Good Decisions from Good Data

Helping organizations collect, manage, and distribute air quality data

Tim Dye
Sonoma Technology, Inc.
Petaluma, California

Advances in Earth Science:
Data as a National Asset for Decision-Making
Washington, D.C.
June 22, 2016

STi
Sonoma Technology, Inc.

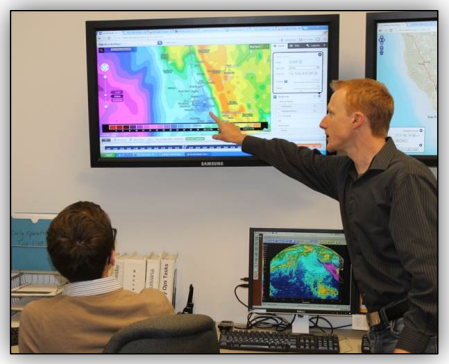
Sonoma Technology, Inc.

Innovative Environmental Solutions

- Small business helping organizations manage and use environmental data
- Work on
  - Air quality
  - Fire and fuels sciences
  - Meteorology
  - Software engineering
- Clients/partners
  - Federal (EPA, State Dept., NOAA, Forest Service)
  - State/local government
  - Private sector (industry, manufacturers)
  - Non-profits









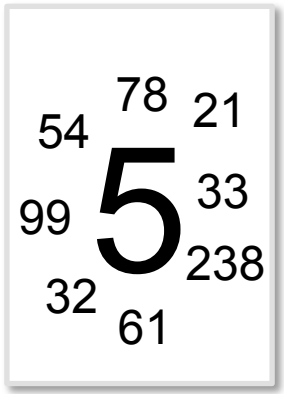
Underpinnings of Decision Support

- Instruments
- Communications
- Data validity and data management
- Data products and dissemination
- Decisions

Observe



Data



Information



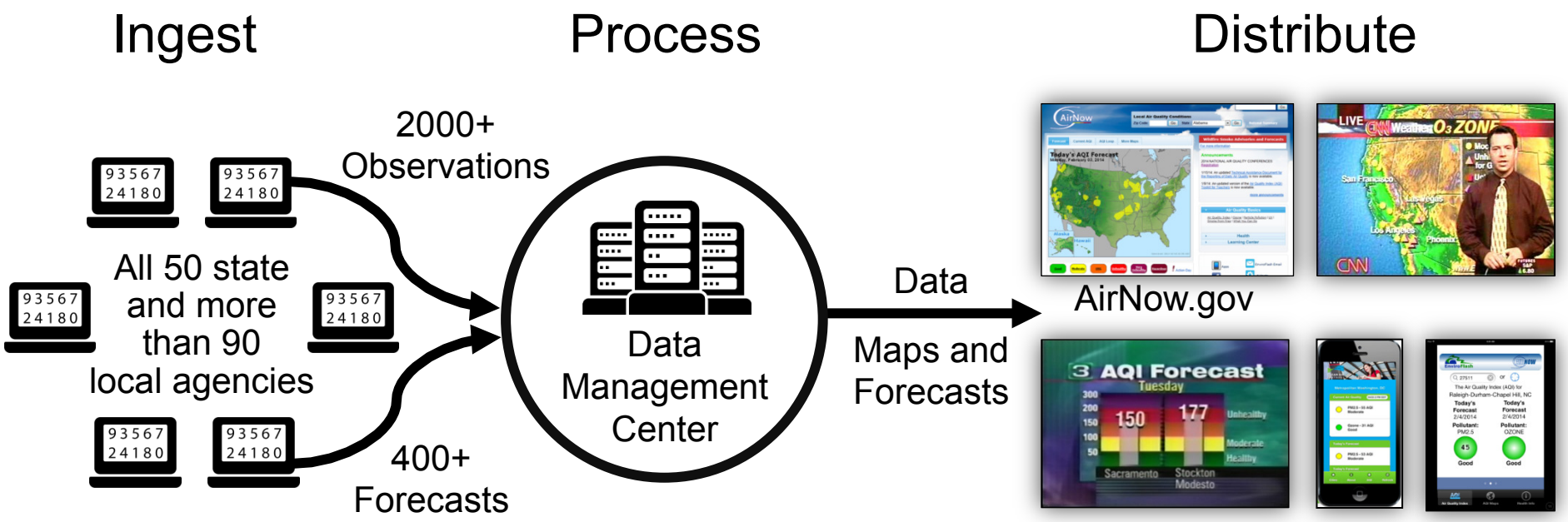
Action



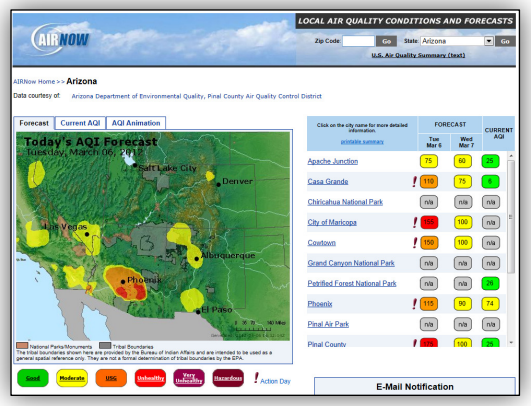
Government – AirNow Program

AirNow is the national system* for acquiring and distributing air quality information in real time

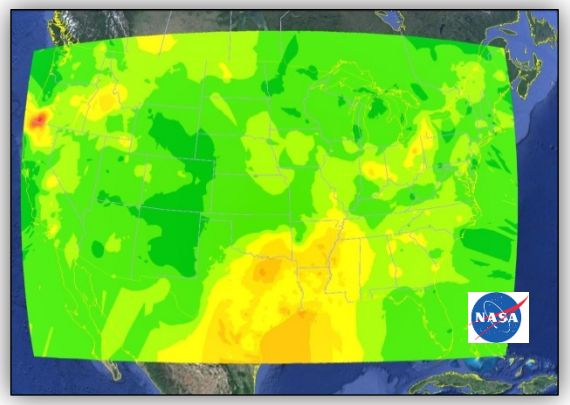
*Funded by U.S. EPA



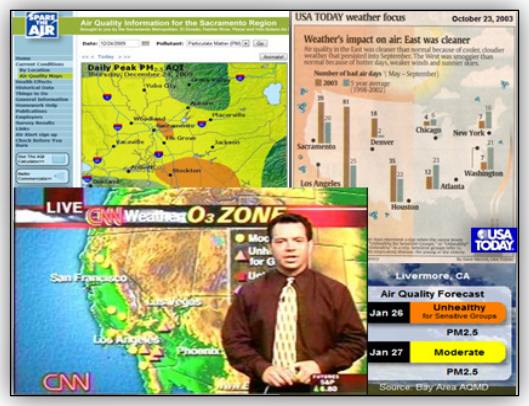
Decisions Using AirNow's Information



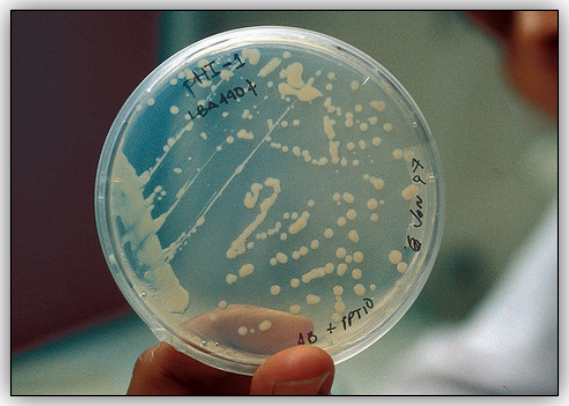
Public: make decisions about exposure using AirNow.gov



Research: develop real-time applications



Media: inform and alert the public



Industry: use data to make decisions

Industry – New Tech. Helping Address Old Problems

- Issue:
  Coal dust at power plants
- Potential solution:
  Can low-cost sensors be used to detect blowing dust?
- Evaluation study:
  - Reference station
  - New air sensors
  - Weather station

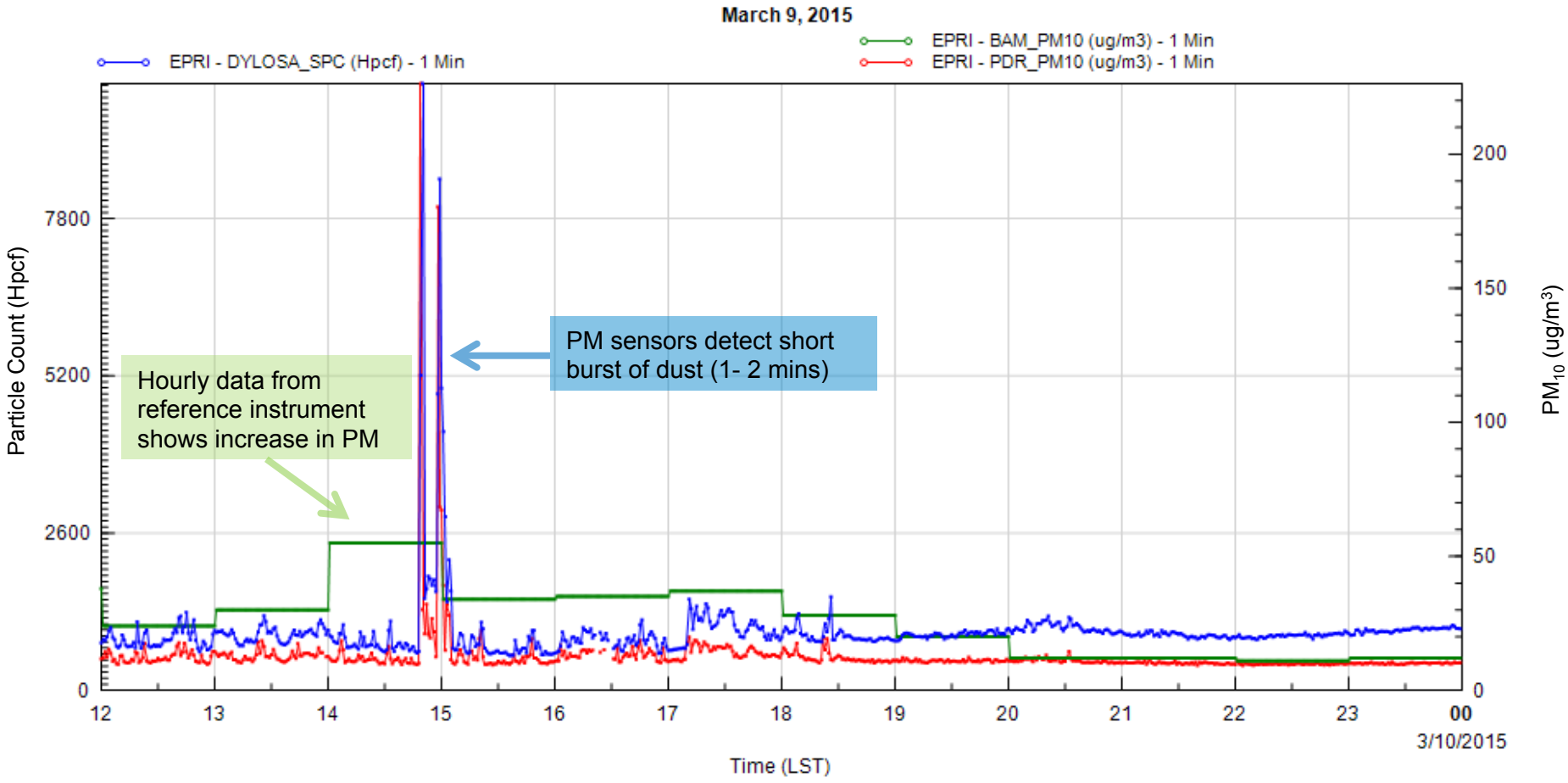
EPRI
ELECTRIC POWER RESEARCH INSTITUTE





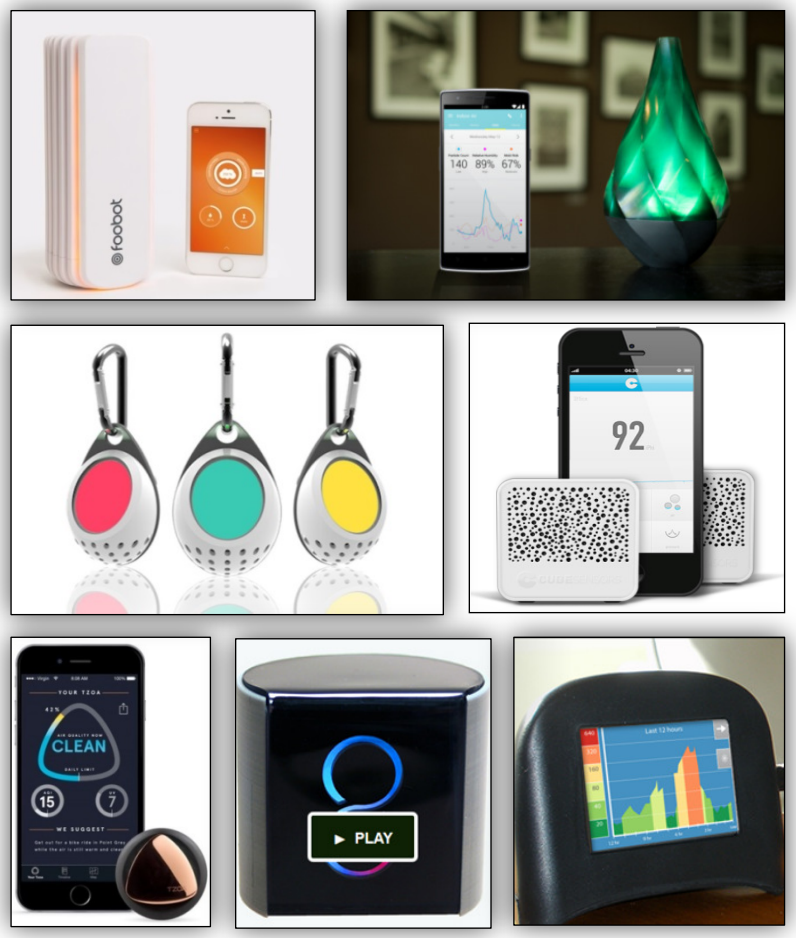


Industry – New Tech. Helping Address Old Problems



Personal Air Measurements

- Air quality sensors used by everybody
- Characteristics:
  - Low-cost
  - Portable
  - Accuracy can vary
- Applications:
  - Improve family health
  - Precise public health
  - Better research



STEM Education With Air Sensors

Kids Making Sense – An educational program that teaches youth to measure pollution using air quality sensors and to interpret the data they collect.



Learn



Measure



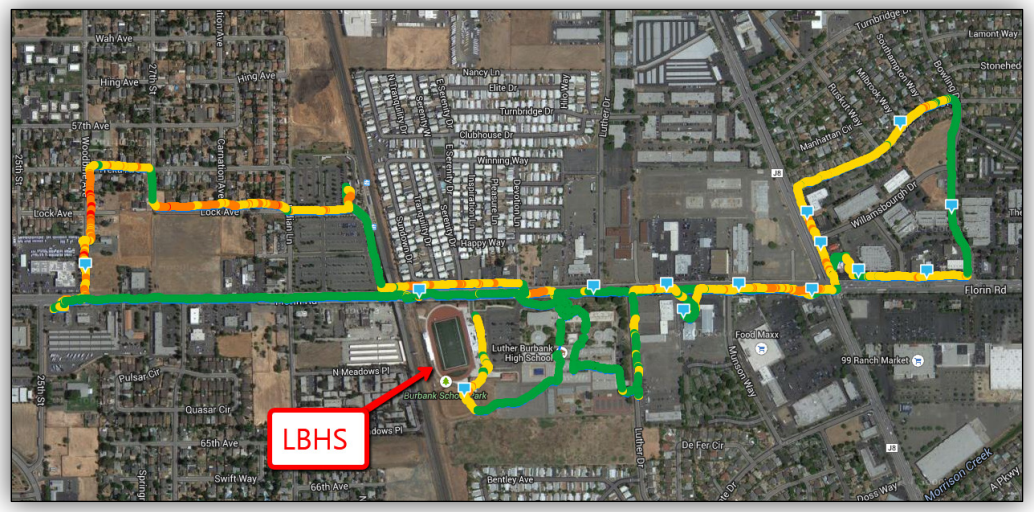
Discover

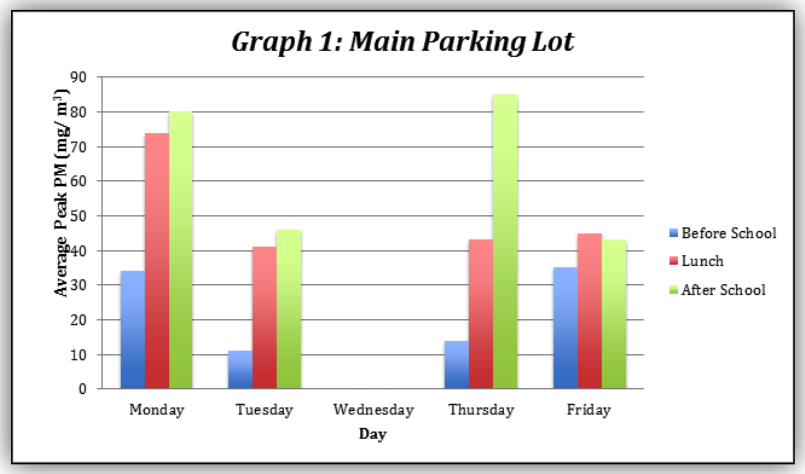


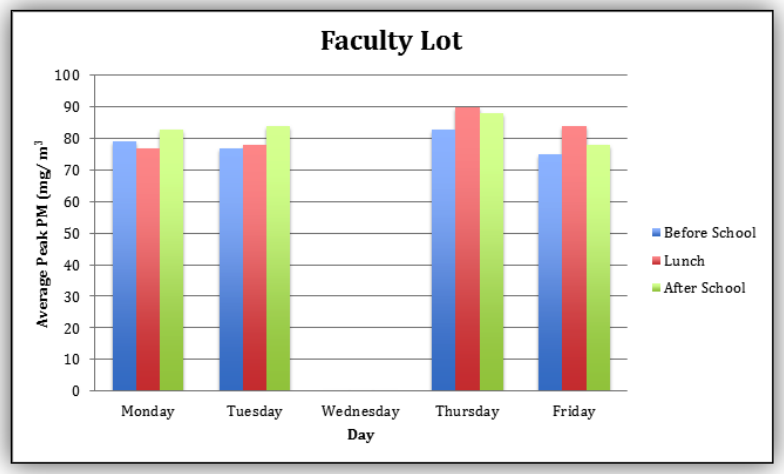
Interpret

Kids Making Sense in Sacramento, CA







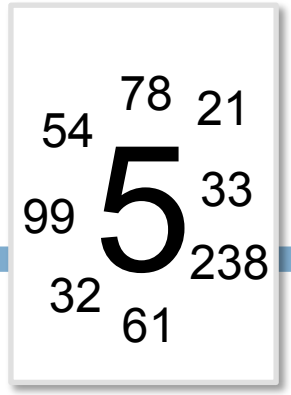


Student results: faculty lot had higher PM levels from school buses and delivery trucks, while PM increased throughout the day in the main lot.

Future Opportunities and Challenges

Observe → Data → Information → Action









Future Opportunities and Challenges

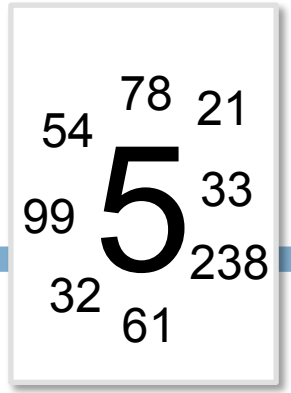
Observe

Data

Information

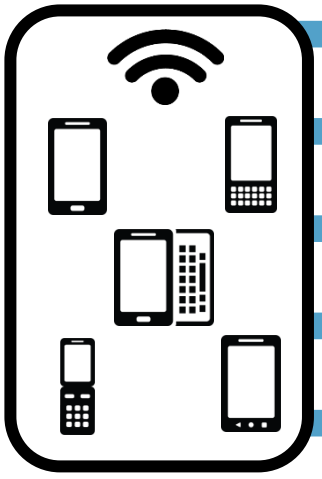
Action

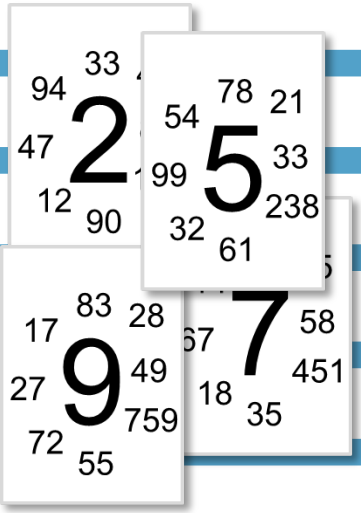
























Contact

Tim Dye

Senior Vice President,
Chief Business Development Officer
Tim@sonomatech.com
@TimSDye

www.SonomaTech.com
@sonoma_tech

STi
Sonoma Technology, Inc.
Environmental Science and Innovative Solutions