

# **Product Launch Notes - Insurance**

Last Updated: October 31st, 2024

For more information related to a specific product launch, please reach out to your CAPE Analytics relationship contact or support@capeanalytics.com

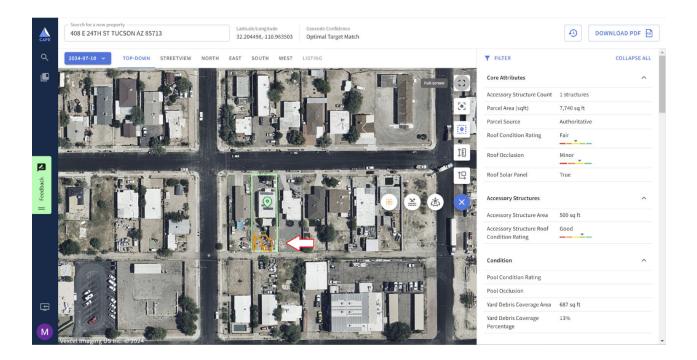
## October 2024

#### Personal Lines

### Map Layers in the CAPE Personal Lines Application

We added a "map layers" feature to the Personal Lines web application to allow users to see highlighted areas where the property has yard debris, a pool, or a trampoline. This change will enable users to quickly and reliably confirm the location of major risk factors on the property and facilitate efficient policy review.

To use the feature, click on the "map layers" icon on the right of the image, then select which feature to highlight (yard debris, pool, or trampoline, if detected). The app will then highlight the area of interest for the selected feature. An example with yard debris highlighted is below. More details are also in the app user guide, available <a href="here">here</a>.



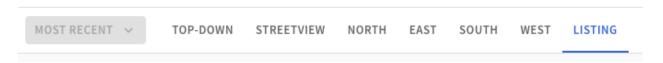
## Roof Condition Rating v5 and 2025 Product Roadmap

We will share more details about our latest version of Roof Condition Rating and our 2025 product roadmap in the December 2024 release notes.

# Primary Property Elements

## Real Estate Imagery in the CAPE Personal Lines Application

We can now deliver real estate listings imagery (when available) via the CAPE personal lines web application. This functionality complements the upcoming next-generation Quality Grade product, which produces Kitchen, Bathroom, Interior, Exterior, and Overall Quality Grade ratings directly from real estate imagery. The real estate listing imagery can be accessed alongside other imagery angles currently available:



This functionality has been added to the app user guide, which is available here. Please contact your CAPE client development representative to learn more and start using this functionality.

# August 2024

#### Personal Lines

# Roof Condition Rating and Other Attribute Models Optimized to Incorporate Vexcel and EagleView Imagery

We have now optimized all Roof Condition Rating models to incorporate Vexcel and EagleView imagery. All models have the same scoring system, and we made no other taxonomy changes except to incorporate the new imagery sources and minimize potential impacts to underwriting processes and coverage decisions. This includes limiting:

- RCR score dislocation so that inspection prioritization and other underwriting decisions would be as stable as possible
- Movement between typical scores for adverse action (poor/severe) and no adverse action (fair/good/excellent) to further limit book impacts

For those incorporating CAPE models into pricing, we:

- Limited changes at the RCR reason code/low-level feature level
- Limited changes for other roof and property attributes

Those building an in-house roof score/symbol with RCR reason codes or other low-level features should see as stable impacts as possible. Additionally, CAPE diligently reviewed our direct approved model filing materials to support the VX/EV imagery switch in a manner that would not require refiling. This should eliminate the carrier's need to refile and point to a different CAPE-filed model.

While we are in discussions with many clients already on individual needs, please continue to feel free to contact us with any questions or needs for assistance.

## Hail Intelligence Suite Now Incorporates Roof Age

CAPE has now added roof age as a component to its Hail Intelligence Suite. The updated version is now available to Personal Lines clients to deliver a forward-looking view of hail risk given a roof's age and other characteristics. It also offers a view of the actual hail damage sustained by a roof over the course of its lifetime, with weather information updated daily. By incorporating roof age as a variable in assessing hail risk and hail damage, the updated Hail Intelligence Suite identifies not only the potential for future hail claims but also the likelihood that a roof may already be damaged. This is a critical insight that can be used during new and renewal business underwriting, coverage decisions, and rating.

As before, the Hail Intelligence Suite is equipped with the following scores and ratings:

- Hail Vulnerability Rating: Relative probability that a property will be damaged during a hail event, now incorporating roof age as well as other variables.
   These include:
  - Hail Vulnerability Reason Codes: Top three negative factors
    contributing to the score returned by Hail Vulnerability Rating, in order of
    magnitude. Roof age is now a possible reason code.
- Hail Loss Severity Rating: Expected relative loss severity for a potential hail event.
- **Hail Experience Rating:** The actual hail damage <u>a roof has experienced over its lifetime</u>, including:
  - Hail Event Count: Total number of hail events a roof has experienced over its lifetime.
  - Hail Max Size: Maximum hail size (in inches) a roof has experienced over its lifetime.
- Hail Risk Rating: Relative probability that a property will be damaged when a
  hail event occurs, incorporating both historical hail activity from Canopy
  Weather with the detailed vulnerability characteristics identified by CAPE.

For more information, CAPE collaborated with PC360 on a webinar earlier this summer about the benefits of using roof age and hail intelligence together. The webinar recording is available <u>here</u>.

#### Commercial Lines

Commercial Roof Condition Rating Optimized to Incorporate Vexcel and Eagleview Imagery

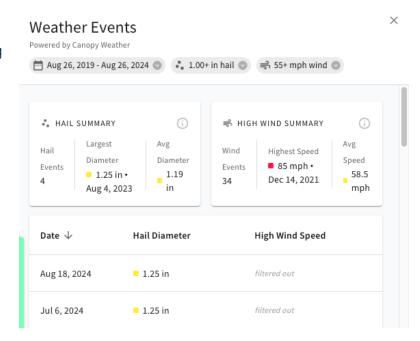
Mirroring the personal lines update above, we have taken the same steps to optimize commercial Roof Condition Rating models and other commercial lines attributes with Vexcel & EagleView imagery.

#### Commercial Hail Module - Phase 1: Weather Events

CAPE has launched the new Weather Events functionality as part of the first phase of our Commercial Hail Intelligence module.

Underwriters can now review historical weather events starting from 2011 at the location level filtering events by date, hail size, and wind speeds.

In addition, weather events are now included in the priority tab, where we show the largest hail size and highest wind speeds a location has experienced in the last 5 years.



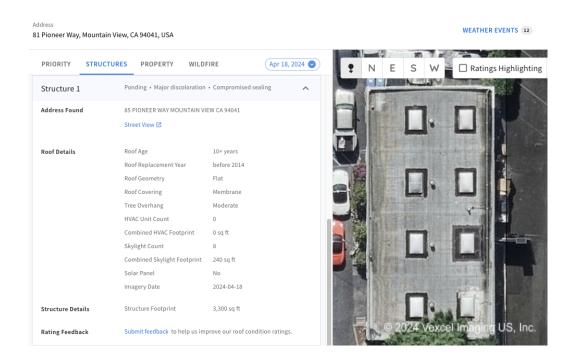
Clients can now combine weather event information with CAPE attributes like RCR and roof age to enhance underwriting eligibility workflows, adjust coverage and pricing decisions based on recent weather experience, as well as prioritize inspections.

## **Skylights Model**

CAPE's new skylight model identifies the number of skylights present on commercial roofs, as well as aggregates the total roof footprint of the skylights for each structure in square feet.

Commercial roofs with skylights have higher exposure to hail and water-weather claims if installed improperly. They are more prevalent on buildings of industrial, educational, and storage use.

The new skylight model attributes can be found under the Structures tab portion of the web application, specifically under the tab's Roof Details section.



#### **User Groups**

We can now create user groups within each client organization and define which features are available to specific user groups using CAPE's commercial and personal lines applications.

This is a helpful feature for clients looking to validate and test new products and features with power users before scaling. Clients can now tailor specific features for different underwriting cohorts, loss control, and other users.

## **June 2024**

No products were launched for June 2024.

# **April 2024**

#### Commercial Lines

#### **Occupancy**

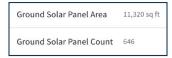
CAPE has launched the new occupancy module to enable enhanced COPE assessments. This module will help CAPE clients validate broker/agent-provided occupancies in submissions and their existing policies in-force, enable premium lift for higher-risk occupancies, and increasingly streamline underwriting eligibility needs through CAPE.

Clients can expect to receive business classification details such as NAICS codes, hours of operation, employee count, social media links, and other business details.

The occupancy module is available via batch for immediate testing and will be made available in our commercial web application and API shortly thereafter. To proceed with a test of the new occupancy module, contact your client development representative for more details.

## **Solar Segmentation Model**

Our original solar panel model for commercial lines determined the presence of solar panels on commercial roofs. The updated model now quantifies the square footage of the solar panels detected and determines whether the panels are installed on the roof of a structure or are ground-mounted units.



#### Personal Lines

#### **User Application**

The PL App has been redesigned! We:

- 1. Modernized the overall look and feel of the app
- 2. Maximized the property details screen space for high-usage page elements, such as imagery
- 3. Re-structured the property details page layout to accommodate additional visual content in the future, such as floorplans and weather maps

The app redesign will also help us increase the speed at which new features are added based on client feedback and incorporate new CAPE products as they become available.

A guide to key changes is available <u>here</u>, and a video demo of the app is available here. Please reach out to your CAPE representative to learn more and start using the new version.

## Primary Property Elements

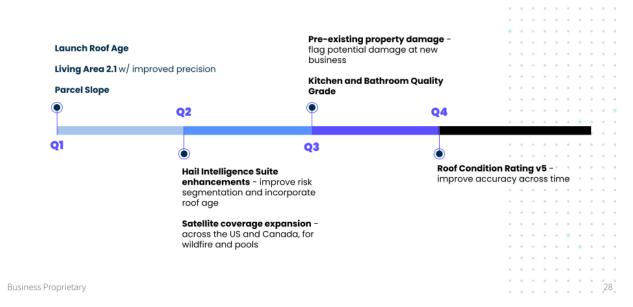
## **Living Area v2.1**

A new iteration of CAPE's Living Area model has launched with improvements to both overall accuracy and precision. Additionally, new logic has been introduced to limit the model's predictions to only the properties for which it is trained (single-family detached dwellings) in order to avoid overestimated predictions on dwellings such as townhomes, row-homes, or other multi-family structures.

# Long Term Roadmaps

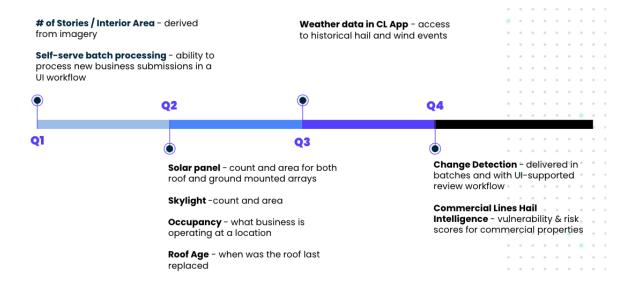


# CAPE Personal Lines 2024 Roadmap





# CAPE Commercial Lines 2024 Roadmap



# February 2024

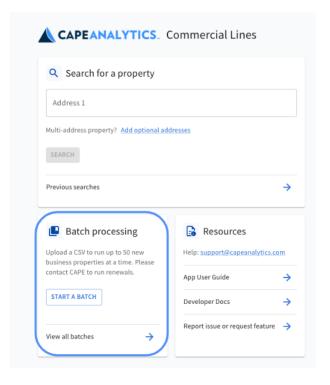
#### Commercial Lines

#### **Self-Service Batch**

CAPE has released a new self-serve batch capability that allows clients to efficiently process new business submissions in the commercial web application.

This feature will allow clients to quickly augment small batches with CAPE attributes without a lengthy IT integration process or exchanging files through SFTP.

Clients can sort and filter locations within a processed batch based on CAPE attributes like Roof Condition Rating. That way, underwriters can focus their attention on properties with condition issues while locations in good condition can be fast-tracked.



To learn more about this feature, contact your client development representative.

# Long-Term Roadmap

CAPE continues to develop new products and services to better serve our clients. Below are our 2024 high-level product launch plans. As always, we welcome feedback on these plans, including the types of products we develop, their timing, and priorities so that they best meet your needs.

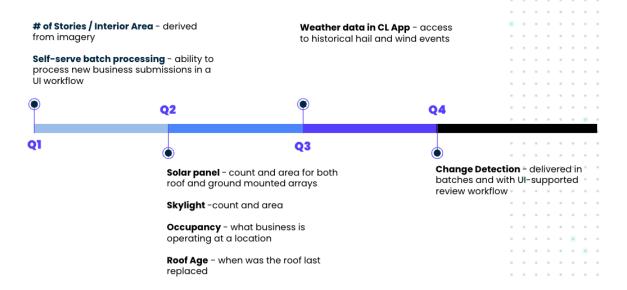


# CAPE Personal Lines 2024 Roadmap





# CAPE Commercial Lines 2024 Roadmap



## December 2023

#### Personal Lines

### **Roof Age**

CAPE has launched a new, imagery-based solution to deliver Roof Age to the insurance market for homeowner lines. As an already established factor in insurance rating, coverage, and underwriting workflows, CAPE's solution provides an accurate, geographically consistent, and scaled delivery to the problem of inaccurate or incomplete roof age data. By leveraging the full timeline of high-resolution aerial imagery available for a location, CAPE identifies the year of the last full reroof and a calculated roof age to supplement carrier rating, underwriting, and coverage decisions.

Roof Age is now available to all clients, with testing of sample books to be coordinated through your CAPE representative.

#### **Roof Condition Rating Version 4 Update**

Roof Condition Rating Version 4, inclusive of reason codes, was launched in 2022 with significantly enhanced transparency and explainability for specific ratings. The rating model for Roof Condition Rating leverages those reason codes and associated claims performance to make a final determination. Investigations over the last 6 months have identified areas for improvement related to the sensitivity of the model to minor changes in discoloration and streaking, often present due to minor imagery variances from seasonality.

In this launch, CAPE is making an updated version of Roof Condition Rating Version 4 available to reduce this sensitivity and provide a more stable rating from image capture to image capture, while focusing on only significant material changes to the roof's condition. This model has minimal impact on overall rating prevalence, and has minor predictive lift improvements. Testing of this new version is now available to clients interested in upgrading.

#### **Google Geo-Enabled Models**

Expanded coverage and improved recency is the feature request most cited by clients as the most impactful enhancement CAPE could make to our product. A new partnership with Google Geo allows CAPE to address this need by delivering incremental imagery coverage in areas not yet covered by existing imagery partners. CAPE models, including Roof Condition Rating, Tree Overhang, and other critical attributes, can now be powered by Google Geo high-resolution aerial imagery, providing enhanced coverage. Reach out to your CAPE representative for more details on enabling this new imagery source for your implementation.

#### Commercial Lines

#### Interior Area & Number of Stories

Delivering interior area and number of stories fills in a data gap for these critical primary details that are often missing from commercial lines schedules. CAPE is launching these attributes as a standard offering within our commercial lines solution.

Number of Stories is an attribute derived from oblique imagery and tax assessor data to predict the number of stories for each structure.

Interior Area is calculated by multiplying Number of Stories with the two-dimensional footprint area of the structure. This results in the wall-to-wall interior area that commercial carriers use to calculate replacement cost.

#### **Roof Age**

CAPE is launching a new, imagery-based solution to deliver Roof Age to the insurance market for commercial lines. As an already established factor in insurance workflows, CAPE's solution provides an accurate, geographically consistent, and scaled delivery to the problem of inaccurate or incomplete roof age data. By leveraging the full timeline of high-resolution aerial imagery available for a location, CAPE identifies the year of the last full reroof and a calculated roof age to supplement carrier rating, underwriting, and inspection decisions.

Roof Age is now available to all clients, with testing of sample books to be coordinated through your CAPE representative.

## General Platform

### **Application URL Change**

Starting in January 2024, CAPE will be updating the application URLs for both Personal Lines and Commercial Lines applications from client.cape-product.com/\* to client.capeanalytics.com/\*. More details on access for the application, along with any whitelisting needs will be provided by your CAPE Solution Engineering contact.

## October 2023

#### Commercial Lines

### **Canada Expansion**

CAPE's Commercial Lines Core Product is now available for Canada - enabling property intelligence insights for carriers with Canadian business. CAPE's Canada expansion will generally offer the same functionality available in the U.S., with our standard delivery mechanisms of API, batch files, and CAPE's web application. Features not yet available for CAPE's Canada Core product are the Property Mapper Boundary Expansion model and the 3rd party data module.

#### **Solar Panel Detection**

CAPE's commercial lines Core product now offers solar panel detection - a solution to identify the presence of solar panels on the roof of a commercial property. Solar panel detection will programmatically return the presence of solar panels, as well as provide multiclass confidence scores with each API response.

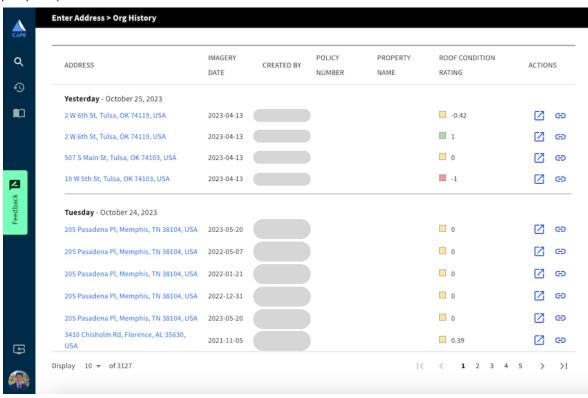
#### Paved Area Illumination - Model Update

This launch introduces an updated attribute in CAPE's Paved Area Data Module - the light pole detection model, used to calculate the illuminated area of a property. The model update reduces the number of false positives previously produced from palm trees.

CAPE clients utilizing this attribute can expect a more accurate paved area illumination attribute, especially for habitational communities in southern states that have a higher prevalence of palm trees.

### Web Application Update - Organization History Page Redesign

The Organization History page in CAPE's commercial web application has a new refreshed look, allowing users to browse through historical address searches for their organization. This page will feature the address in question, along with the imagery date viewed, the individual who searched it, and the Roof Condition Rating of the property.

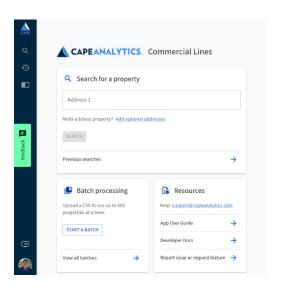


Example - Organization History Page In CAPE's Web Application

## **Web Application Update - Landing Page**

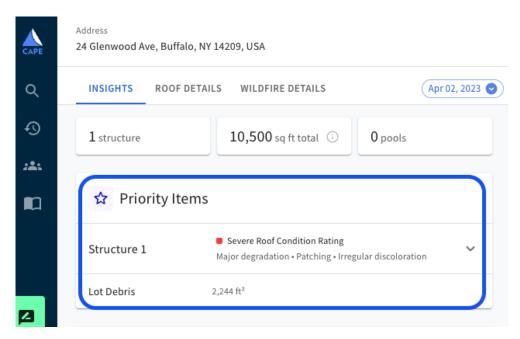
CAPE's commercial web application has a new landing page, making initial in-app interactions more intuitive for users.

The landing page also highlights additional resources CAPE has to offer, like support functionalities, API documentation, and the upcoming self-serve batch processing functionality.



### **Web Application Feature Update - Priority List**

The Priority List feature surfaces the most relevant attributes to the top of the insights screen in CAPE's commercial web application. Clients can work with CAPE to configure the logic that promotes the attributes to the top of the insights page, namely if an attribute is above or below a desired threshold.



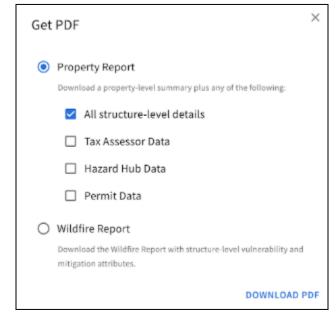
Example - Priority List on Insights Screen configured for RCR and Lot Debris

### Web Application Feature Update - PDFs

CAPE's PDF reports and report modals are now updated, allowing clients to more easily export a more intuitive version of property reports within the CAPE Application.

Clients won't have to wait for the PDF report to be ready before clicking again to download.

The new report modals allows users to choose between a variety of newly designed reports for Property Condition, 3rd Party data, and Wildfire.



#### Personal Lines

### **Application Date Comparison**

In early October, CAPE launched the Date Comparison feature to the Personal Lines application for all clients. This capability allows a user to view multiple images and associated data attributes for a given location side-by-side. Users can access the capability by clicking the blue imagery data button in the top right of the application.

## Bring Your Own Imagery (BYOI) Analytics

Delivering CAPE-derived property intelligence for imagery licensed directly from an imagery provider by a CAPE client is now available within CAPE's platform. With an enabled API key from an imagery provider, regardless of blue or gray sky imagery type, CAPE can deliver attributes derived directly from that imagery subscription and serve it via API, batch, or the application.

For more information about this capability, please reach out to the CAPE team to discuss your imagery subscription.

#### Purefill

### **Updated Living Area Model**

CAPE's latest Living Area model has launched with a number of enhancements to improve accuracy and the flexibility of implementation. The updated Living Area model now contemplates data sourced from interior floor plans, which allows the model to better discern above-grade finished living area and provides a significant accuracy benefit to the most important input into replacement cost estimates. Additionally, CAPE's Living Area model now delivers an associated confidence score with each living area value to allow clients to prioritize dynamic actions based on both living area and confidence.

#### General Platform

#### **Parcel Data Update**

As of October 27th, CAPE has made a major update to parcel data boundaries used within the CAPE platform. This update impacts all new and existing parcels to deliver the latest information available for a given location. Users should expect improved geocoding performance related to identifying newly constructed homes or recently divided subdivisions. Parcel-related attributes, such as Parcel Area, Yard Debris, Lot Debris, and Wildfire Mitigation Rating should experience minor updates for a given location due to updates to the underlying parcel geometry and size.

CAPE expects to continue to refresh parcels on a quarterly basis to ensure the most up-to-date data possible.

# August 2023

#### Personal Lines

#### **Hail Intelligence Suite**

CAPE's Hail Intelligence Suite is now available to Personal Lines clients, delivering to carriers both a forward-looking view of hail risk alongside an up-to-date and daily refreshed view on recent hail activity for a given location. These new analytics are aimed at identifying not only the potential for future hail claims but also the likelihood that a roof may already be damaged, a critical insight during new business underwriting.

The hail intelligence suite is equipped with the following scores and ratings:

- Hail Risk Rating: Relative probability that a property will be damaged when a hail event occurs, incorporating both historical hail activity from Canopy Weather with the detailed vulnerability characteristics identified by CAPE.
- Hail Vulnerability Rating: Relative probability that a property will be damaged during a hail event.
- Hail Vulnerability Reason Codes: Top three negative factors contributing to the score returned by Hail Vulnerability Rating, in order of magnitude.
- Hail Loss Severity Rating: Expected relative loss severity for a potential hail event.
- Hail Event Count: Total number of hail events a property has experienced in the last 2 years.
- Hail Max Size: Maximum hail size (in inches) a property has experienced in the last 2 years.

## **Roof Equipment**

Rooftop evaporative coolers (a.k.a. swamp coolers) and air conditioners (a.k.a. HVACs) are insurance risk factors due to their tendency to 1) become damaged in severe weather, 2) create additional water ingress failure points on the roof structure, 3) spring leaks from plumbing connected to the unit, and 4) damage the roof due to effluent discharge.

CAPE has developed two new attributes, which provide clients with a count of evaporative coolers and air conditioning units on a property's primary rooftop.

### **Swagger Documentation Endpoint**

Developer-focused API endpoint that delivers an OpenAPI swagger documentation configuration JSON response specific to the input API key. The output enables implementation configuration automation with the CAPE describe\_location and location\_changes endpoints.

#### Yard Debris Model Update - Version 2

CAPE is launching an updated Yard Debris model introducing improvements in handling rocky terrain landscaping and utility by increasing numerical precision from two to five digits. This updated numerical precision allows for more non-zero values. For example, 50 sq ft of debris on a 20,000 sq ft parcel would register as 0.0 using the prior model's 2-digit precision, but 0.0025 using the new model's 5-digit precision. Overall, the updated model reduces false positives and increases overall precision, resulting in a lower prevalence of yard debris across portfolios.

Upgrading to Yard Debris version 2 will be handled via established change management processes that clients expect for their CAPE integration.

#### **Fence Setback**

As of April 14th, 2023, insurance carriers are required by the California Department of Insurance to incorporate into their rating plan the presence of fences and gates within 5 feet of a given building. CAPE is launching fence setback, the last of 3 fence-focused attributes, also including fence presence and material type, that are required to identify and quantify the presence of a combustible fence within 5 feet of a building. Fence setback is a calculation of the setback from the roof perimeter of the detected fence and will be delivered as a distance in feet.

#### **Chimney Presence**

Fireplaces are a key factor in the overall replacement cost calculation for a home. Many fireplaces are embedded into the structure of a home and can be incredibly expensive to replace - in both material and labor costs. Additionally, some carriers underwrite or rate against wood-burning fireplaces due to the increased risk of smoke or fire and a chimney is often a telltale sign of the presence of a wood-burning fireplace. Public records are inconsistent and not widely available creating gaps for carriers trying to use public records as prefill.

CAPE is launching Chimney Presence as part of CAPE's Purefill solution, aimed at making it easier for carriers to identify properties that may have a fireplace, resulting in additional underwriting or inspection verification.

#### Garage Size Update - Version 2

Garage presence, type, and size are valuable inputs into replacement cost estimation tools and a significant factor in determining the living area of a home. Garages do not have the same cost per square foot as the living area of a home and, therefore, are typically captured separately within the replacement cost estimation (RCE) tools.

CAPE is launching version 2 of the Garage Size model as part of CAPE's Purefill solution. This update changes the attribute name from "cape\_garage\_width" to "cape\_garage\_size" to be more reflective of the attribute's purpose. In addition, the model has improved differentiation for garage sizes of 1 to 3 cars within aerial imagery coverage. CAPE will return a garage size of 4 cars or greater only if available public record data includes those values.

Upgrading to Garage Size version 2 will be handled via established change management processes that clients expect for their CAPE integration.

#### Commercial Lines

### Newly Redesigned Property Details Screen - Commercial Lines Application

CAPE's new property detail screen introduces a refreshed UI/UX update to the commercial lines application, allowing for a seamless experience when reviewing commercial properties in the application.



Application users can transition to the new screen by enabling the Beta toggle switch on the left-hand side menu in the commercial lines app. Additional upgrade timelines will be communicated directly with clients by the CAPE team.

### Wildfire Intelligence for Commercial Lines

CAPE's Wildfire Intelligence Suite is now available to Commercial Lines, providing carriers with a complete solution for differentiating wildfire risk in underwriting and rating workflows.

The wildfire intelligence suite is equipped with the following scores and ratings:

- Wildfire Risk Rating: Assesses the overall wildfire risk of a property, considering both hazard and vulnerability factors, powered by hazard data from HazardHub
- Wildfire Vulnerability Rating: Relative probability that a property will be damaged during a wildfire.
- Wildfire Mitigation Rating: Re-calculates the wildfire vulnerability rating, assuming mitigations have been completed
- CAPE Wildfire Hazard Score: Relative probability that a property will be exposed to wildfire and underlying risk factors from HazardHub.

## **June 2023**

#### Personal Lines

#### **Change Detection API**

CAPE's initial change detection offering was only supported by batch processing. To support our API clients, CAPE has developed a change detection API endpoint to deliver the same property-level change information that our batch clients receive with the ease of on-demand access via an API. The new location\_changes endpoint enables customization of a start and end date to quantify changes over various time steps, with the most typical insurance use case being comparing the latest data with 1 year prior to the ongoing renewal.

## Commercial Lines

#### Commercial Lines Roof Condition Rating Model Update - Version 4.2

CAPE's new Roof Condition Rating model for commercial lines, Version 4.2, is trained using commercial properties and shows improved signal for commercial properties relative to wind and hail claims.

Version 4.2 also introduces reason codes for commercial roof condition ratings. These reason codes are the main drivers behind the roof condition rating score. This new model provides up to three reason codes per roof.

Reason codes are a useful tool for communicating decisions to brokers or agents. Below is a list of all of the available reason codes version 4.2 is able to provide:

- **Tarp Presence**: Presence of a tarp on the roof.
- (Major) Roof Material Degradation: Degree to which the roof exhibits signs of wear or damage of the roof covering material.
- Roof Loose Organic Matter: Presence of loose organic matter on the roof, generally from leaves or pine needles.
- **Ponding:** Presence of ponding on the roof.
- **Patching:** Presence of patching on the roof.

- (Major) Streaking: Degree to which the roof exhibits visible signs of streaking, generally due to black algae buildup.
- (Major) Natural Discoloration: Degree to which the roof exhibits visible signs of natural discoloration due to natural effects such as dirt accumulation or black algae buildup.
- Irregular Discoloration: Roof material exhibits signs of damage or wear as evidenced by unnatural or irregular patches/sections of discoloration.
- **Rusting:** Roof material exhibits signs of rusting, generally on metal roofs.
- Missing/Peeling Material: Roof material exhibits signs of exposed tar, missing shingles or tiles, peeling, or curling.
- Compromised Sealing: Roof material exhibits signs of compromised seals between two or more sections of roof material, either due to wear or poor workmanship

#### Roof Condition Rating v4.2 Model Highlights

- Improved signal for commercial properties relative to loss rations for wind and hail claims
- The introduction of reason codes provides additional explainability behind the roof condition rating score given by Version 4.2
- Available for free to all of CAPE's commercial lines clients and prospects
- For clients who wish to upgrade to v4.2, please contact your client development representative for implementation details

Note on Model Nomenclature: Version 4.2 is a direct upgrade from Version 1.1 for commercial lines, as there have been no additional Roof Condition Rating models released since Version 1.1. The gap in version numbers reflects the alignment in methodology and reason codes between the personal lines Version 4 and this new commercial lines model

### Property Mapper - An Underwriting Solution for Habitational Properties

Property Mapper is a model that predicts the spatial boundary of a habitational property, by leveraging the relationship between neighboring structures and parcels.

The Property Mapper model can drastically improve the efficiency of underwriting habitational properties, and even automate the risk segmentation process with programmatic outputs when combined with roof condition rating scores.

Property Mapper is now available as a free upgrade in the commercial lines application, batch processes, and the CL API v2.

Note: Property Mapper should only be used when evaluating habitational properties, like the example above.

For clients who wish to upgrade and begin using the Property Mapper model, please contact your client development representative for implementation details.