



Kansas Corporation Commission Wildfire Tech Showcase

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About Technosylva

OUR MISSION

We exist to make our world more resilient in the face of wildfires and other natural catastrophes.



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Our team.



55

Experts with post-grad degrees

Specializations in natural resources, forestry, all-hazard emergency response and incident management, fire science, meteorology, atmospheric science, cyber-security, GIS, resiliency, economics and urban planning

130+

Collective Years of Prior Utility Experience

Employees across Customer Success, Product, Marketing, and Implementation Teams with years of experience supporting utilities, including in emergency operations.

50+

Scientific Publications

Our team has authored over 50 scientific papers in peer-reviewed journals.

300+

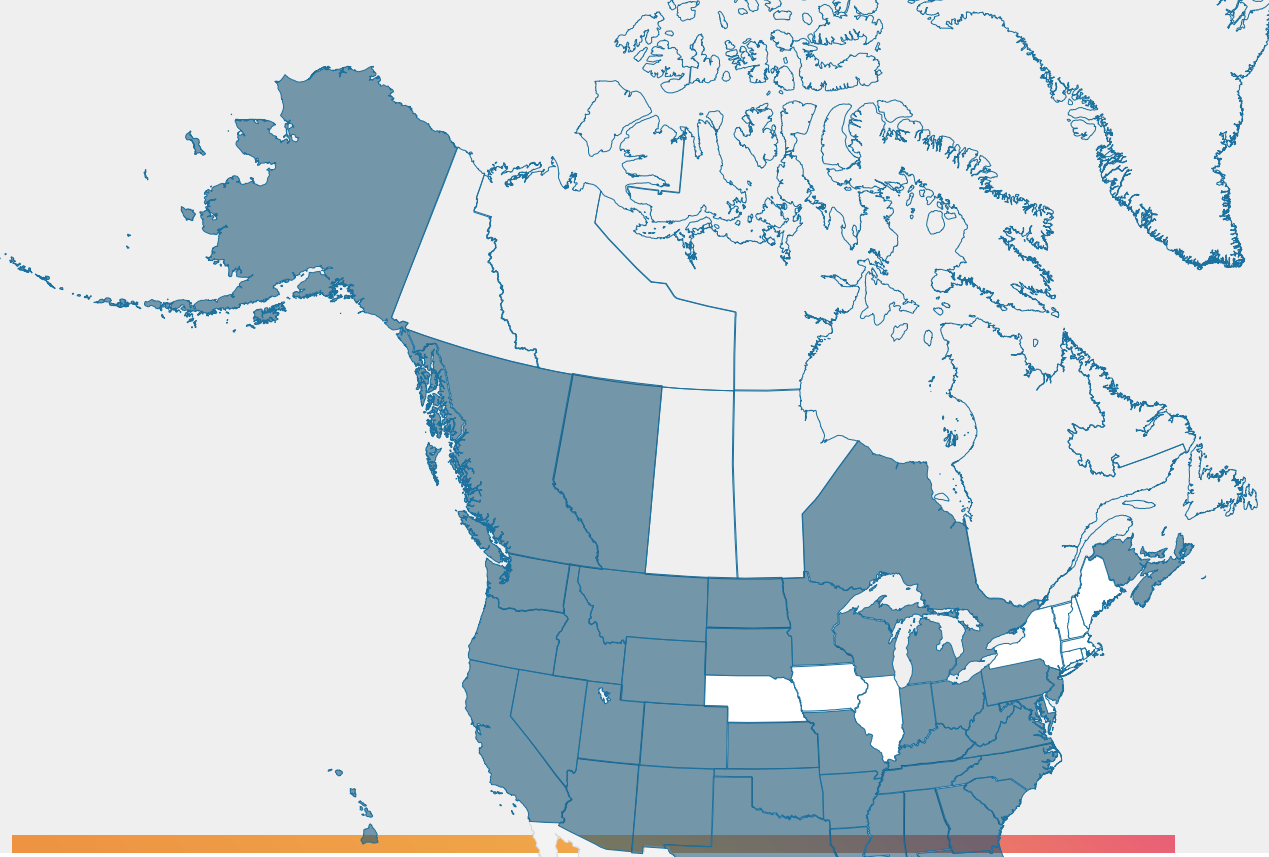
Employees Spanning 5 Countries

Working closely with electric utilities and fire agencies in 13 countries across 3 continents.

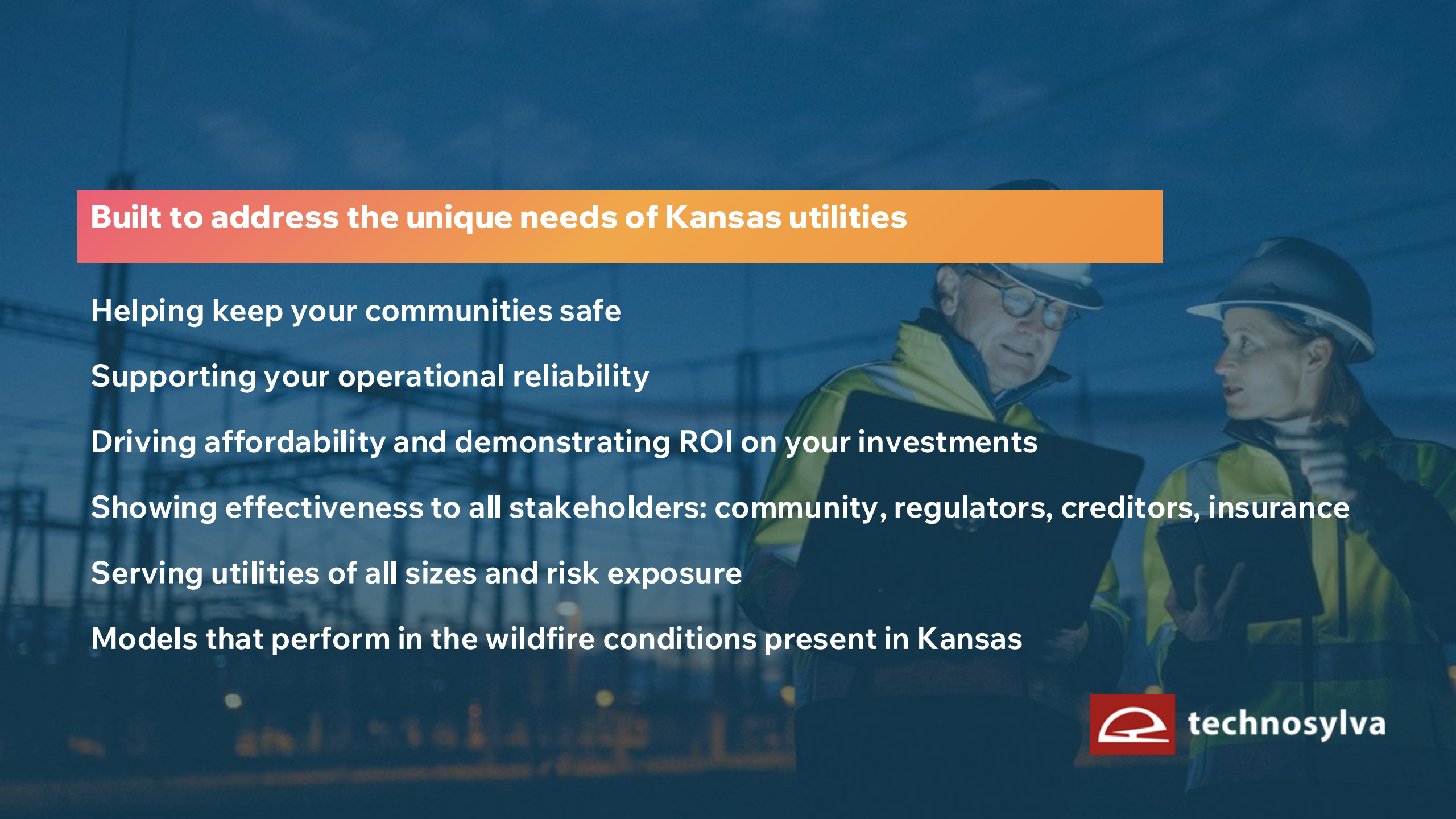


Supporting wildfire and multi-hazard operations.

Fire agencies in 12 countries
40+ electric utilities across
US/Canada
100+ insurance companies globally



*Risk Assessment



Built to address the unique needs of Kansas utilities

Helping keep your communities safe

Supporting your operational reliability

Driving affordability and demonstrating ROI on your investments

Showing effectiveness to all stakeholders: community, regulators, creditors, insurance

Serving utilities of all sizes and risk exposure

Models that perform in the wildfire conditions present in Kansas

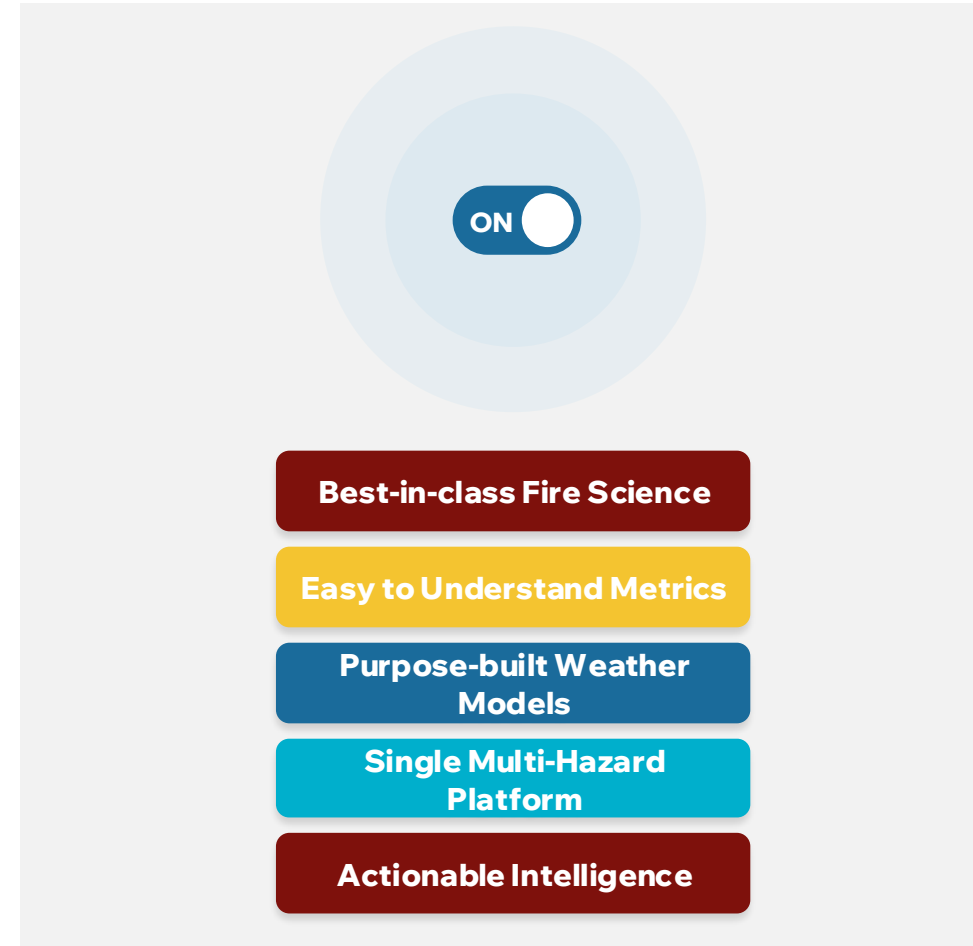
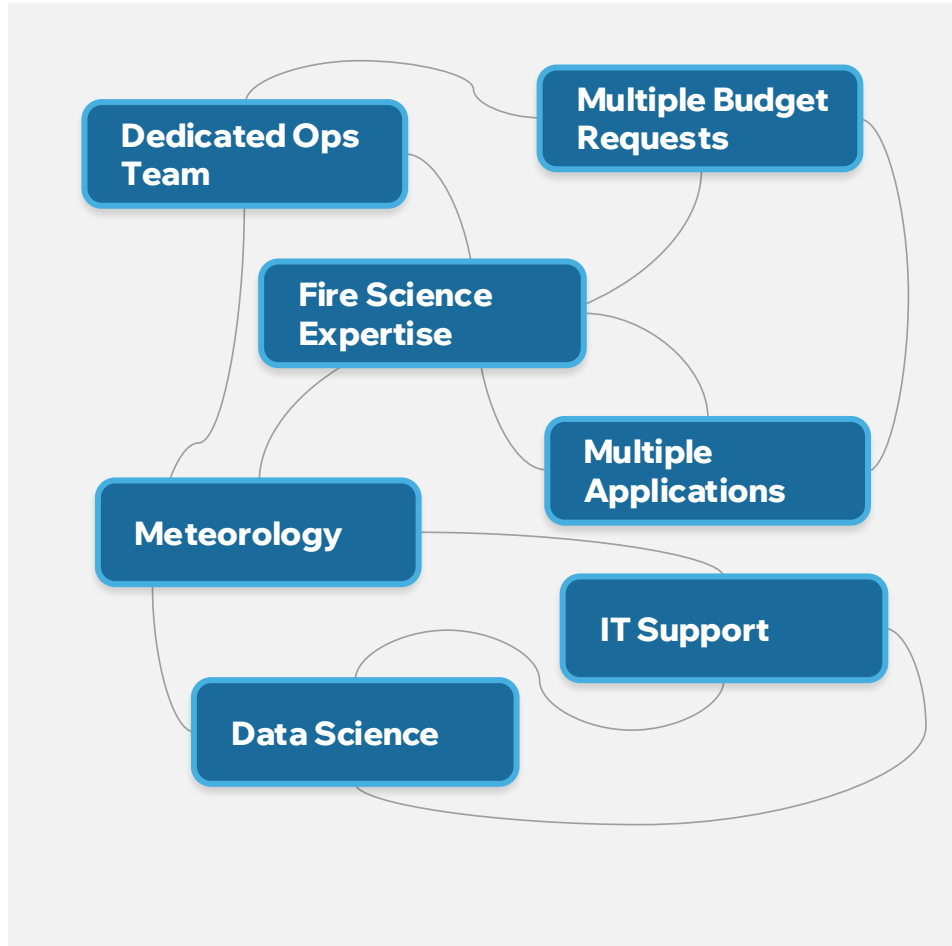


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As easy as “flipping a switch”.

SELF BUILD





Designed for a “team of one”.

Technosylva supports co-op and municipal utilities of all sizes in the highest wildfire risk areas.

**EVERY UTILITY CAN'T HAVE A
WORLD CLASS FIRE SCIENTIST ON
STAFF TO PROTECT THE COMMUNITY
AND THE COMPANY...UNTIL NOW**



[Click here to play](#)

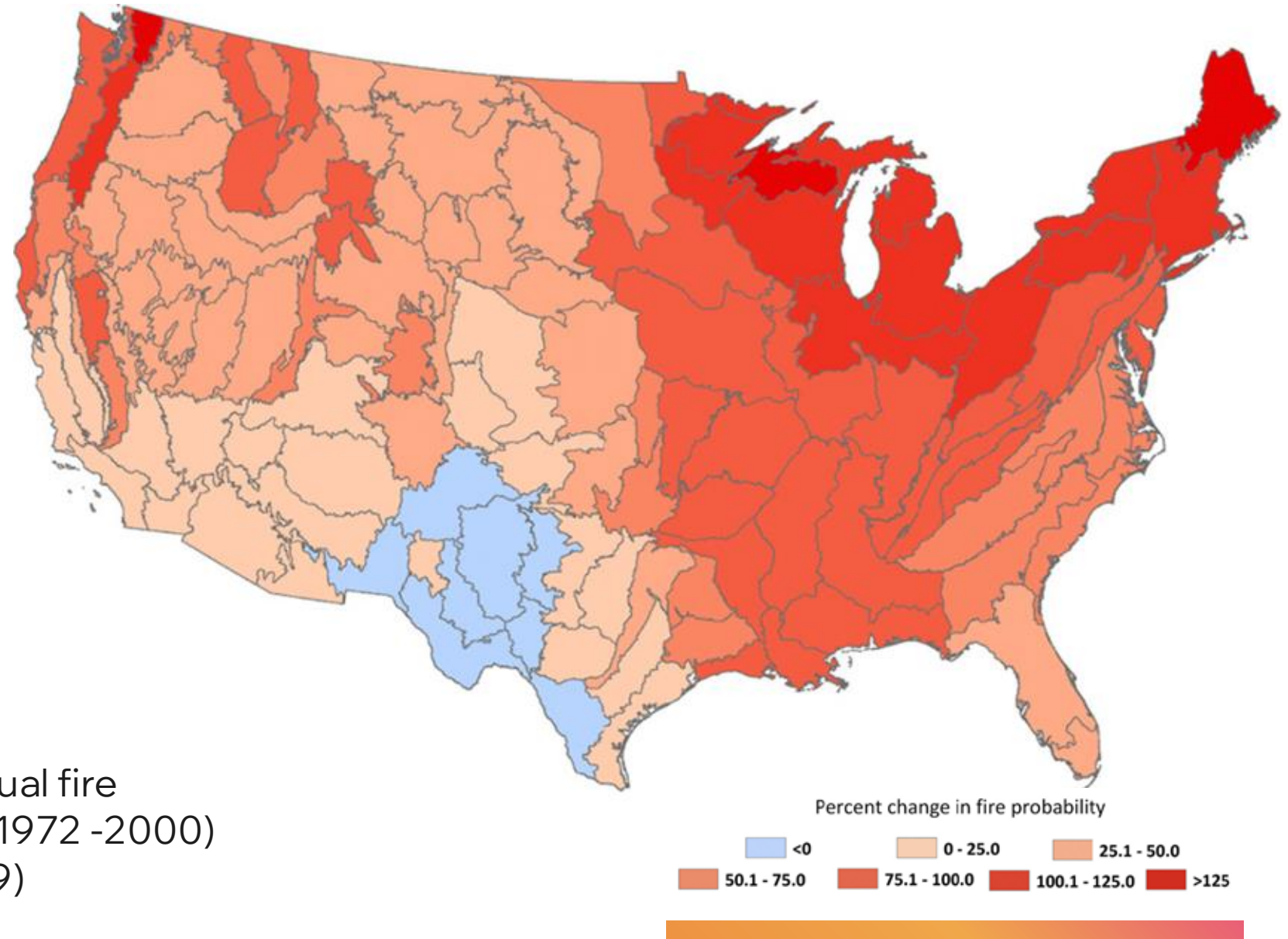


How Wildfire Risk is Changing



Long-term fire probability is rising nationwide.

Projected % change in annual fire
probability from baseline (1972 -2000)
to late century (2070-2099)



Source: Gao et al (2021)



2026 has already been an active fire season.

The U.S. entered spring 2026 with 63% of the country in drought - Most since 2012

Notable Wildfires To-Date

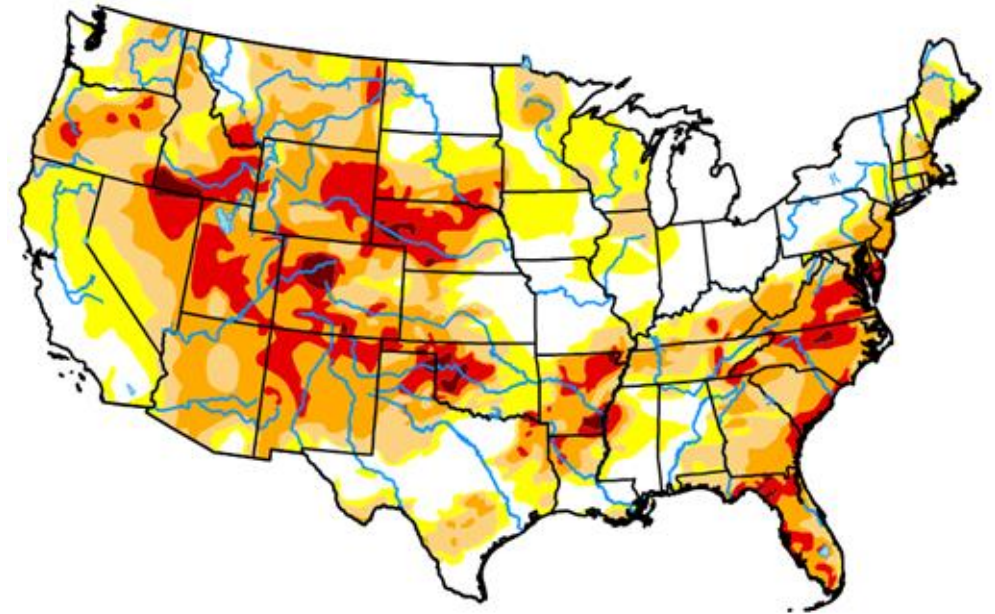
- 1. Morrill Fire (640,000+ acres):** Largest in Nebraska history, one fatality.
- 2. Georgia Wildfires (55,000+ acres):** 120 homes destroyed - most in Georgia history.
- 3. Iowa Wildfire (3,500 acres):** Largest field fire in Iowa in 2 decades; 2 homes / 20 structures destroyed.



A photo from the Laramie, Neb. area showing the amount of smoke coming from a field fire that spread through Woodbury County. (Photo courtesy of the Nebraskan Herald)



U.S. Drought Monitor Map as of June 11, 2026



Intensity and Impacts

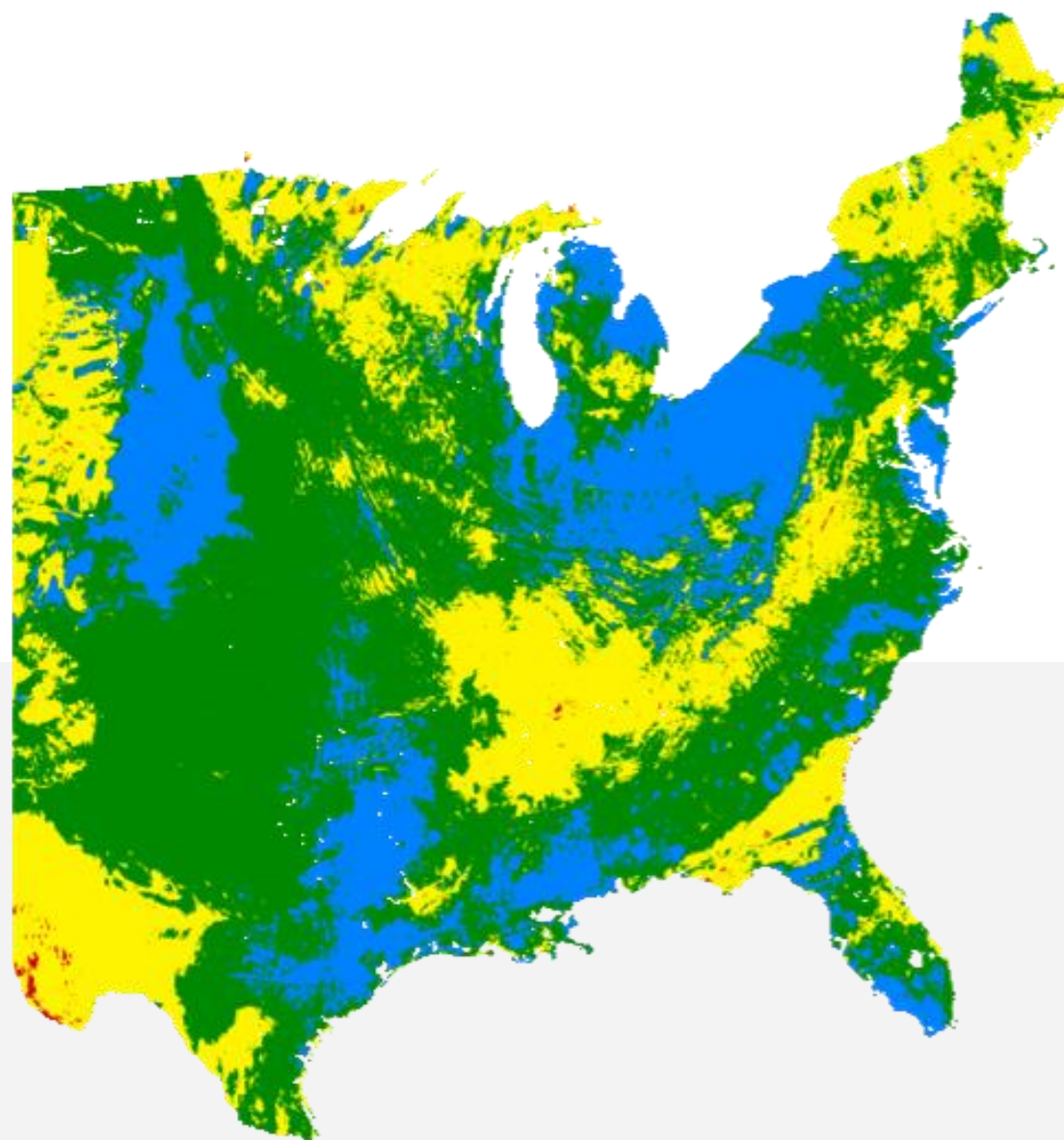
None	D1 (Moderate Drought)	D3 (Extreme Drought)
D0 (Abnormally Dry)	D2 (Severe Drought)	D4 (Exceptional Drought)

Red Flag Warnings & PSPS: Numerous PSPS events to-date, including 6 at Xcel alone. First-ever PSPS at Arizona Public Service. Two PDS (Particularly Dangerous Situation) Red Flag Warnings in Colorado!



Risk is changing, every hour, every day.

Daily Fire Potential Index
(Composite) at 2km resolution



Very Low Low Elevated High

Source: Technosylva)



Kansas Wildfire Risk



Fuels of Kansas



Ag Lands

Vast agricultural expanses characterized by row crops and seasonal stubble, presenting unique fuel continuity challenges during harvest.



Riparian

Vegetation along rivers and streams with grasses, shrubs, and trees that can support intense fire behavior and act as fire corridors during drought and extreme fire weather.



Short & Tallgrass Prairie

Native grasslands with rapid fire spread potential under dry and windy conditions, requiring high tactical mobility.



Woodlands & Shrublands

Mosaic of hardwoods, shrubs, and understory grasses creating complex fire behavior and varied fuel loading.



Wildfire Risk in Ag Lands

West Wind Fire (2021)

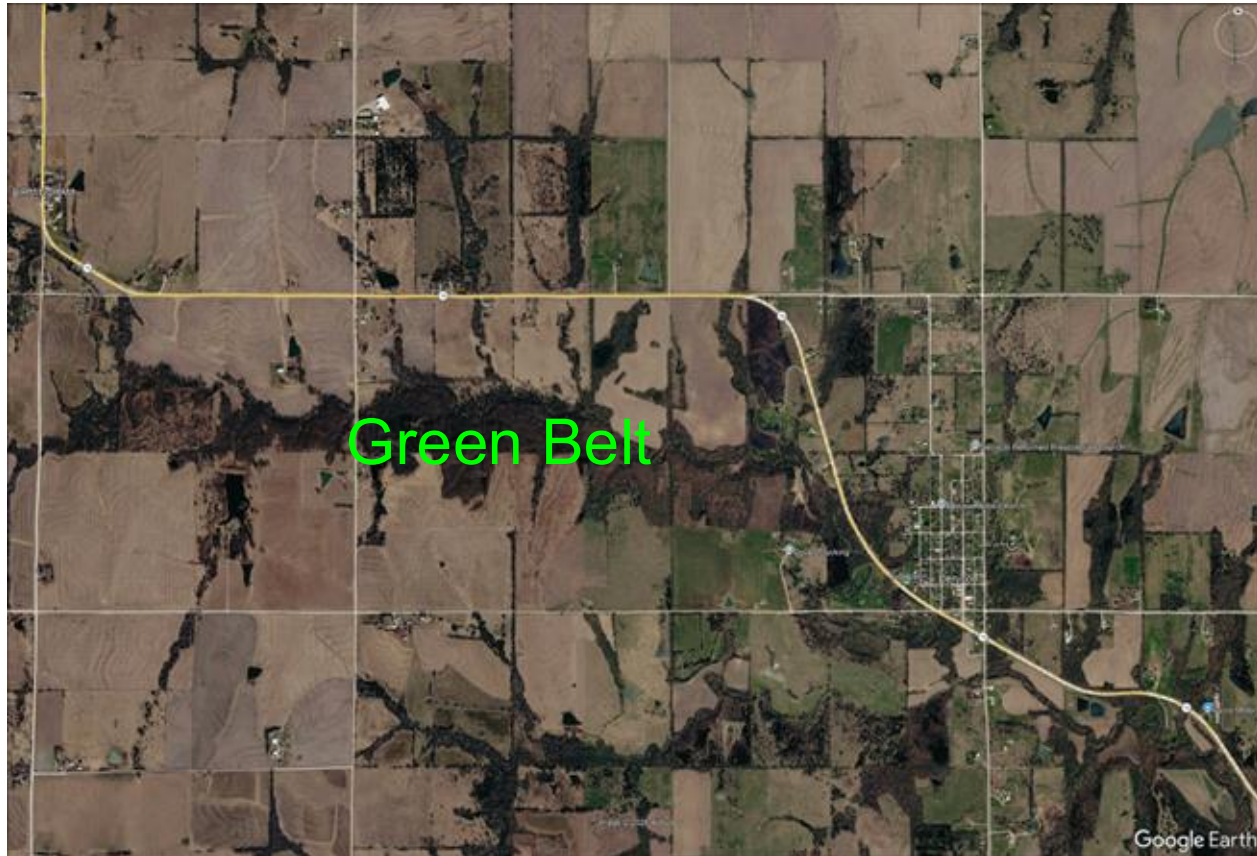
- 10,000+ acres & nearly 50 structures
- Occurred in a “Very Low” hazard area
- Started by power lines during strong winds (99th percentile gusts)



Denton, MT



Wildfire Risk in Ag Lands



Denison, KS



Denton, MT





Greenbelts Can Become Wildfire Corridors



Almeda Drive Fire - (Labor Day 2020)

- 3,200+ acres & **3,000+ structures**
- 3 fatalities
- Spread along a very narrow greenbelt surrounded by ag lands and residential neighborhoods
- **60 yards** across at the narrowest spot





Grassland / Prairie Fire Example: Starbuck



Starbuck Fire - (March 2017)

- 627,00 acres (464,00 in KS)
- 26 homes destroyed
- 5,000-9,000 cattle lost
- Wind-driven by 50-70 mph winds
- **Largest in KS history**





Wildland Urban Interface (WUI) Examples in KS



Manhattan, KS

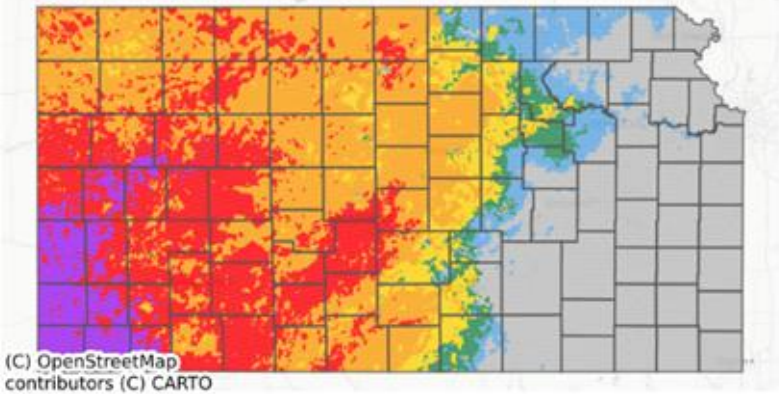
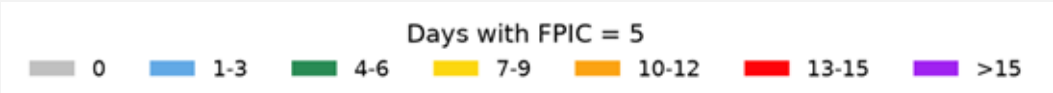


Olathe, KS

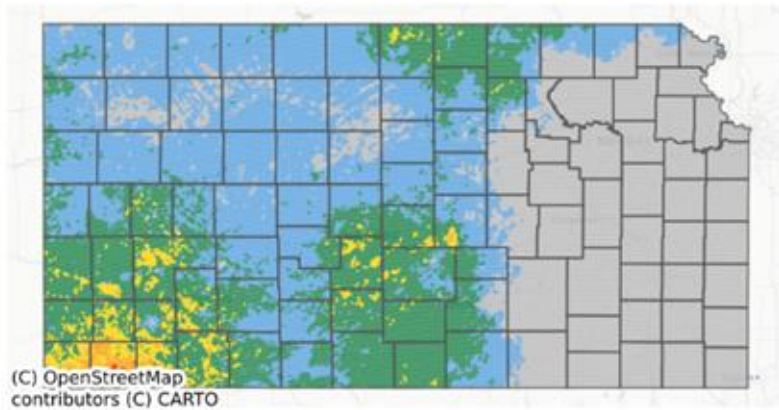


Kansas Fire Potential Index.

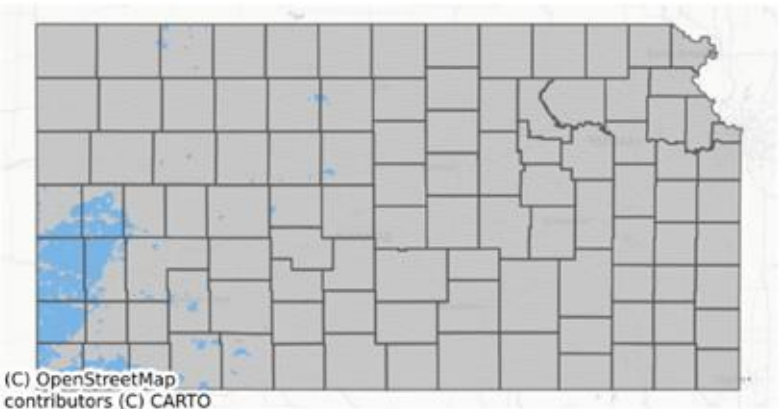
FPI is a surgical tool to identify adverse weather/fuel days



**APRIL
2026**



**MAY
2026**

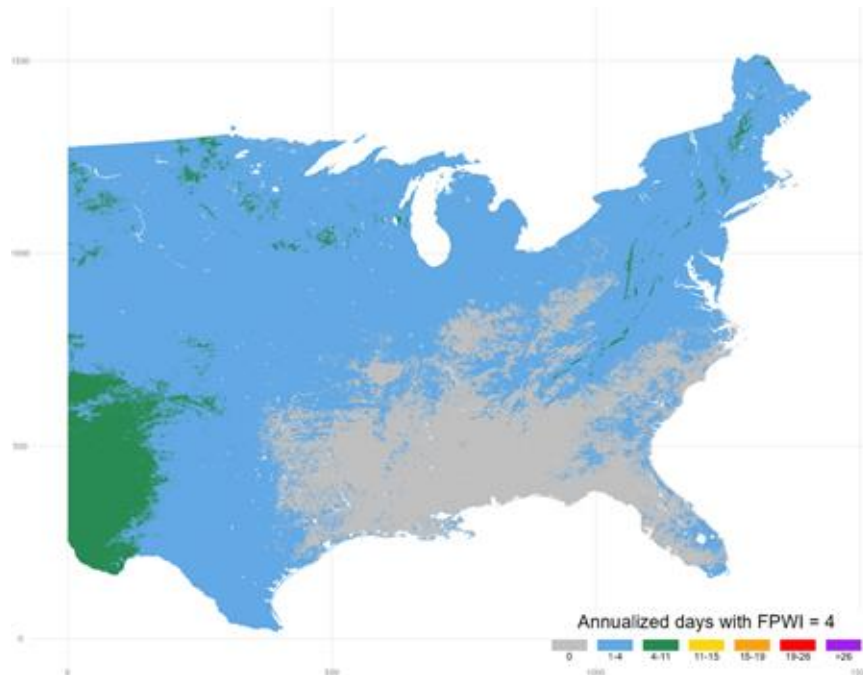


**JUNE
2026**



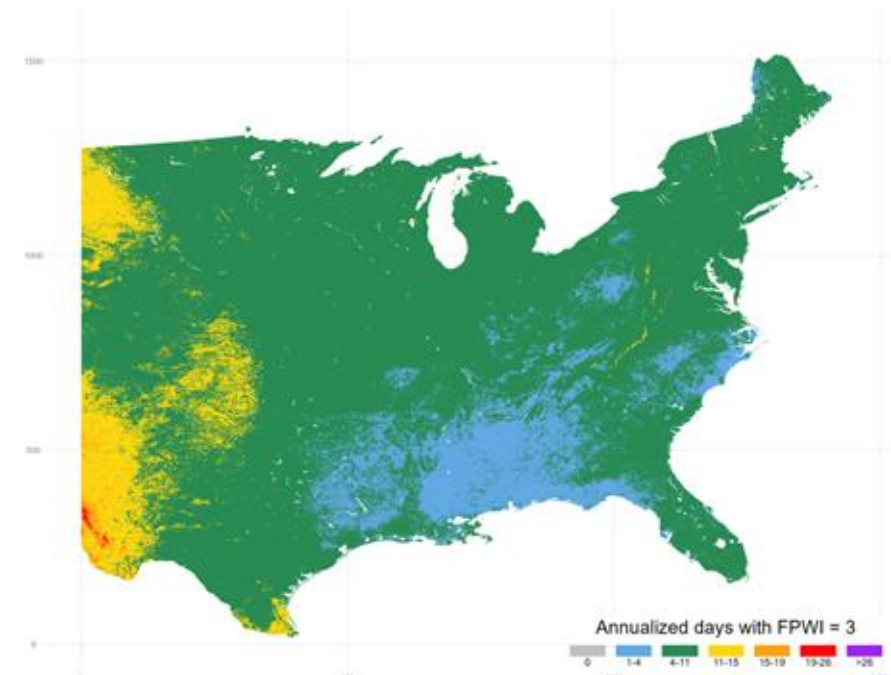
Fire Potential Wind Index.

Wind makes bad days worse, increasing risk of ignition and spread



1-4 Extreme Fire Weather Wind Days per year

These are the days most associated with catastrophic wind-driven wildfires. On average, Kansas experiences 1-4 extreme FPWI days per year, typically from February - March.



4-11 High Fire Weather Wind Days per year

These days are sometimes associated with wind-driven wildfires and are more common than extreme days. On average, Kansas experiences 4-11 of these days per year, typically from February - March

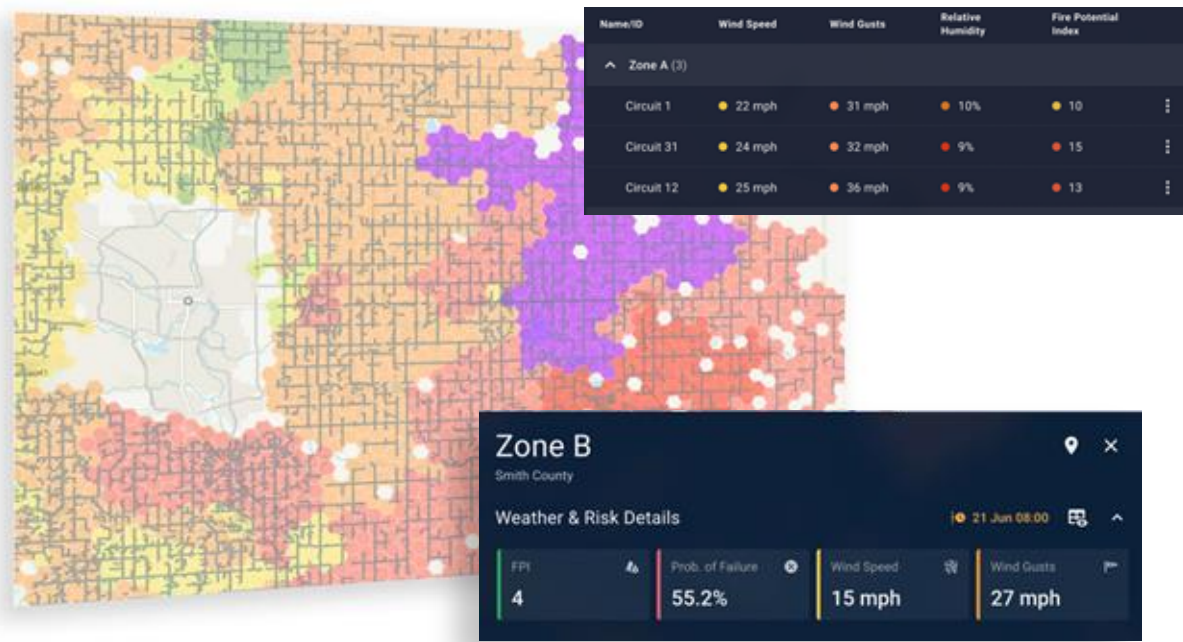


We support both mitigation prioritization and near-term operational action.

Med-long term resilience: Planning, infrastructure and mitigation
Balancing risk reduction and resilience with cost



Near-term to events: PSPS, EPSS and Restoration
Avoid catastrophic ignitions, restore power faster, minimize community impact





Prioritize mitigation based on territory and asset risk.



Risk & Consequence Modeling



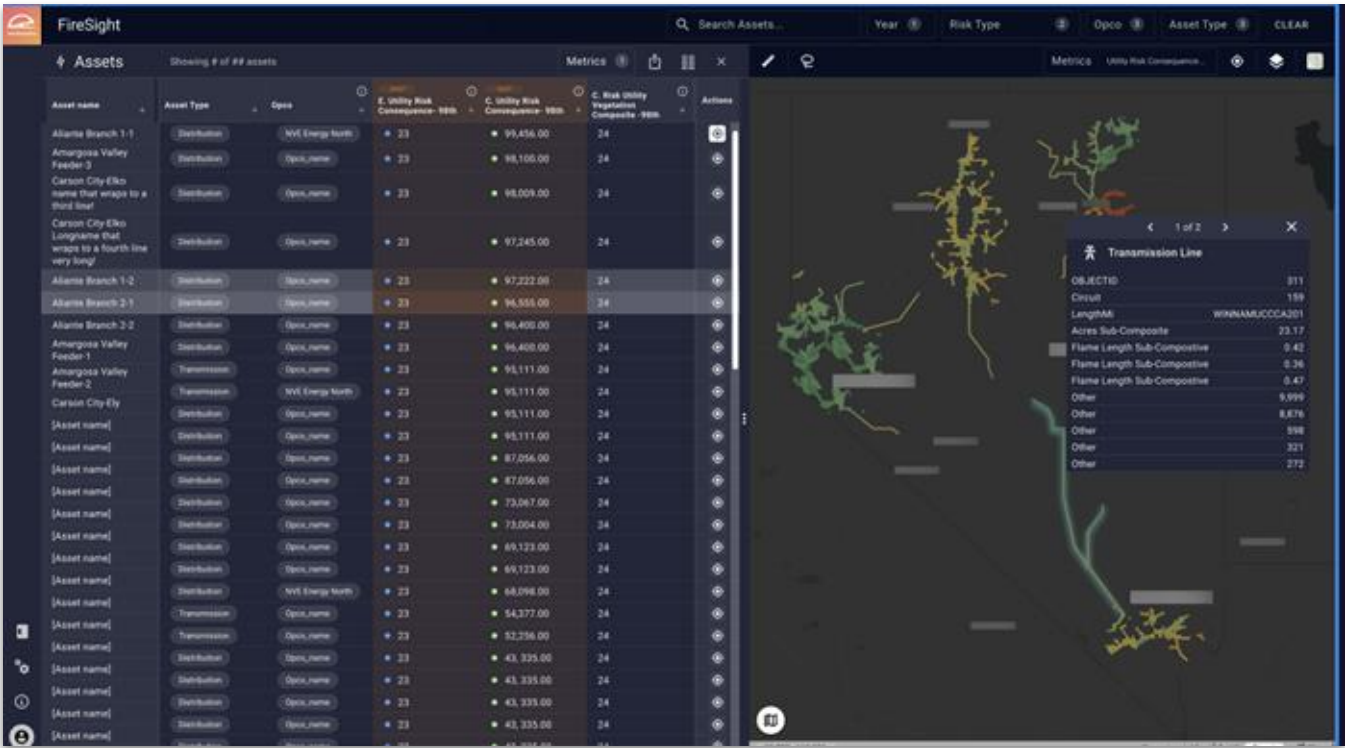
Asset Fragility



Mitigation Prioritization

KEY FUNCTIONALITY

Territory and asset specific risk and consequence metrics, including expected/conditional risk, asset ignition/failure analytics, and fire characteristics.



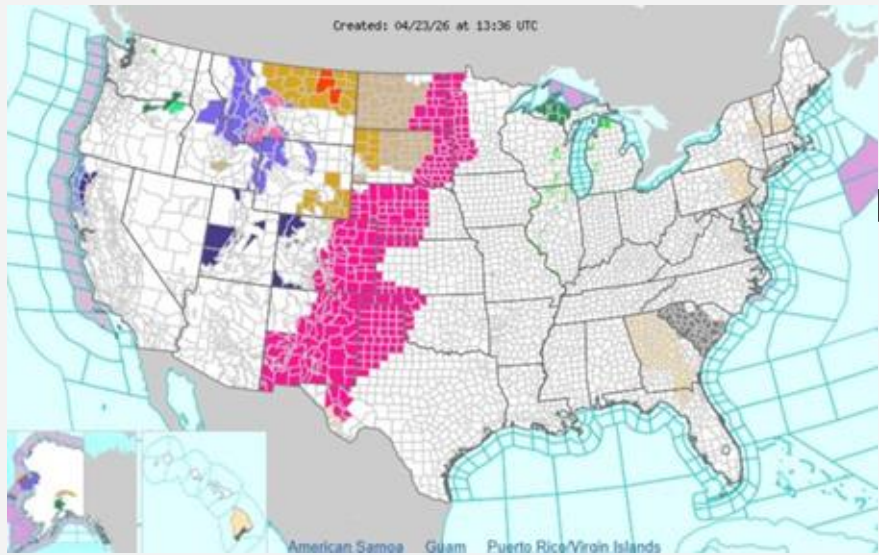
Proven Support for Regulatory Teams
Rigorous analysis that holds up under regulatory scrutiny. Directly mentioned in 14 WMPs.

Targeted Mitigation
Prioritization of interventions to mitigate wildfire risk – grid hardening, vegetation management, and asset management

Forward-Looking Insights
Climatological projections that help utilities prepare for future risk and inform grid expansion, i.e., large load growth



How to go from broad warnings to surgical precision.



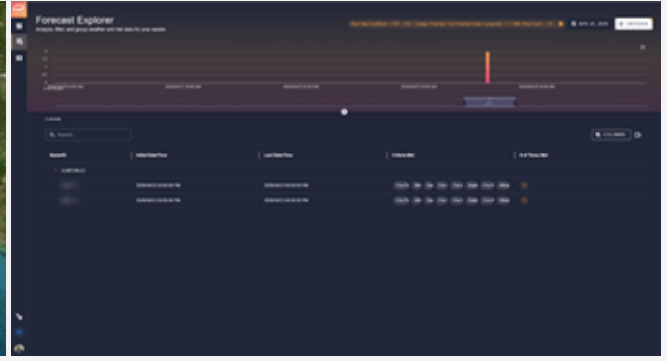
**228 Circuits
in a RFW**



66 Circuits in Scope for Settings



2 Circuits in Scope for PSPS



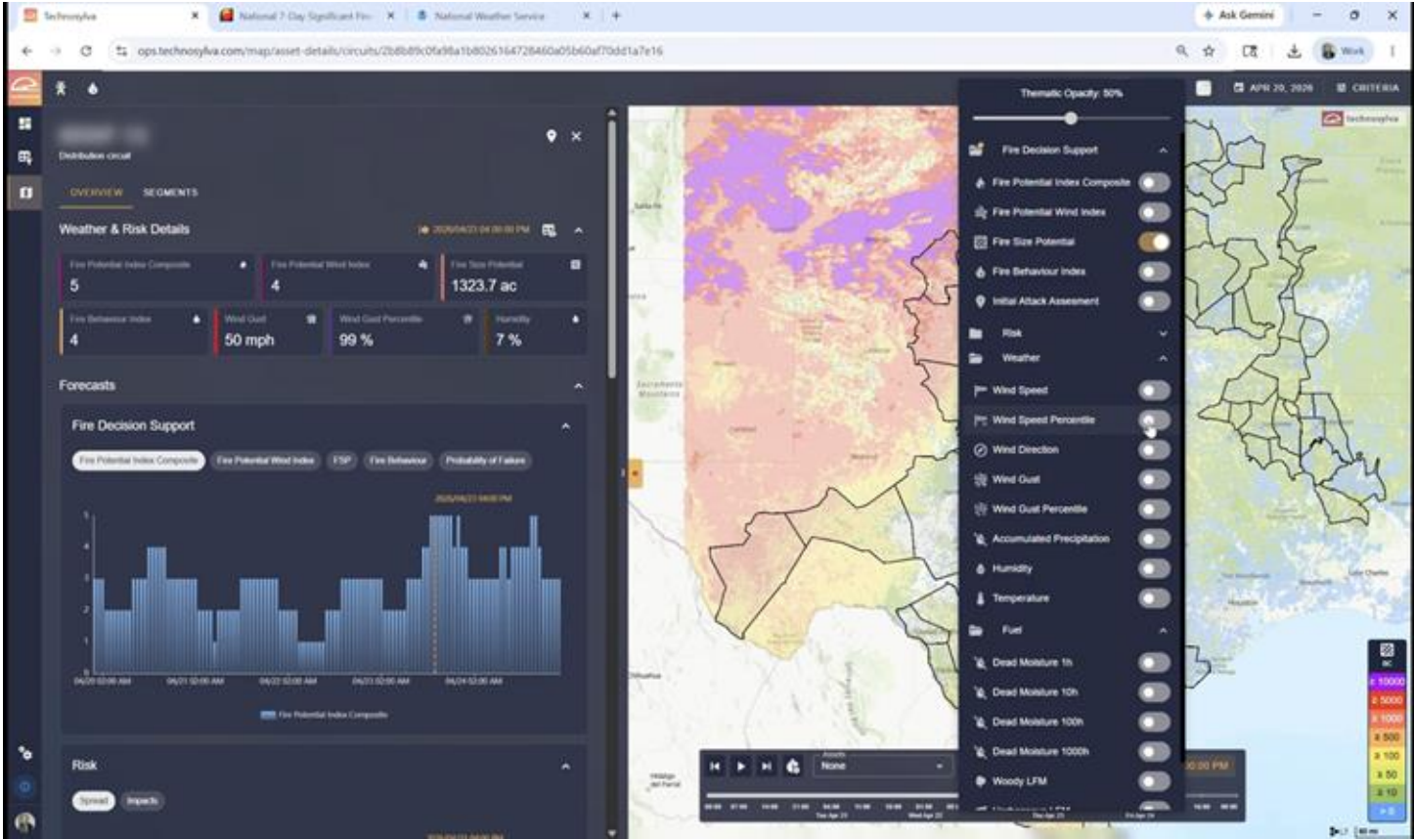


Industry-leading science made simple.



Anyone can use this tool

The work and science of 55+ PhDs... distilled and delivered so simply that a 10-year-old could immediately understand and interact with it.



[Click here to play](#)



Thank you.

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