

# NIOSH Center for Direct Reading and Sensor Technologies

May 2016

## What are our priorities?

The National Institute for Occupational Safety and Health (NIOSH) Center for Direct Reading and Sensor Technologies works with partners in industry, labor, trade associations, professional organizations, and academia. The Center focuses on fostering leaders, cultures, and systems to advance the development and use of sensors for occupational safety, health, well-being and productivity.

## What do we do?

- Coordinate a national research agenda for direct reading methods and sensor technologies.
- Develop sensor-relevant guidance documents, including validation and performance characteristics.
- Develop training protocols to help others learn how to select, use, and interpret the data of direct reading methods and sensor technologies.
- Partner with other Federal agencies (such as the Environmental Protection Agency and U.S. Air Force), the American Industrial Hygiene Association, and with academics such as the University of Cincinnati to increase the development and use of sensors in occupational health research.

## What have we accomplished?

- Published an article describing the NIOSH sensor development lifecycle and the Center. The article also invites others to partner with the Center on mutually important research and development projects.
- Collaborated as a key player in the National Nanotechnology Signature Initiative on Sensors for Nano and Nano for Sensors. The NIOSH sensor development lifecycle has been incorporated into the program activities and publications of the Signature Initiative and the Center is helping the Initiative explore ways that nanotechnology can protect and improve health, safety and the environment.
- Held three webinars on sensors and information sharing with the American Industrial Hygiene Association, the National Nanotechnology Coordination Office, and the Environmental Protection Agency.
- Hosted two seminars led by expert academic researchers on sensor use in occupational and environmental research. Each seminar was attended by approximately 50 individuals from within and outside of NIOSH.
- Developed outreach opportunities, including:
  - Participating in a “Sensor Fair” that demonstrated NIOSH-developed sensors to attendees at the International Society for Exposure Science.
  - Presenting at partner organizations, including the International Society for Exposure Science, the American Industrial Hygiene Association, the Health Physics Society, and the University of Cincinnati Sensors Community.
- Provided training to three American Industrial Hygiene Association Local Sections.

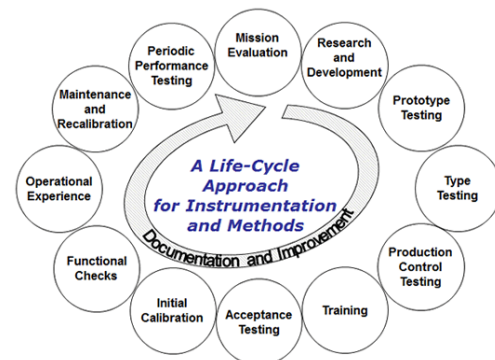
## What's next?

- Hold at least two expert seminars on sensor applications open to NIOSH staff and outside partners.
- Publish a guidance chapter on direct reading meters for gases and vapors in the NIOSH Manual of Analytical Methods.
- Conduct three focus groups with emergency responders to gather information on current practices and limitations for the selection, use and data interpretation of sensors used to assess hazardous conditions.
- Coordinate a workshop to bring together experts on the use of sensors in emergency response to develop a framework for a guidance document on best practices.
- Hold a webinar on issues for the ethical and legal use of sensors to increase awareness of these issues for developers and users of sensors.

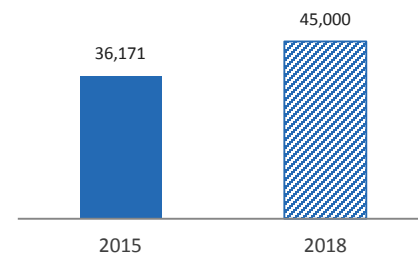
## At-A-Glance

The Center for Direct Reading and Sensor Technologies is a virtual center that provides leadership to develop recommendations on the use of 21<sup>st</sup> century technologies in occupational safety and health. This snapshot shows recent accomplishments and upcoming work.

### NIOSH Sensor Development Lifecycle

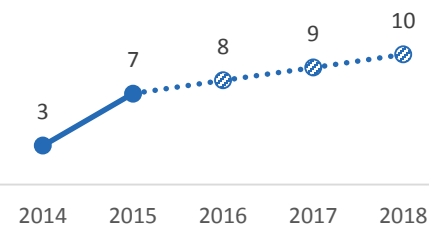


Total Number of NIOSH-Developed Sensors Sold by Manufacturers since 2012



Source: NIOSH Program Records

### Outreach Presentations and Trainings



Source: NIOSH Program Records