

# Preparing for Conversations about Personal Air Sensors

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MECKLENBURG COUNTY

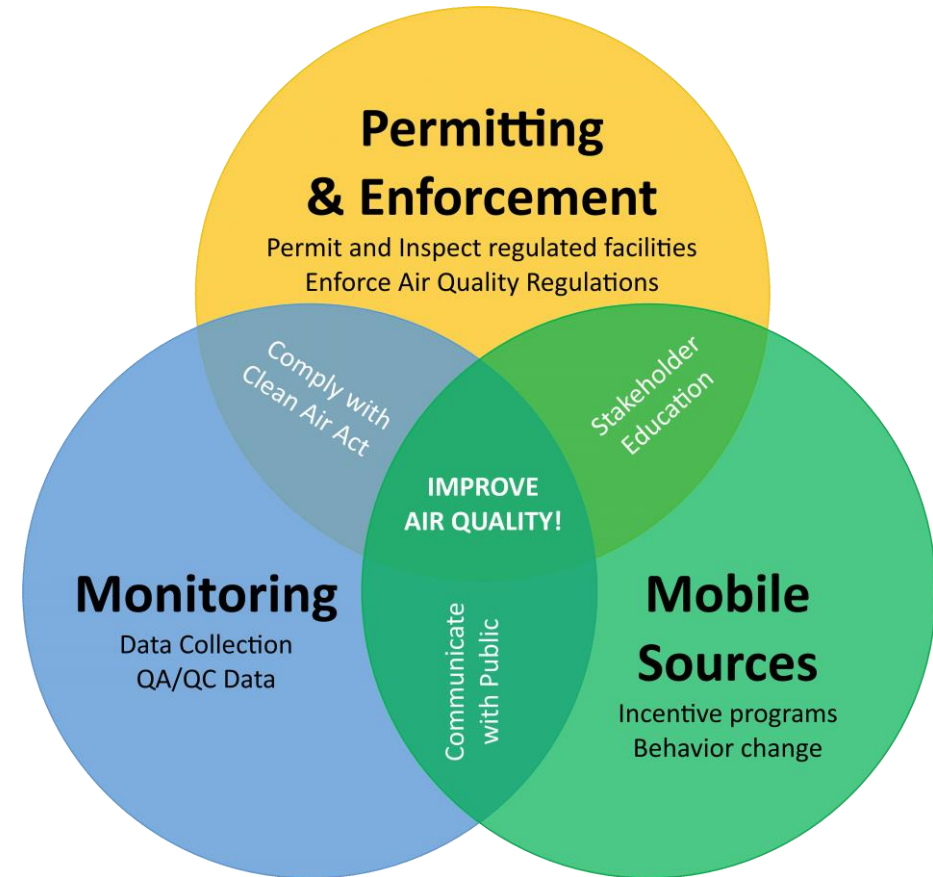
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# Mecklenburg County Air Quality

One of three local programs in North Carolina

## MISSION

Lead and assist Mecklenburg County, NC towards **meeting and maintaining compliance** with the health-based National Ambient Air Quality Standards.



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It's 2013.  
Sensor technology is on the horizon.  
What should we do?



# Student-led Research on Sensor Technology



## 2013 - Initial Research

- Industry overview (40 devices)
- Possible applications
- Challenges



## 2014 – Sensor Testing Begins

- Data collection started Oct. 28, 2014
- Two applications
- Working out the kinks



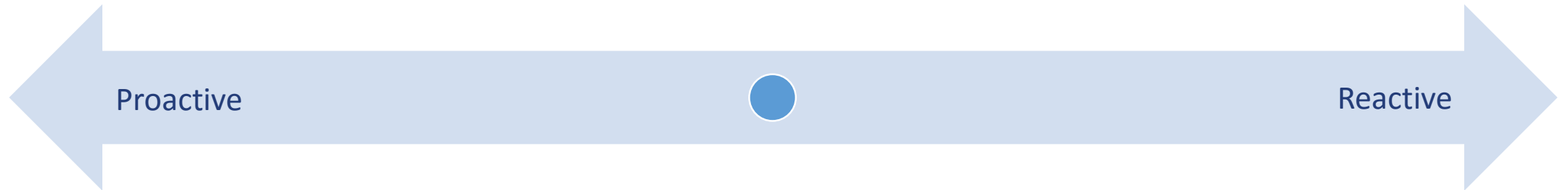
## 2015 – Collocation Focus

- Multiple sets of sensors
- Two Sample T Test
- Data collection ended May 27, 2016

# What We Learned Through Our Research

- Emerging Technology = Work in Progress
- Difficult to Compare Data to Reference Points
  - Units of measure
  - Averaging time

It's 2016.  
Sensor technology is HERE.  
What should we do?



# Preparing for Conversations About Sensors

Develop an internal guidance document that addresses the following:

- MCAQ's understanding of the "state of the science" of personal air sensors (reliability, accuracy, etc.);
- How sensor differs from MCAQ's monitoring network;
- **Recommended uses for air sensors;**
- **Protocol for addressing concerns or questions about "high" readings on sensors (i.e. how to interpret sensor readings and data).**

# Lets Talk!

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