

What's in Your Indoor Air?

Chemical reactions in the air

Indoor environmental quality 21
Energy efficiency 35
Sustainable site planning & management 16
Material & resources 11
Water efficiency 10
Innovation 7

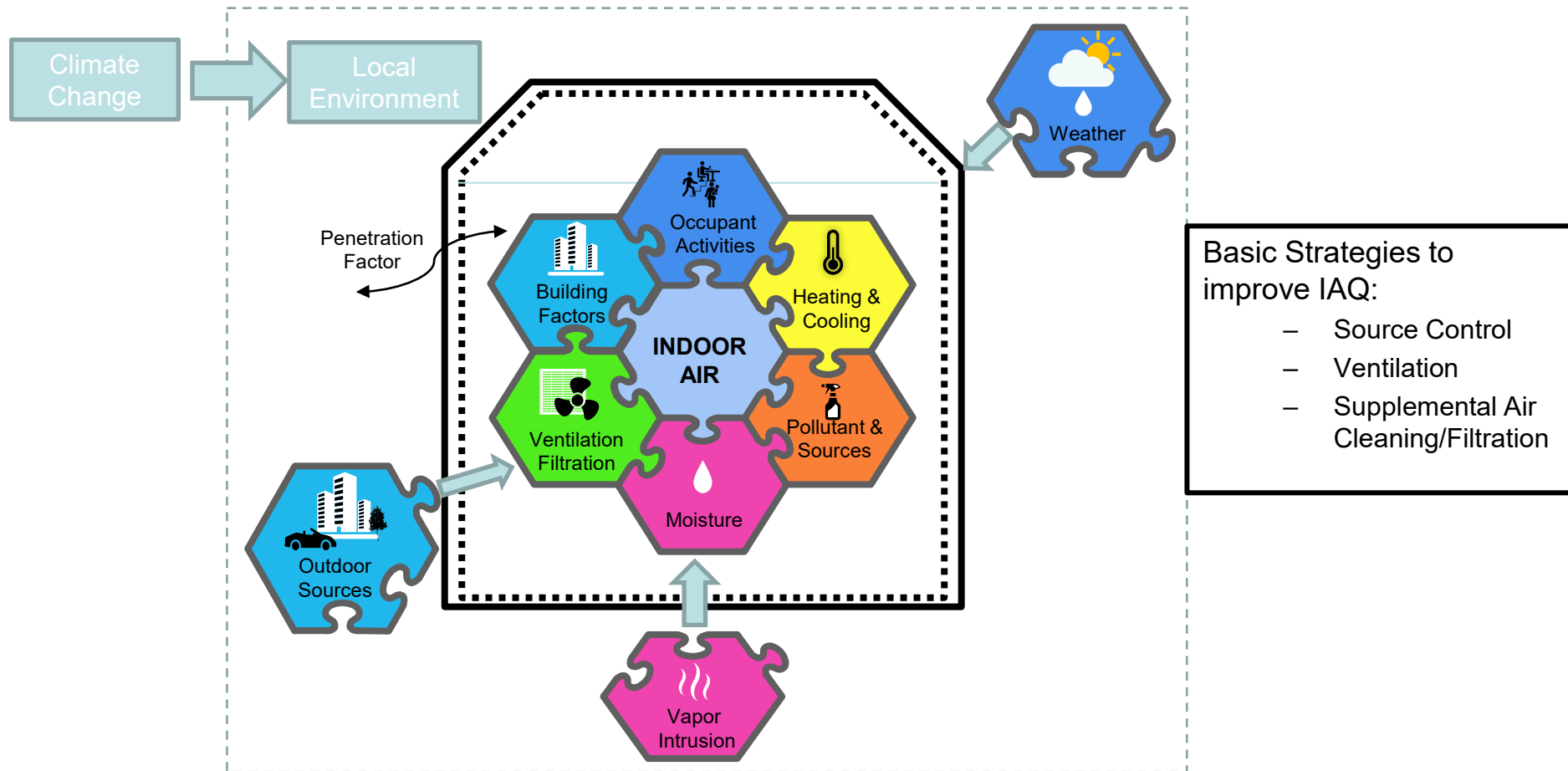
Total score 100

Lauren Burton and Randolph Chapman
Indoor Environments Division

Workshop For Indoor Air Quality Officials
Environmental Law Institute
October 6-7, 2023

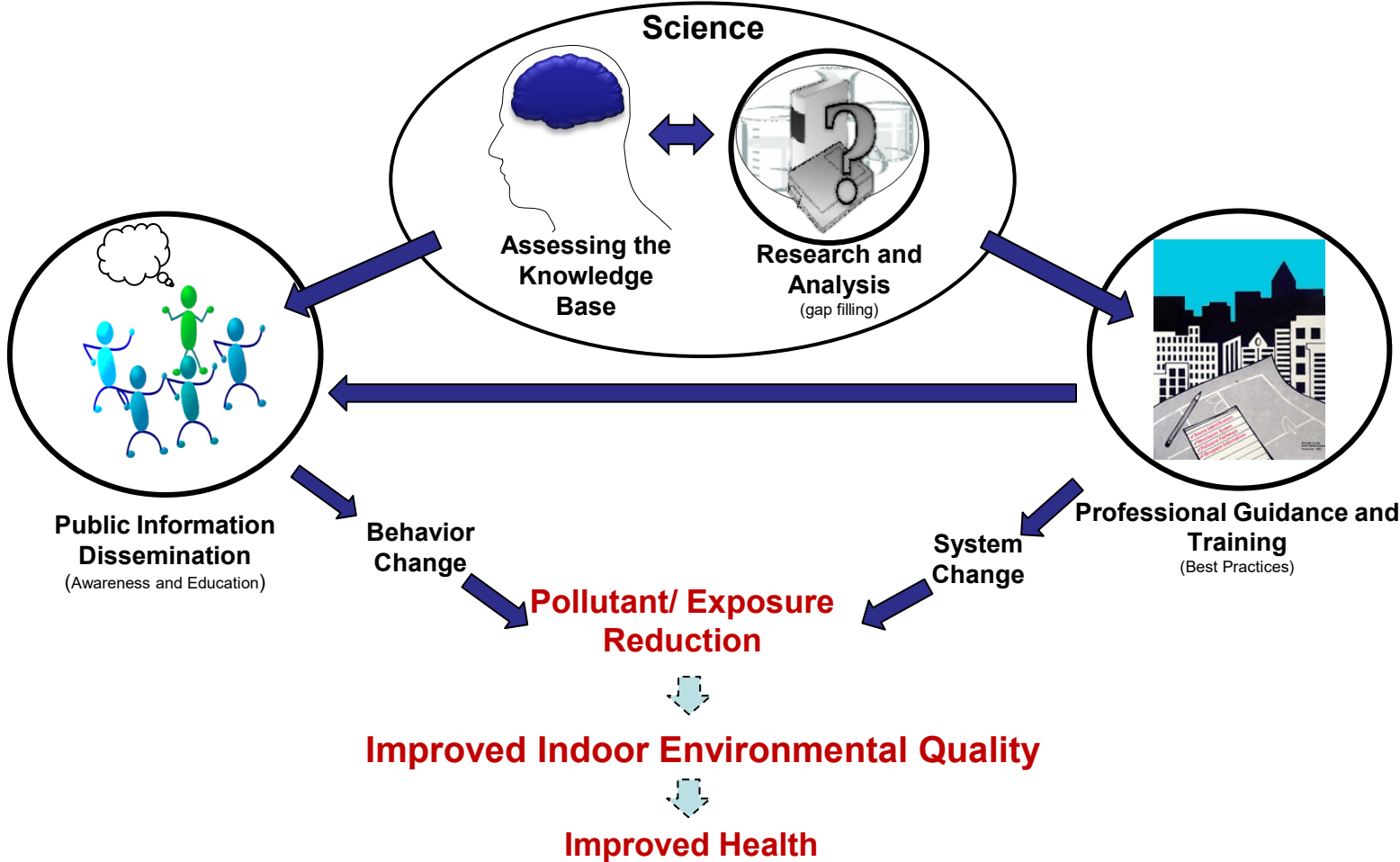
Indoor Air Quality (IAQ)

The Complexity of IAQ



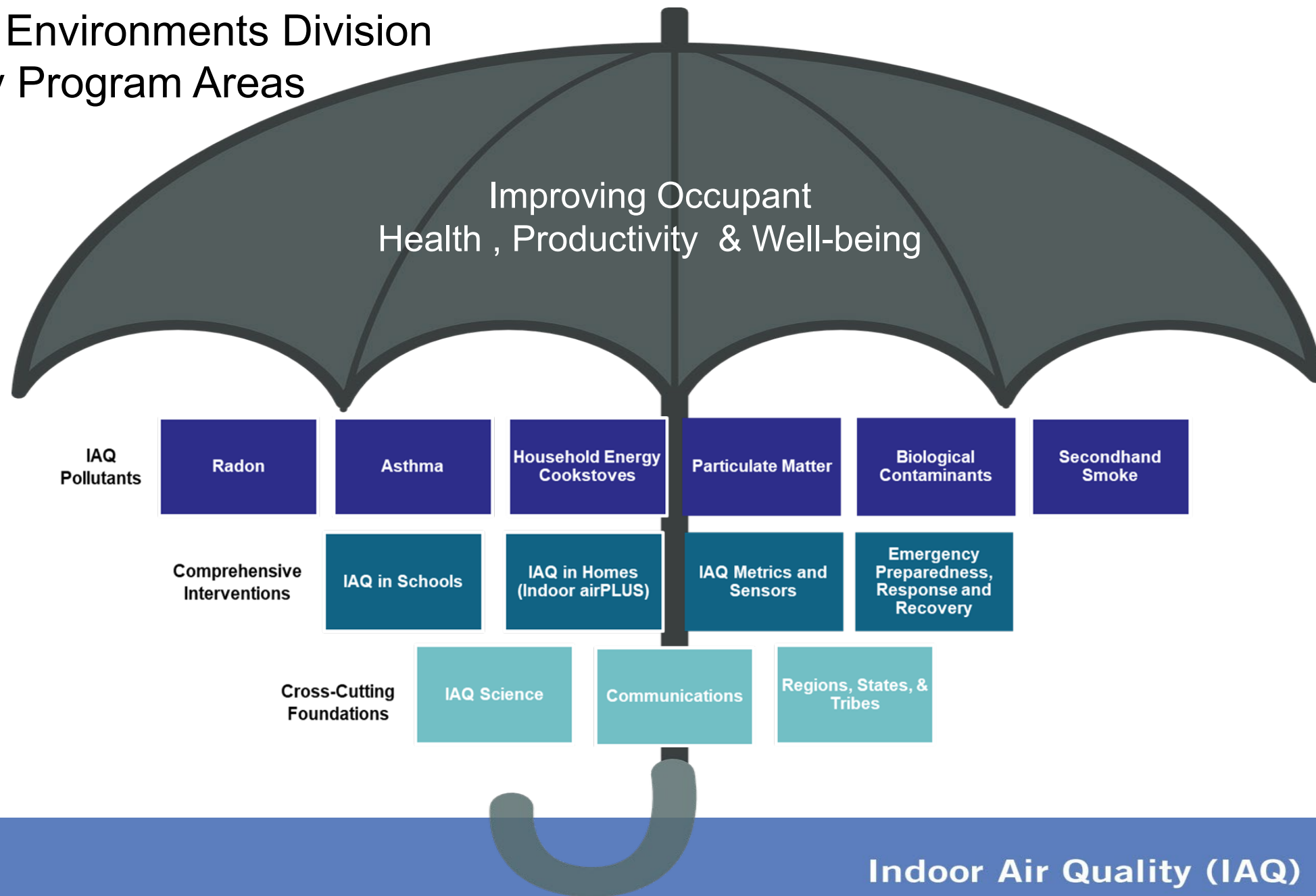
EPA's Role in Improving IEQ

MISSION:
Protecting the public's health from indoor environmental concerns where they live, learn, work and play





Indoor Environments Division Priority Program Areas



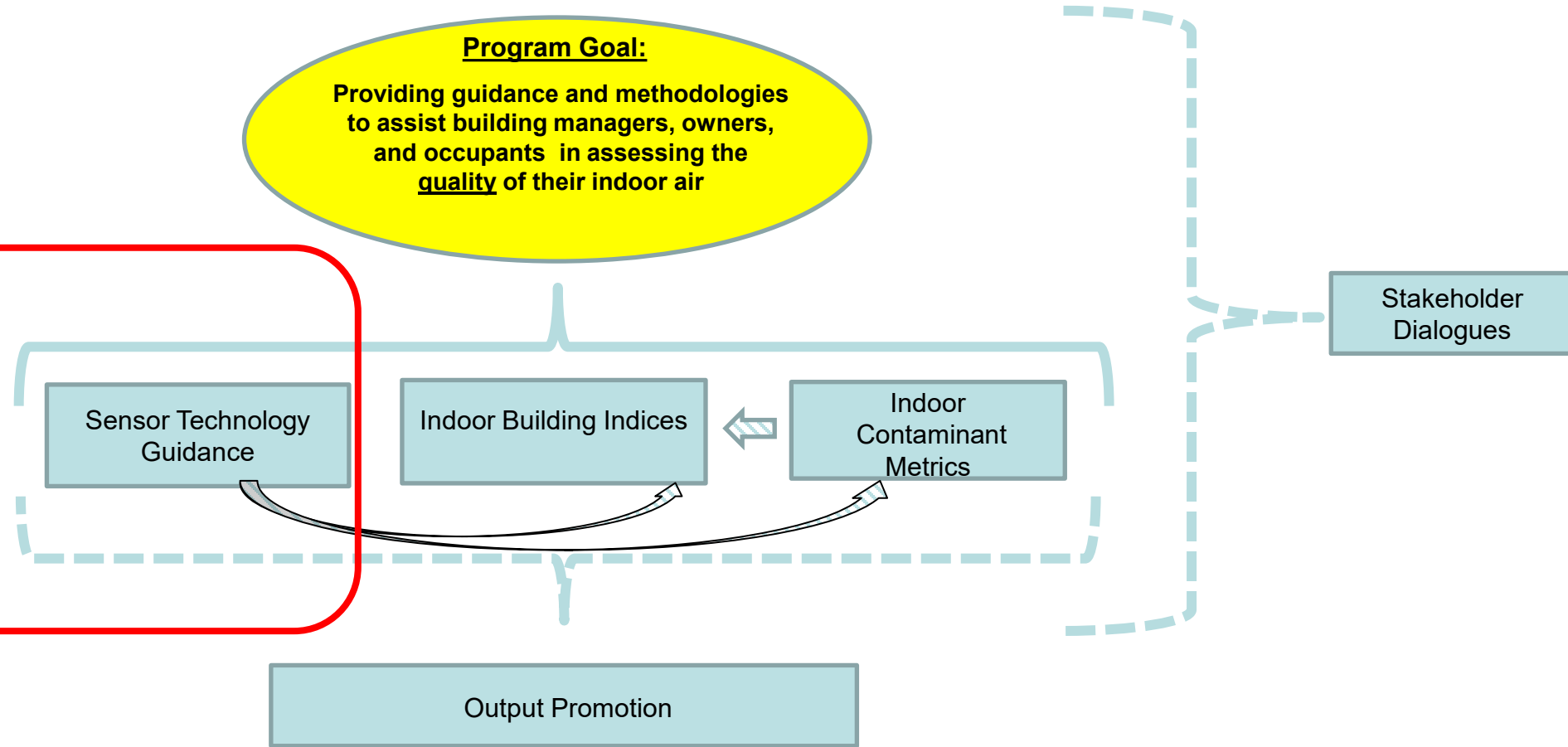
IED's I-MIST Program: Work Areas

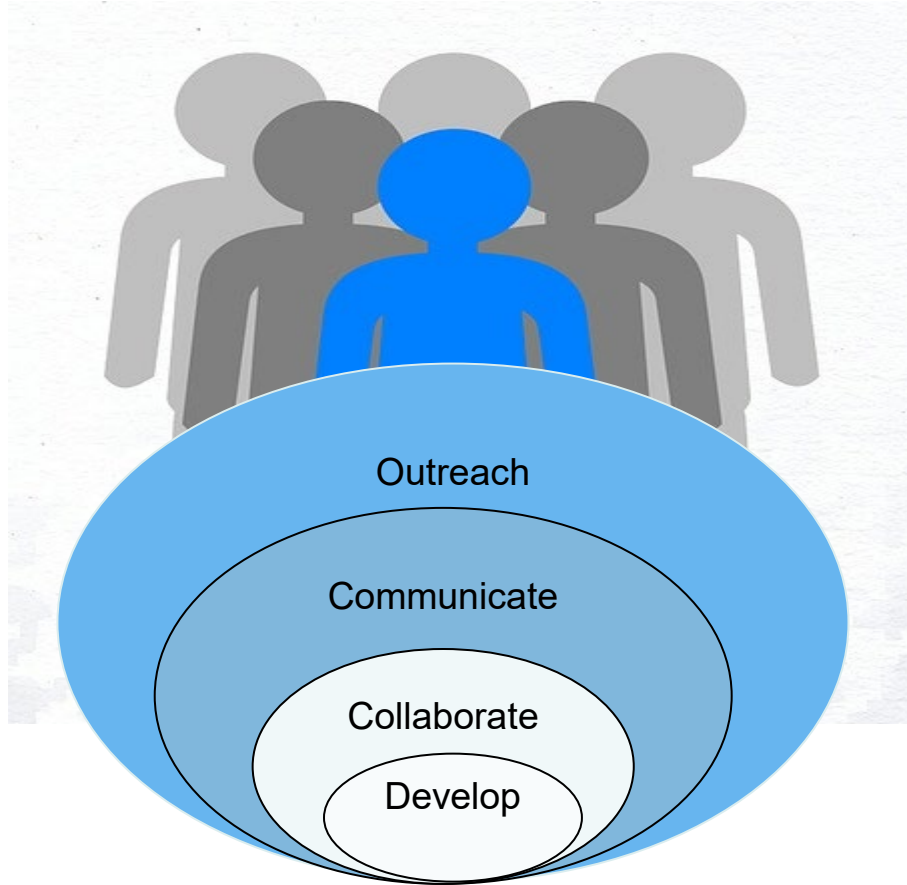
I-MIST Metric and Building Indices Project Goal

1. Establish IAQ metrics for priority indoor air contaminants
2. Develop building performance and asset rating systems or indices

I-MIST Sensor Technology Project Goal

1. Summarize current scientifically credible information/data
2. Develop guidance for the public on appropriate use of consumer-oriented, indoor sensors





IMIST Spheres of Influence

- Analysis of Current Information
- Promoting Stakeholder Communication and Consensus Building
- Promoting collaboration and consistent messaging indices & indoor contaminant metrics on indoor sensor technology, indoor building among stakeholders
- Development and Dissemination of Professional/Consumer Guidance

WEB-BASED GUIDANCE:

**“AIR SENSOR TECHNOLOGY AND INDOOR
AIR QUALITY”**

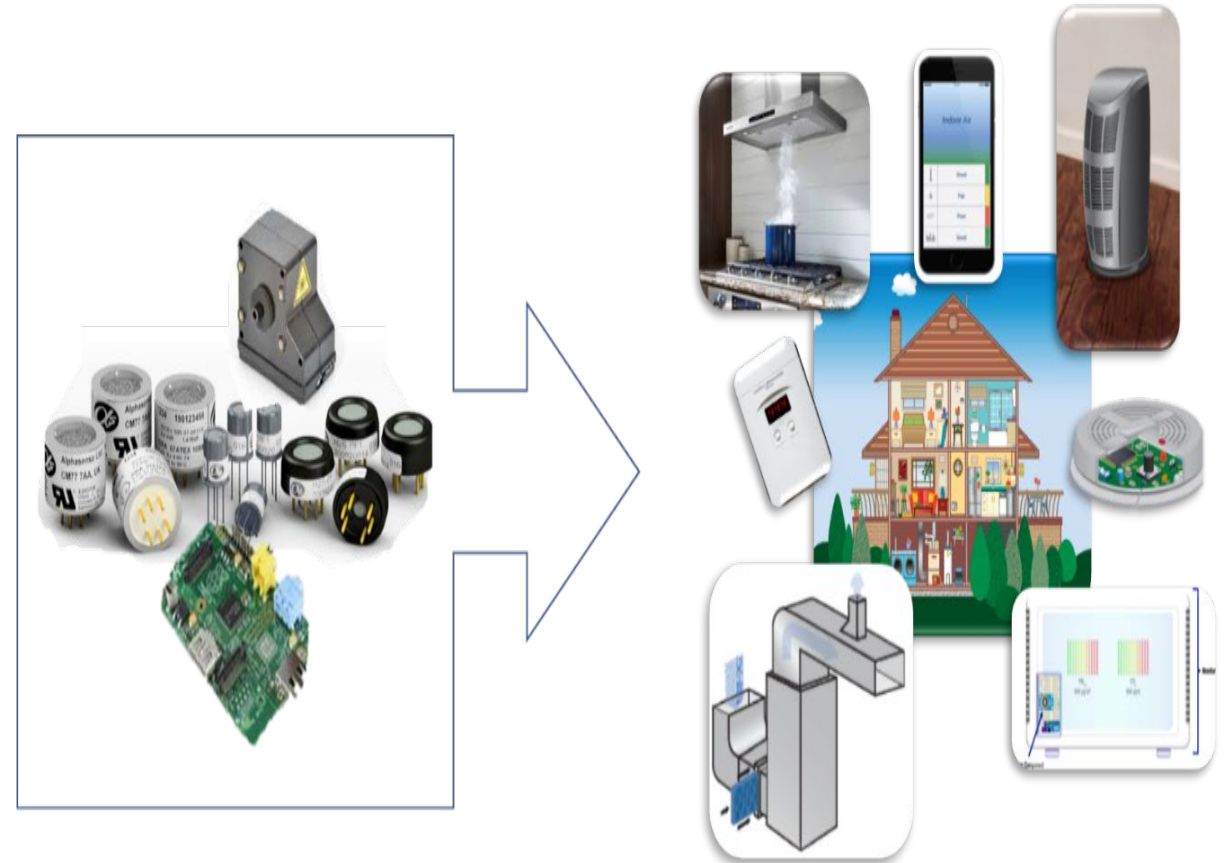
AND

**“LOW-COST AIR POLLUTION MONITORS AND
INDOOR AIR QUALITY”**

Air Sensor Technology and Indoor Air Quality

- Hub Page

- Consumer web-based guidance on indoor use of sensor technology
- A centralized location for all things related to indoor use of sensors technology



Air Sensor Technology and Indoor Air Quality cont'd

Hub Page Content

- Terminology
- Introduction of sensor technology as a change factor in IAQ management
- Introduction to common uses indoors
 - Detecting airborne pollutant concentrations.
 - Triggering an action
 - Activation of safety devices
 - Research and educational activities.

Information Expansion (linked webpages)

- Low-Cost Air Pollution Monitors (published)
- Educational Activities (pending)

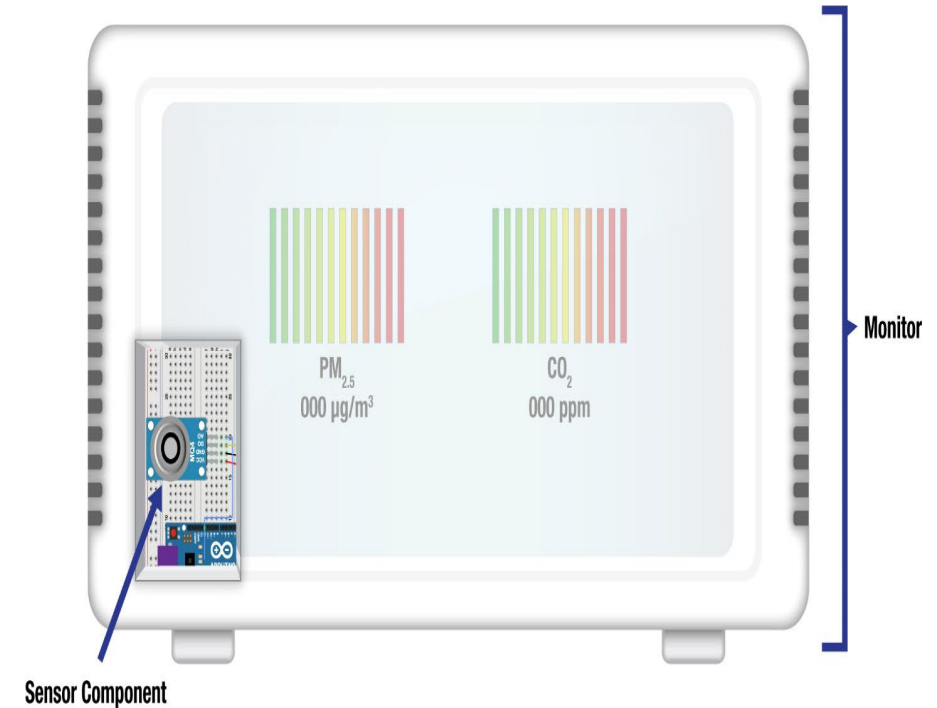


Indoor Air Quality (IAQ)

Indoor Air Quality and Low-cost pollutant monitors

Consumer web-based guidance

- Developed to help inform and increase consumer understanding of pros and cons of these devices
- Why this issue?
 - IAQ monitor market is a multi-billion dollar a year industry
 - Unknowns and uncertainties of equipment operation
 - No agreed upon protocols of use
 - Lack of indoor health-based standards or action levels for most contaminants



Indoor Air Quality and Low-cost pollutant monitors cont'd

Responses to commonly asked questions such as

- Types of pollutants and environmental factors measured by available low-cost air pollution monitors
- Difference in meaning of alert from low-cost monitor and emergency devices (e.g., smoke detector, CO alarm)
- Typical lifespan of a low-cost air pollution monitor
- Accurate and precision concerns
- Low-cost monitor readings and indoor air quality actions to take
- Low-cost monitor readings and health



Question, comments, interested in collaborating:

- Laureen Burton Burton.Laureen@epa.gov
- Randy Chapman Chapman.Randolph@epa.gov

Websites:

- Indoor Environments Division Website
 - www.epa.gov/indoor-air-quality-iaq
- Air Sensor Technology and Indoor Air Quality
 - www.epa.gov/indoor-air-quality-iaq/air-sensor-technology-and-indoor-air-quality
- Indoor Air Quality and Low-cost pollution monitors
 - www.epa.gov/indoor-air-quality-iaq/low-cost-air-pollution-monitors-and-indoor-air-quality



Suggestions?
Questions?
Discussion