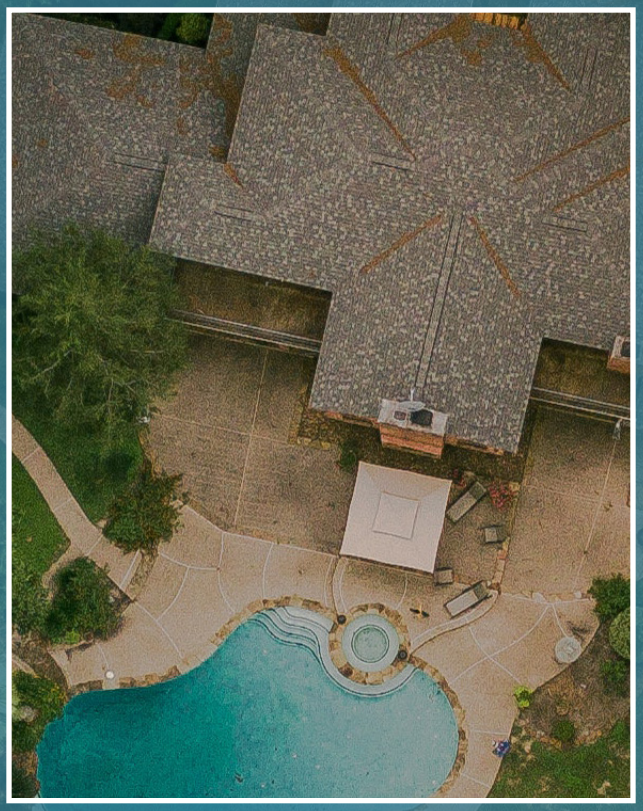
How home insurers can get a true view of roof risk.

Executive Summary

Accurately assessing roof condition is crucial for home insurers looking to reduce risk. Why?

Roof-related home insurance claims are accelerating both in frequency and severity, due to factors such as extreme weather events and escalating roof repair and replacement costs. Knowing the real condition of a roof allows you to make the best decisions regarding your risk exposure so that you can rate and underwrite appropriately. But it's not quite that simple.

While there are numerous methods for determining roof condition, no one method alone gives you a complete view. By combining aerial imagery data with important, claims-driven context, you can get a truer assessment of a roof's condition and characteristics, better manage risk and improve the customer experience.



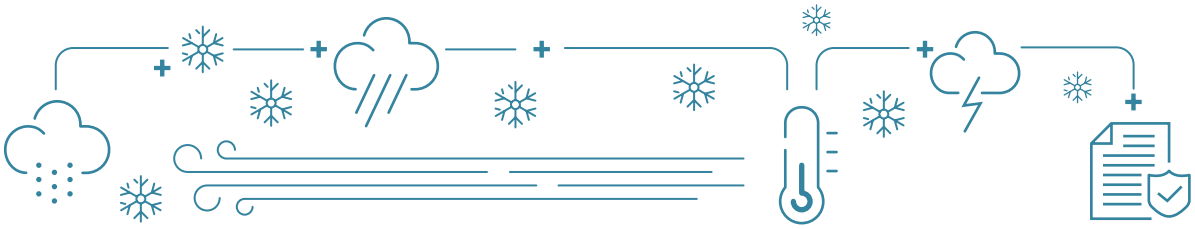
Roof-related losses are getting worse

Between 2014 and 2019, wind and hail claim frequency increased by 24%.[1] The average severity of a wind and hail loss claim increased by 31% over the same period.[2] Hail loss claims alone increased 19% from 2018 to 2019.[3] These weather perils are significant contributors to roof damage and are becoming more severe. In certain states, these roof losses are the biggest challenge the industry faces.

Although you can't control the frequency of wind and hail events, you can better manage the impact to your business with access to robust and accurate information about roof condition. Misinformation or lack of information can result in costly assessments, adverse selection and even more costly claim payouts.

Why roof-related losses are accelerating

In 2019, the U.S. experienced 5,392 major hail events, a large increase from 4,610 events in 2018.[4] Wind and hail claims now make up 46% of home losses and are becoming more costly over time.[5] **Why is this happening**? There are several potential contributing factors.



Weather Frequency

Extreme weather changes are leading to more roof damage. 2019 ranked as the second wettest year on record.[6] That moisture had a lot of implications for roof conditions. For example, stagnant water that pools on roofs can cause wood to rot and form leaks. Rain runoff can cause streaking and deterioration.

Claim Cost

Houses are getting larger and have more complicated roof designs. Updated building codes, safety guidelines and raw materials are adding additional costs to new construction as well as roof replacements. For example, a summer 2020 spike in softwood lumber prices caused the price of an average new single-family home to increase by $16,148, according to National Association of Home Builder standard estimates of lumber used to build the average home. The cost of roofing materials is going up as well.[7] With the average size of an American home at approximately 2,000 square feet and the average price to replace an asphalt shingle roof at approximately $7 per square foot, a complete roof replacement cost is estimated to be around $14,000.[8] Not only that, larger homes have more complicated roof lines, so their roofs are more expensive to repair.

In 2018, 93% of insurance industry survey respondents conducted on-site inspections for every or most new policies. 10% of insurance carriers expect to do the same in 2022.

Source: LNRS Home Research Report, 2020

The problem with the status quo

Current methods to assess roof condition don't reveal the full story.

Self-reporting

Gathering meaningful roof condition intelligence can be a real challenge for many home insurance carriers. Why? Because all too often carriers rely on information about roof condition from homeowners. Most homeowners have little true knowledge of their current roof condition, even underestimating when a roof was last installed.

Age estimates

When a consumer is buying a policy, many carriers rely on roof age estimates to determine potential exposure to a roof loss. Building permit data is often unreliable and doesn't capture every roof installation or repair. Further, roofs age differently due to material, shape, location, animal activity, vegetation and weather patterns. Finally, the quality of roof structure, installation and maintenance affects a roof's durability.

Inspections

While roof inspections can provide additional information and are sometimes clearly necessary, they can add cost and delays to the policy rating process that may cause friction to the customer experience. Simple visual inspections from the ground or a drive-by are not always accurate. You must be able to see the entire roof to know its condition. And these inspections can take time. Even drive-by inspections can take up to 10 days to schedule and implement. On-ground supplemental inspections require ladders, and sometimes a rope and harness— equipment that can add cost and make inspections more dangerous.

Weather patterns

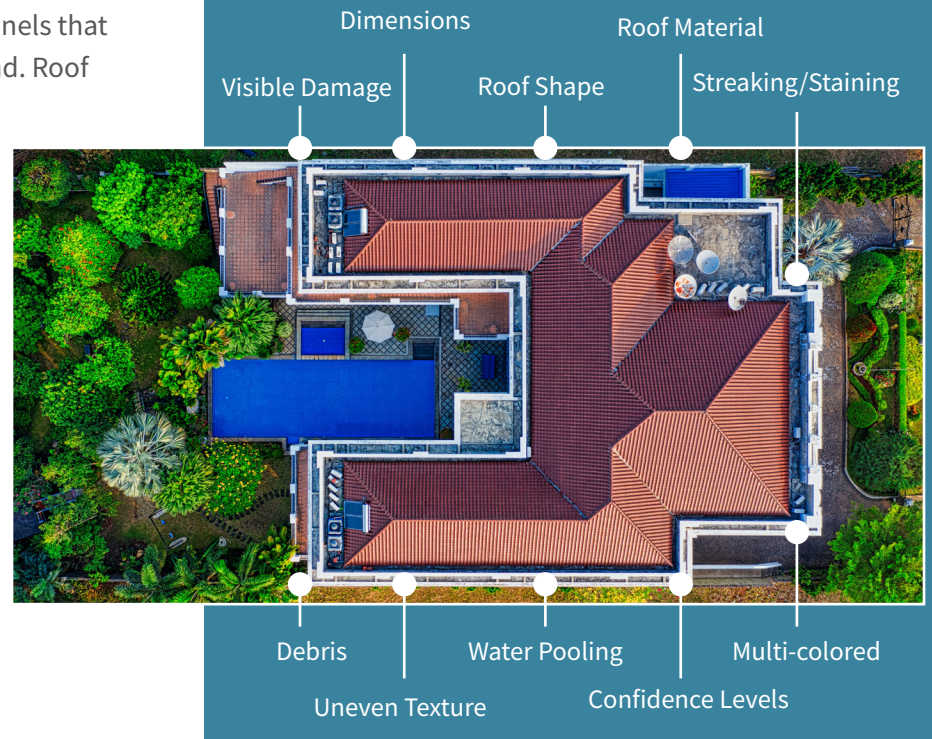
Monitoring weather patterns by peril and location to understand the path of recent storms for the purpose of determining current and potential risks can be useful in assessing probable roof condition. However, publicly available weather data tends to overstate the impact of a storm and is too broad to provide the "**ground truth**" about a specific roof. In these cases, underwriters run the risk of ordering inspections on properties where there was no storm damage—adding cost for carriers and again creating friction in the customer experience.

Aerial imagery

The latest trend in assessing roof condition and managing roof risk is the use of aerial imagery to virtually inspect a roof. This technology is changing the roof assessment game. Aerial imagery can provide valuable details about roof material, shape and complexity. Images can also show the amount of tree overlap and other features, such as the number of solar panels that cannot be seen from the ground. Roof condition indicators such as stains, streaks and pooling water are also visible through aerial imagery. Additionally, all these elements are captured with a time stamp to indicate the date of the photo, which helps ensure information is current.

Out of sight out of mind

Let's face it. No one wants to climb up on their roof to see if it sustained damage after a hailstorm. Unless homeowners notice a water leak or animal problem, they are unlikely to recognize or report any issues with their roof. Therefore, when we try to determine the ground truth for which homes were impacted by weather and which ones weren't, we have to look beyond highly generalized weather data and home insurance claims.



Underwriting is the next frontier for aerial imagery analytics. While 100% of the top 50 carriers surveyed use aerial imagery in the claims process, only 36% use the technology in the underwriting process.[9]

While aerial imagery allows you to gather important insights at the time the image was captured, there are still important gaps. Imagery alone can quickly become outdated, which creates a blind spot for many insurers when assessing risk. The specialized aircraft that fly over properties to capture the images may only fly two or three times per year in populated areas. In rural areas, images may be much older, or even unavailable. An additional limitation is that aerial imagery can't always detect certain types of damage, such as damage from hail. Finally, overhanging trees can obscure a complete picture of the roof.

Take aerial imagery to the next level

Assessing roof risk requires more than a picture. It requires context.

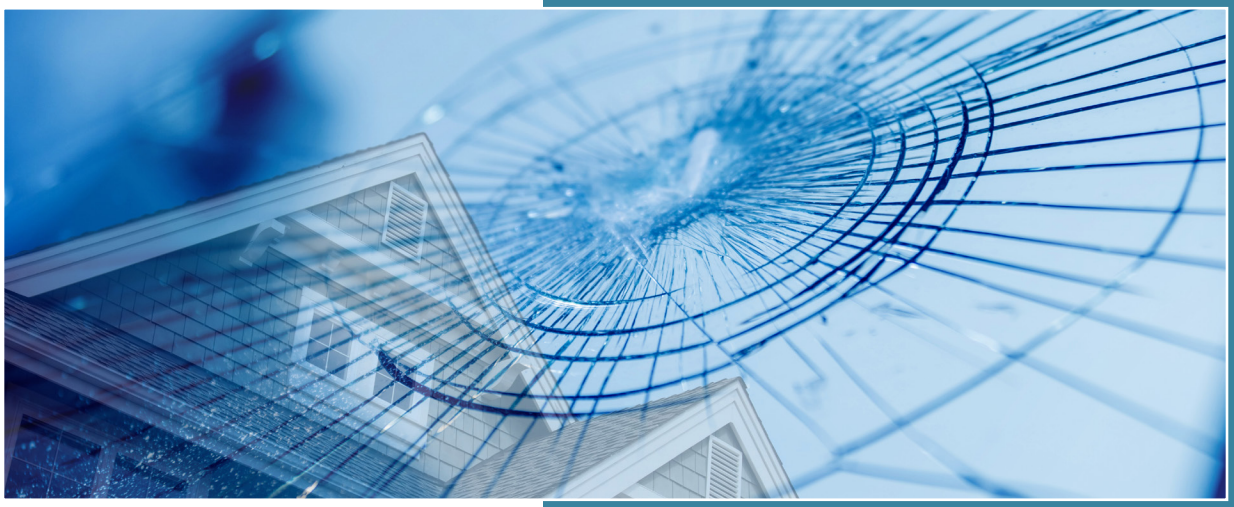
By answering two key questions, you can help fill in the gaps imagery can leave with additional context:

1. What weather events have occurred in the area and was this home impacted?

2. What damage might not be visible in the image?

Claims clusters provide the answers to these questions and supplement the information gleaned from imagery. Developed by LexisNexis® Risk Solutions, claims clusters are created with a geospatial view of specific weather events and the resulting auto and property claims, taking into account proximity to a specific address. They provide the ground truth insight into which homes in a specific area have been exposed to storms and may have roof damage.

By coordinating claims cluster results with imagery, you can be much more precise about pinpointing a particular property that has been exposed to damaging weather and may have a greater propensity to file a roof-related loss claim.



What you don't know **CAN** hurt you

Many carriers mistakenly believe there is nothing they can do to improve outcomes related to roof risk on the existing policies in force.

Insurtechs disagree. In fact, in 2019 one digital insurance carrier announced that it would expand its umbrella of services to include protective home maintenance, starting with home wellness checkups. As insurtechs look for ways to disrupt the industry, one approach is to limit losses by engaging customers early and often.

Whether through targeted home maintenance incentives or roof inspections that can lead to repairing or replacing a roof before damages get out of hand, proactive customer engagement can create a win-win situation for both insured and insurer alike.

In addition, no one likes to be surprised with greater than expected losses. Understanding aggregated risk already on the books will help to reduce surprises and inform underwriting strategy for the future.

Auto hail damage claims can provide clues to roof condition

After a hailstorm, a homeowner may not even realize that they have roof damage. But they will likely notice hail damage to their vehicle and are far more likely to file a claim for hail damage to their auto immediately. While only 18% of property hail claims are reported within 10 days of the hail event, nearly 60% of auto comprehensive claims are.[10] A carrier can use auto claims data to understand storm paths, leading to more predictive modeling and quicker damage assessment.

Is there an even better, easier way to determine true roof condition?

Geospatial analytics allow you to marry the locations for weather events with recent claims activity, producing geospatial claims clusters. Combining home and auto insurance claims with geospatial analysis of weather and claims data, enhanced by aerial imagery, can help reduce subjectivity and improve accuracy when it comes to determining potential risk related to a roof's condition.

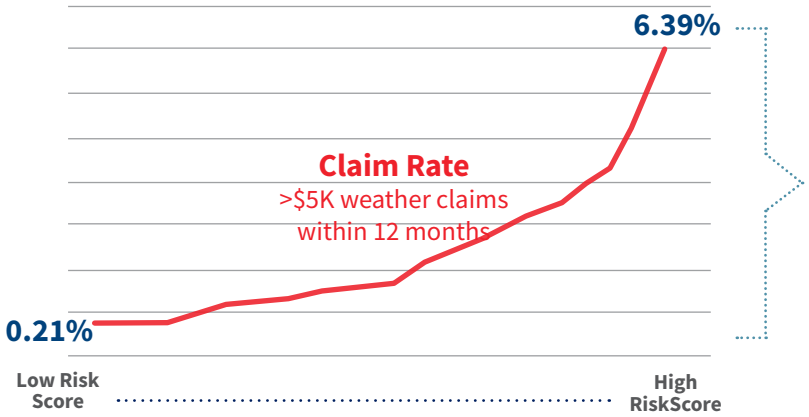
Here are a couple of examples that show you the power of the combined data:

A homeowner is shopping for new insurance on their home. The carrier has a four-month-old image of the homeowner's roof that shows no damage. Without other insights, the carrier may decide no additional research is needed to underwrite the policy. But if the carrier knew that the home was impacted by two recent hailstorms with one-inch hail and that many neighbors filed claims, the carrier may suspect increased risk and choose to inspect the home. In this case, the addition of claims cluster intelligence enhanced the information from the imagery.

On the other hand, imagine the carrier knew there were recent weather events and a claim was in fact filed for this home. How does the carrier know if the roof was subsequently repaired or replaced? Before taking on the risk, the carrier can leverage a virtual inspection performed through aerial imagery to see the true condition of the roof.

To further prove this point, LexisNexis Risk Solutions conducted an industry study comparing the claim rates of insurance shoppers to roof score. Results showed that the highest risk properties had a significantly higher loss cost than the lowest risk properties.

Industry Study: Claim Rate Relativity by Rooftop Score



The claim rate for highest risks is 30X the claim rate of the lowest risks.

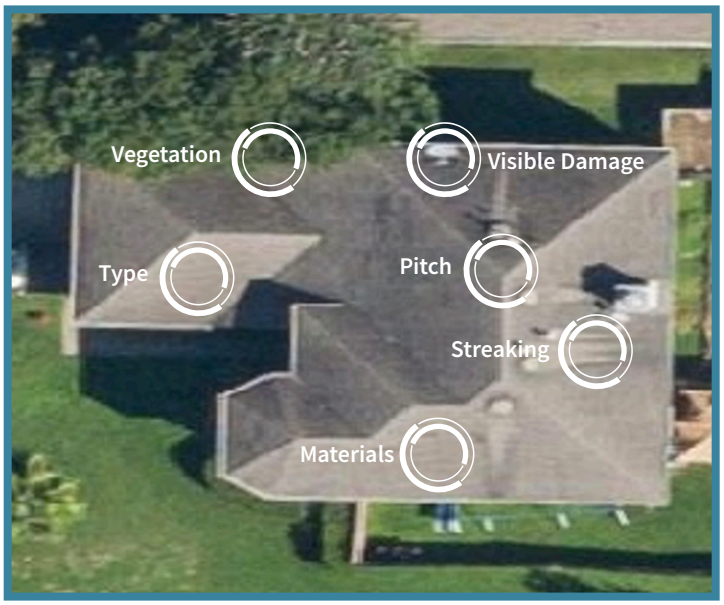
*LexisNexis Analysis of 340,000 properties in 25 Central and Southern States: AL, AR, CO, FL, GA, IA, IL, KS, KY, LA, MN, MO, MS, MT, NC, ND, NE, NM, OK, SC, SD, TN, TX, VA, WY, and subsequent weather claims > $5K within 12 months of the effective date.

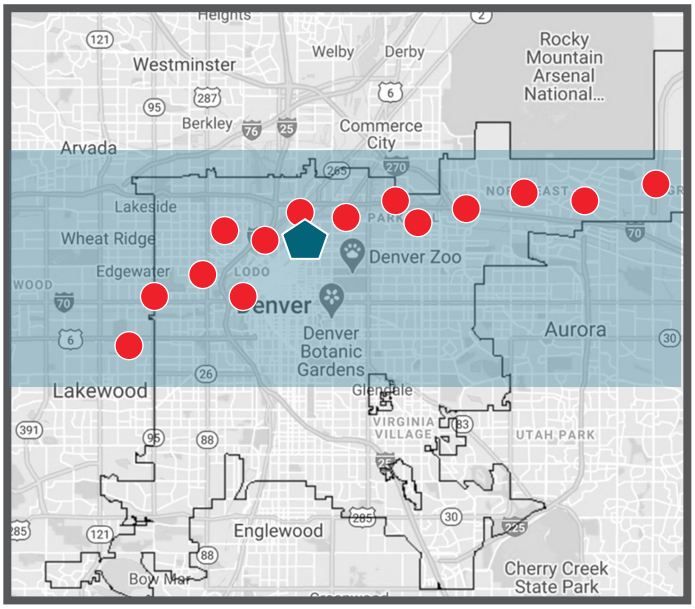
Let us do the hard work for you

Collecting and collating all this data to get a true picture of a roof's condition can be time consuming. The good news is, we do it for you.

LexisNexis® Rooftop uses geospatially analyzed property, auto and weather claims data combined with real-time processing of aerial imagery from multiple sources to deliver roof condition insights at bind, underwriting and renewal. Because of the proprietary combination of data inputs, Rooftop can deliver a score to insurance carriers even if a recent image is unavailable.

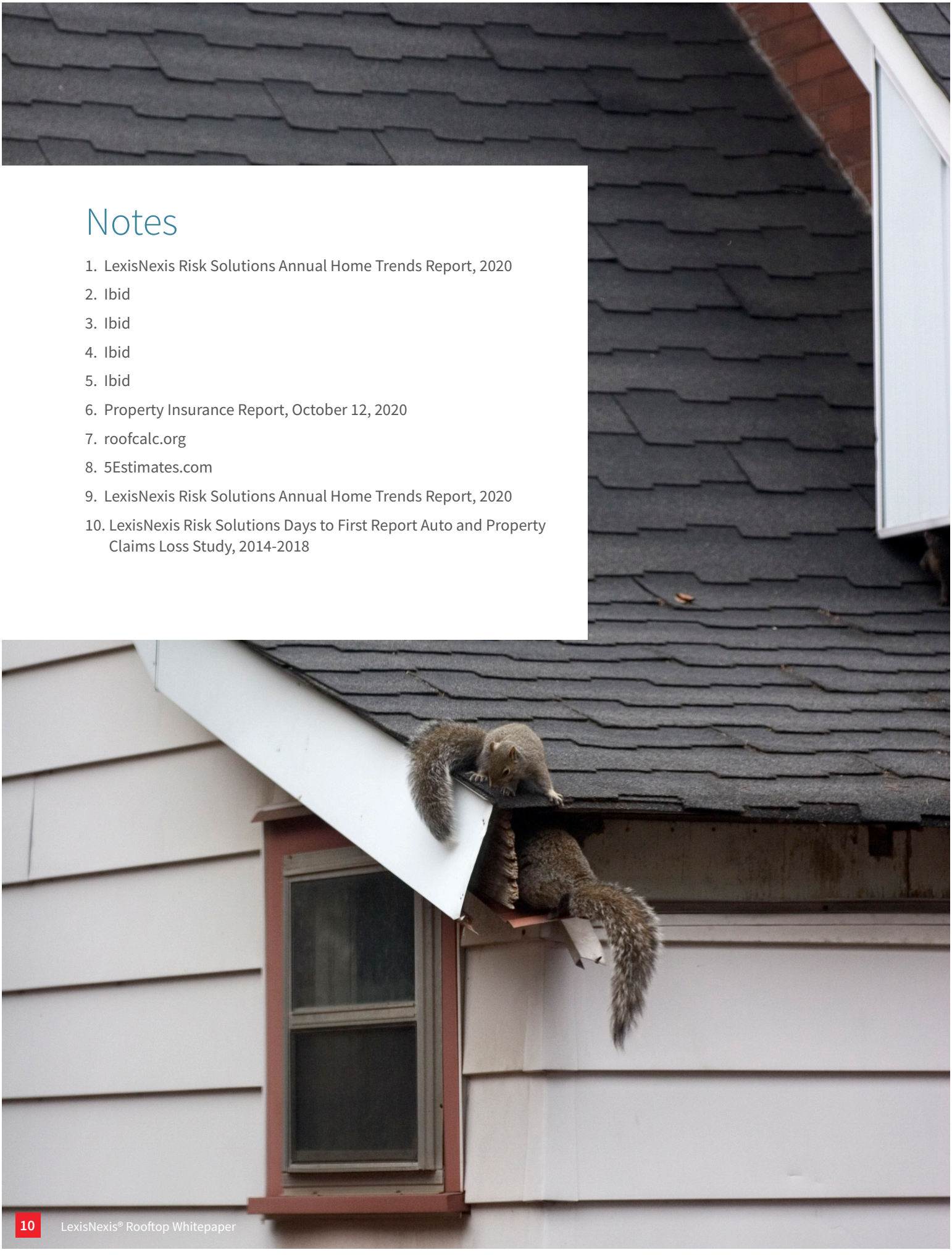
Combine what you can see with what you can't see





LexisNexis® Rooftop eliminates the subjectivity of simply using a self-reported roof age as a determinant of roof condition. It also helps you focus inspections where you really need them, saving you time and money while improving your customers' experience. The solution increases accuracy by using verifiable data along with relevant and recent images.

While no data solution will predict or control the weather, it's crucial that you are able to more accurately assess roof condition risk. Tools that integrate claims and geospatial data assets along with imagery offer a more effective way to determine accurate roof condition scores so you can protect your business. LexisNexis® Rooftop introduces a truer picture of roof risk that allows you to determine the right rate for the right roof.



Notes

1. LexisNexis Risk Solutions Annual Home Trends Report, 2020
2. Ibid
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4. Ibid
5. Ibid
6. Property Insurance Report, October 12, 2020
7. roofcalc.org
8. 5Estimates.com
9. LexisNexis Risk Solutions Annual Home Trends Report, 2020
10. LexisNexis Risk Solutions Days to First Report Auto and Property Claims Loss Study, 2014-2018

Ready to test? Contact us at 800.458.9197 or email insurance.sales@lexisnexisrisk.com

About LexisNexis Risk Solutions

LexisNexis® Risk Solutions harnesses the power of data and advanced analytics to provide insights that help businesses and governmental entities reduce risk and improve decisions to benefit people around the globe. We provide data and technology solutions for a wide range of industries including insurance, financial services, healthcare and government. Headquartered in metro Atlanta, Georgia, we have offices throughout the world and are part of RELX (LSE: REL/NYSE: RELX), a global provider of information-based analytics and decision tools for professional and business customers. For more information, please visit www.risk.lexisnexis.com and www.relx.com.