

Saving Lives with Big Data: Wildfire Prediction and Emergency Response

A dramatic photograph of a wildfire at night or dusk. The fire's intense orange and yellow flames are visible against a dark, hazy sky. The fire appears to be moving through a dry, possibly grassy or brushy area, with some trees visible in the foreground and middle ground. The overall atmosphere is one of danger and destruction.

W1.1

After this video you will be able to..

- Give an example of sensor, organizational, and people-generated data used in wildfire analytics
- Explain to a friend why the integration of unexpected streams of data is critical to wildfire prevention and emergency response

Why important?

San Diego County, May 14, 2014

Why important?

San Diego County, May 14, 2014



14 fires burning

Why important?

San Diego County, May 14, 2014



area of
San Francisco

14 fires burning

Why important?

San Diego County, May 14, 2014



area of
San Francisco

14 fires burning

6 injured
+ 1 death

Why important?

San Diego County, May 14, 2014



area of
San Francisco

6 injured
+ 1 death

14 fires burning

\$60 million USD

Why can Big Data help?



Why can Big Data help?

The diagram features a central dark green rectangular box containing the text "Integration of diverse data". This box is positioned between two large blue circles. The left circle contains the partial text "People" and the right circle contains the partial text "Technologies". Below these three elements is a third large blue circle containing the text "Organizations".

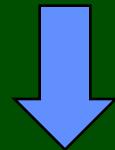
Integration of
diverse data

Peop

ors

Organizations

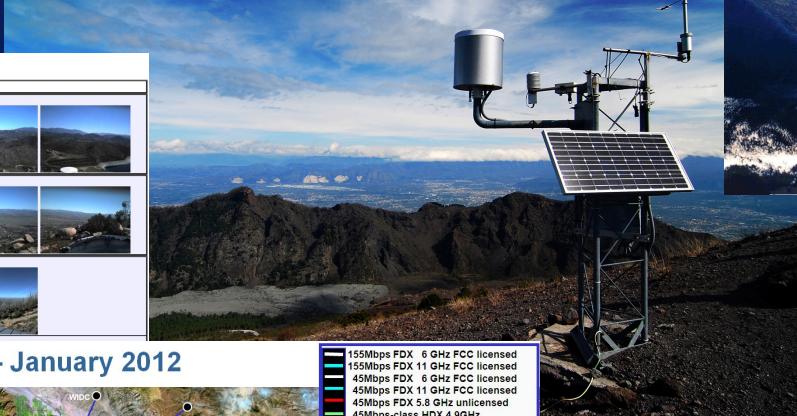
Integration of diverse streams



see new things
develop predictive analytics

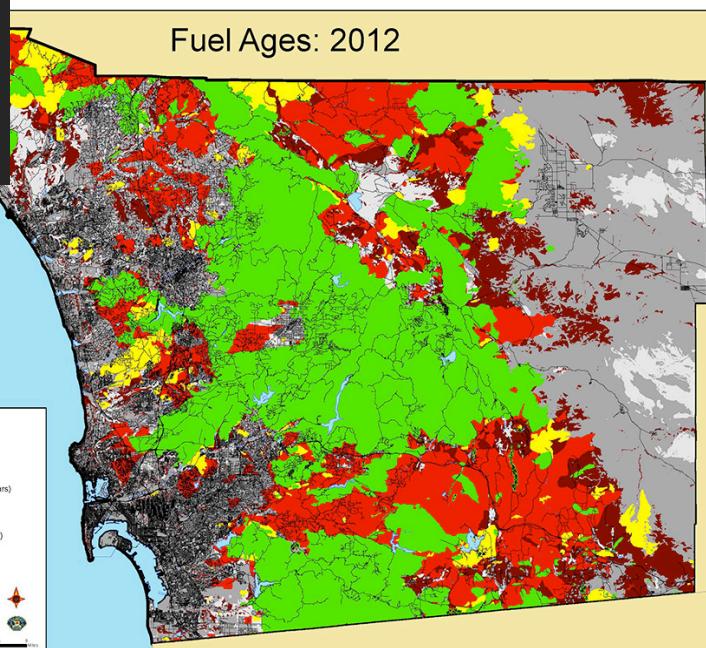
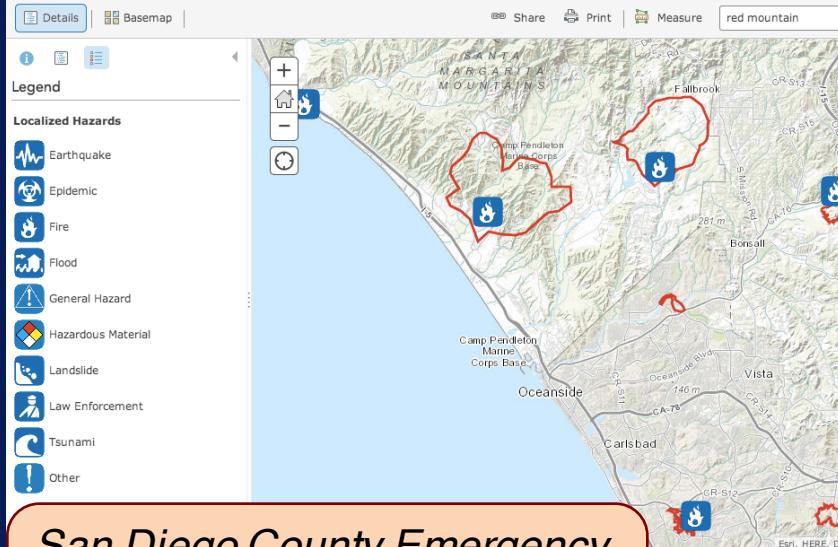
Diverse Data Sources

Machine Data



Organizational Data

ArcGIS - County of San Diego Emergency Map



San Diego County Emergency Map displaying fire perimeter information from NICS.



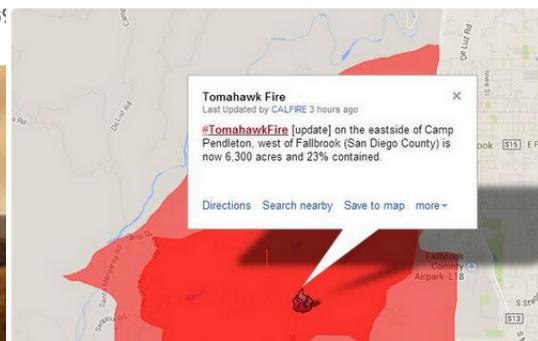
#NBC7 San Diego @nbcsandiego · 16 May 2014

UPDATE: #TomahawkFire: 6300-acre fire on east side of Camp Pendleton 23% contained on nbc7.com/PzAWSI



Be safe out there San Diego. 6,300 acres burned 23% contained

#TomahawkFire



Wow RT" @KTLA: San Diego fires: #CocosFire at 1,200 acres.; #TomahawkFire at 6,000 acres., [. ktlanew.ws/1gr0UkR](http://ktlanew.ws/1gr0UkR)"



#NBC7 San Diego @nbcsandiego · 17 May 2014

Our update for Saturday on #TomahawkFire #SanMarcosFire #PoinsettiaFire #CombatFire nbcsandiego.com/news/local/San...



Saturday Update: San Diego Fires

The latest on the San Diego fires as of Saturday, May 17, 2014.

People

Monitoring

Visualization

Fire Modeling

Big Data



Big Data



*Monitoring
Visualization
Fire Modeling*

Big Data



*Monitoring
Visualization
Fire Modeling*

Wildfire Command Centers of the Future

