HeatScore

The Impact of Extreme Heat

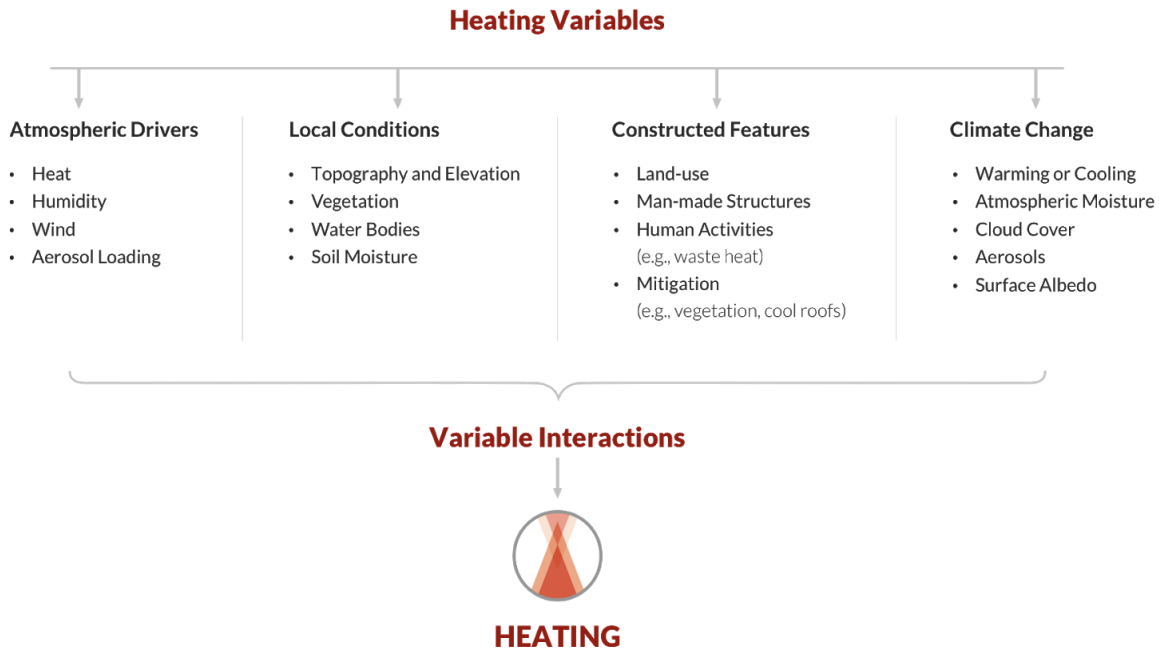
Global temperature rise is increasing the frequency and intensity of heat waves, forest fires, reduced snowpack and earlier snowmelt. Those factors in turn strain water resources, stress electric generation, transmission, and distribution, reduce transportation capacity of airport runways, and increase the rates of heat-related medical emergencies. Understanding the intensity and increased frequency and duration of extreme heat can help decision-makers adapt to the heat-related impacts of climate change.

Jupiter Intelligence™ HeatScore™ projects the increased risk of more frequent and intense extreme heat events up to 50-plus- years in the future. Using Jupiter's state-of-the-science models, customers can make informed decisions to prevent asset damage and property loss, and even save lives.

Jupiter HeatScore

Jupiter HeatScore™ is an application built on top of the Jupiter ClimateScore™ Intelligence Platform that accounts for the urban influences on temperature, i.e., urban heat islands, at building scale. HeatScore probabilistically predicts the number of extreme temperature days per year above a specified threshold over a 50-plus-year time frame and provides the frequency of extreme heat risk as probability distributions for variables, such as multi-day heat events above a defined threshold, and heat stress parameters including humidity (heat index). The application calculates and analyzes historical heat events.

Jupiter HeatScore allows our customers to anticipate and plan for heat impacts on utilities, emergency management, and urban infrastructure. Output data can be delivered as interactive maps, reports, or through an API. Predictions are probabilistic and scenario-based. HeatScore analyses incorporate a variety of variables.



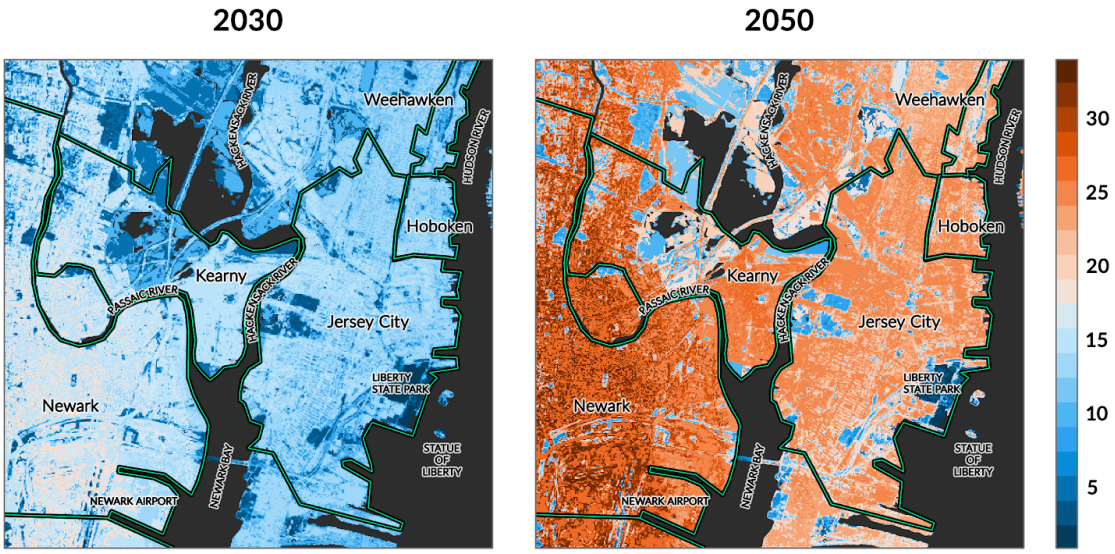
Customers and Use Cases

Customers for Jupiter HeatScore are utilities, enterprises, financial services firms, and the public sector. Jupiter HeatScore data helps these customers better manage risks and take advantage of opportunities related to short-term weather impacts and medium-to-long-term climate change.

Jupiter HeatScore can be used to optimize infrastructure investments for heat mitigation and reduction of urban heat stress, as well as to inform equipment ratings and to help forecast and plan for peak electricity demand. Examples of infrastructure planning for heat mitigation include heating, ventilation and air conditioning (HVAC) systems, transformer and other equipment ratings, and protecting constructed features at commercial air operations that risk major impact from heat stress. Reducing urban heat stress can also dramatically lower impacts on public health, emergency management, worker productivity and other areas.

Jupiter ClimateScore™ Intelligence Platform

All Jupiter services are built on the cloud-based Jupiter ClimateScore Intelligence Platform. Jupiter ClimateScore is based on leading-edge scientific developments by the global earth system science community, including the assumption of a changing climate. The platform is designed specifically for the rigors of dynamic weather analysis and predictive modeling. Its physics-based and artificial intelligence models are continuously fine-tuned, using petabytes of constantly refreshed data from ground-based and orbital sensors. Innovative machine learning techniques reduce local biases of scientific simulations and update the system as new observations become available.



The figure above shows data from Jupiter's HeatScore Planning application on the number of days projected to be at or above 95°F in 2030 and 2050 in western New Jersey.