www.DenverAQ.com

State of Air Sensors…… a Business Perspective

Tim Dye

TD Environmental Services, LLC
Tim@TDEnviro.com
707-310-5541

State of Air Sensors

Types of air monitoring systems

	Research-grade Technology	Reference Instruments	Portable Instruments	Air Sensors
				
Cost	$100,000 - $1,000,000	$20,000 - $200,000	$5,000 - 15,000	$300 – 3,000
Ease of use	Expert	Expert	Expert	Anyone
Current Users	Gov't, Academy	Gov't, Academy	Gov't, Industry, NGOs	Public, Gov't, NGOs
Accuracy	Very accurate	Very accurate	Accurate	Varies

State of Air Sensors – 2019
Challenges and Positive Signs

Challenges

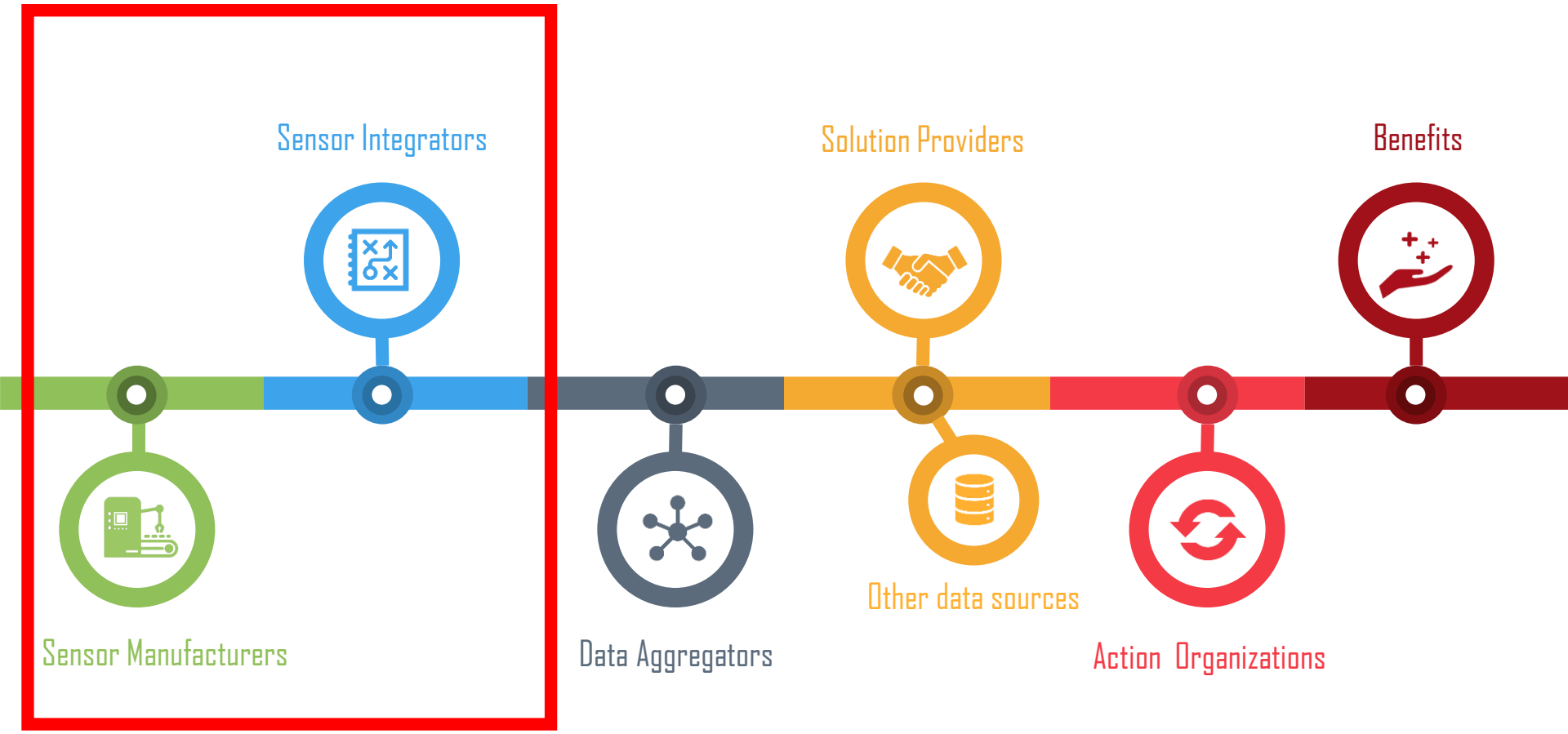
- Large unknowns about sensor performance
- Benefits not yet demonstrated
- Not clear how air sensor data can/can't be used

Positive signs

- Increasing public awareness
- Lots of interest in monitoring local air quality
- Many demonstration and proof-of-concept projects
- Some results are promising

State of Air Sensors

Lots of work needed to create actions and benefits



State of Air Sensors

Many businesses

Sensor Manufacturers

Sensor Integrators

Business Perspective
Market status

- Ecosystem not established (buyers/sellers)
- Fragmented solutions (few end-to-end products)
- Buyer/User side
  - Companies creating products of varying quality
  - Some "false" promises
  - Wonky ways of display and communicate data
- Seller/Business side
  - Unclear users needs/expectations
  - No performance standards yet
  - AQI confusing; little guidance on what data mean
  - Air pollution problems are unique → requires custom solutions; difficult to scale

Business perspective
Outlook

Whitepaper: ***A Breath of Fresh Air***

A dynamic roadmap for investors, philanthropists, nonprofits, and governments interested in improving health, reducing air pollution, and addressing climate change

- A healthy environment requires a healthy business ecosystem to do it
- Companies need investment to respond to government, consumer, and industrial needs
- There are ways to make money with these companies

Worked with Stax Inc. on the study

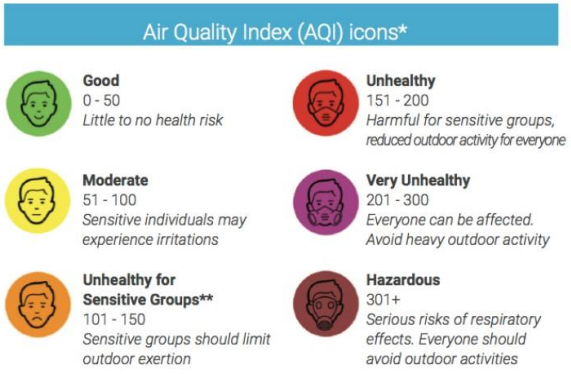
Business perspective
Needs from Government

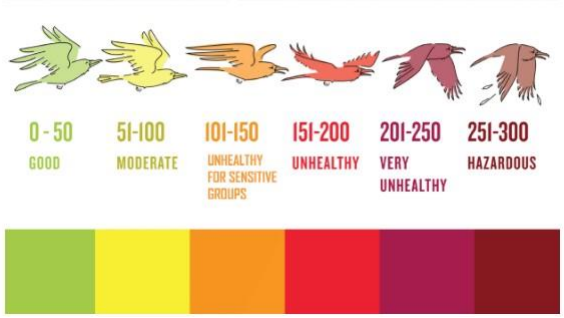
1. How good is good enough?
    - Performance targets needed (EPA and others working on this)

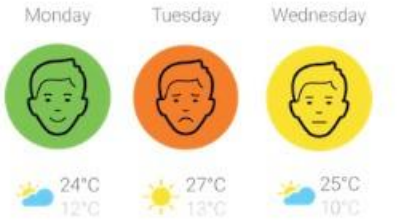
2. How can (can't) air sensor data be used?
    - Clarifying application space
    - Conducting demonstration projects to de-risk for others

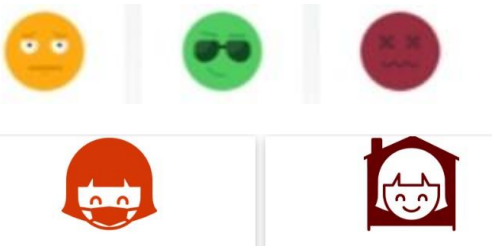
Business perspective

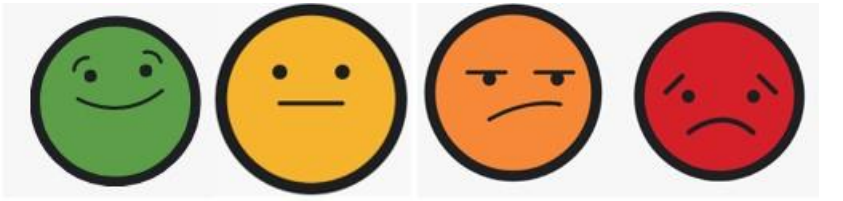
Needs from Government

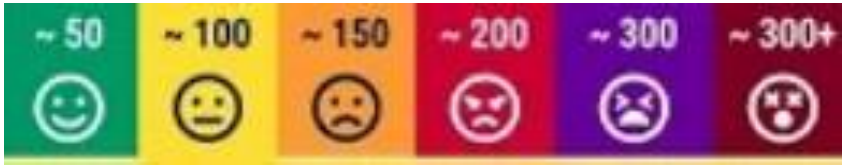


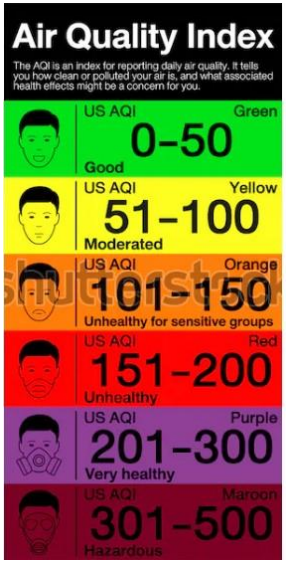












TD ENVIRONMENTAL SERVICES LLC © 2019

Business perspective
Needs from Government

3. How to communicate air quality health information?
   - Air Quality Index
   - Health language/precautions
   - Guidance to companies

State of Air Sensors…… a Business Perspective

Tim Dye

TD Environmental Services, LLC
Tim@TDEnviro.com
707-310-5541