

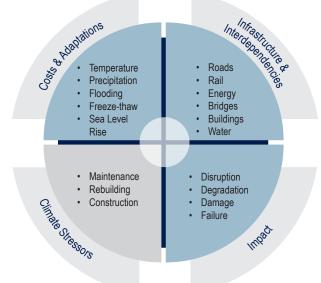


# PROTECTING AGAINST THE IMPACTS OF CLIMATE CHANGE

As the world experiences the growing effects of climate change, future focused analytics will be critical to prioritizing human safety and capital investments. Resilient Analytics, a Stanley Consultants Company, has developed proven climate, engineering and economic models that help clients understand how climate stressors will impact infrastructure and people, determining future fiscal costs and risks to communities and organizations.

Resilient Analytics provides insight on adaption investments that are more cost-effective than reactive approaches and have worked in over 50 countries with clients ranging from county governments to international banks.

Resilient Analytics produces actionable insights that have been used to identify millions of dollars in savings for clients while reducing the near-term and long-term risks to critical operations.



Resilient Analytics has addressed challenging climate change driven issues including:

- Infrastructure and social responsibility impact from wildfire risk
- · Impacts to coastlines and coastal infrastructure
- · Extreme heat impacts on roads and transportation infrastructure
- Neighborhood level analysis of risk-reduction and adaptation opportunities
- · Physical and energy demand impact on buildings
- Analysis of HVAC needs given future climate projections and the impact on maintaining healthy work and living environments



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# **KEY PROJECTS**

Representative examples of the unique solutions Resilient Analytics has developed to predict climate change impacts on people and infrastructure, in turn prioritizing human safety and capital investments.



# Welsh National Housing Climate Impact Analysis | Cardiff Metropolitan University/Welsh Government

Resilient Analytics developed new analysis techniques to determine how climate change would affect historic housing stock in Wales. The study supported the development of national adaptation policies against climate change impacts. Novel approaches were developed to compare 300 years of housing stock to determine material combination impacts and how warming temperatures would affect people living in each era of housing.



# National Sea Level Rise Adaptation Study | Center for Climate Integrity

Resilient Analytics conducted a first of its kind sea level rise study of all coastal areas in the lower 48 United States. Utilizing both sea level rise and storm surge maps, they determined coastal and inland waterway protections for 50,000 miles of coastline property containing infrastructure assets and identified how these costs would be associated with coastal cities.



# Economic Impact of Infrastructure Interruption | US EPA

Resilient Analytics analyzed all Class 1 railway in the United States, as well as all primary roads in the lower 48 states to determine how climate change will result in service interruption. This effort required an analysis of impacts and delays due to repair requirements created by climate events through 2100. Interruptions from climate were compared against adaptation strategies to determine optimum investment strategies.

# Climate Localization Equity and Mapping | Boulder County, CO

Resilient Analytics developed analytical techniques to determine how climate change is impacting local neighborhoods. Through innovative scoring and mapping efforts, they brought existing census data, land cover uses and climate projections together to provide County decision makers with the data required to determine where public investments in climate change adaptation were most needed.



# Data Center Vulnerability Analysis | Large Social Network Client

Resilient Analytics looked at the client's data centers. For each site, they analyzed the climate conditions across the utility service area to determine impacts that may result in power interruption to the data center. They also analyzed the social and economic conditions in each utility area to determine competitive pressures that may hinder the resumption of power to the utility.

# Financial Institution Investment Portfolio Vulnerability | Large West-Coast Bank

Resilient Analytics was asked to develop a risk profile for a bank that had significant assets throughout the San Francisco Bay area, focusing on the growing threat of wildfire. They analyzed wildfire patterns in the area, combined with climate projections, to develop risk profiles for each decade through the 2050s. In this manner, the bank was able to determine which assets had the highest risk profile and exposure to the increasing wildfires in California.



### Climate Change Risk | Hanes Brands, Inc.

Resilient Analytics evaluated potential climate change impacts for risk factors in 120 locations, including energy demand from increased cooling, worker impact from extreme heat and disease vectors and water supply interruption from drought. They determined two-thirds of the locations will have high risk to climate vulnerability by 2050. As a result, Hanes Brands shifted their focus to protect physical assets and ensure human safety.

**CLIENTS** 









