

# NIOSH - focus on worker health and safety



## NIOSH Mining Program

- Office of Mine Safety & Health Research
- Pittsburgh Mining Research Division
- Spokane Mining Research Division

- 11 Divisions and Labs located across 8 States
- 10 industry sectors
- **Create new knowledge** in the field of occupational safety and health and **transfer it into practice** through:
  - Research
  - Surveillance
  - Field investigations
  - Guidance/recommendations
  - Engineering Controls

# NIOSH - interaction with other federal agencies

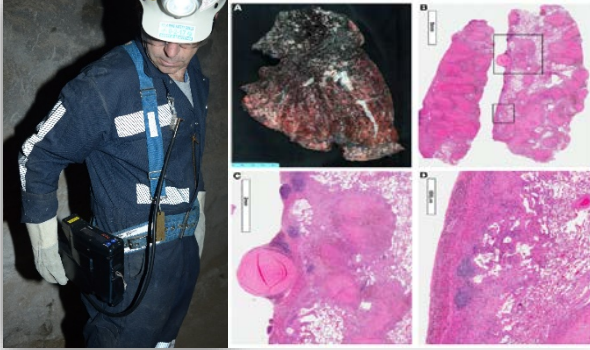


The NIOSH Mining Programs' **mission** is to **eliminate mining fatalities, injuries and illnesses** through **relevant research** and **impactful solutions**.



*Safe mines - Healthy miners*

# Our research portfolio addresses 3 overarching strategic goals



## Health

Reduce mine worker's risk of **occupational illness and disease**



## Safety

Reduce mine worker's risk of **traumatic injuries and fatalities**



## Disaster Prevention

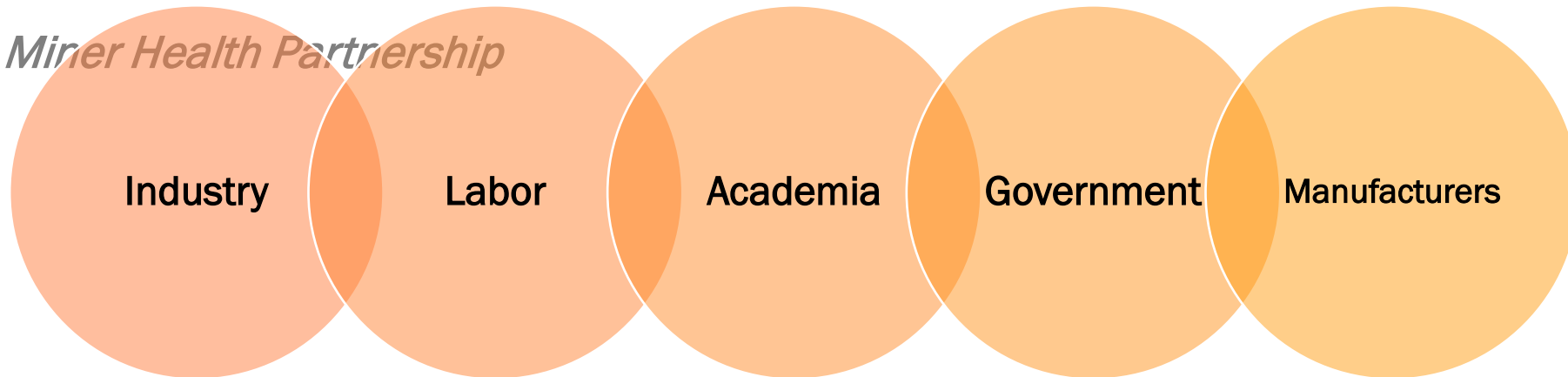
Reduce the risk of **mine disasters** and **improve survivability** of mine workers



# Our Partnership Model for Research

- NIOSH-MSHA Respirable Mine Dust Partnership
- MSHA-NIOSH Diesel Exhaust Health Effects Partnership
- **NIOSH Automation & Emerging Technologies H&S Partnership**
- NIOSH Proximity Detection Partnership
- NIOSH Refuge Alternative Partnership
- NIOSH Breathing Air Supply Partnership
- NIOSH Rock Dust Partnership
- *NIOSH Miner Health Partnership*

*“Mining research is most effective when it has been done in cooperation with the ultimate users of the research.”*



# Automation and Emerging Technologies Health and Safety Partnership

- **2018 intramural report:** *Mine of the future: disruptive technologies that impact our future mine worker health & safety research focus*
- MSHRAC Subcommittee Public **Workshop**
  - 9/10-11/18 Aurora, CO – report and presentations both available
- 12/2018 **Contract report:** *Safety and health research is needed to address the automation movement in the mining industry - Introduction, Insight, Context and Research Recommendations;* Joel Haight
- **RFI:** *Mining Automation and Safety Research Prioritization*
  - Posted 3/18/19; Closed 5/17/19
- **Haul Truck Health and Safety Issues – Research Roadmap**
  - 12/2019 initial draft
- NIOSH Automation and Emerging Technologies Health and Safety **Partnership**
  - 10/8-9/20
  - 8/17-18/21

# Extramural Research: Broad Agency Announcements (BAA)

- Funding 4 projects related to automation
- FY 21 solicitation included automation focus areas:
  - Roof bolter automation and operator dust exposure reduction
  - Big data analytics and machine learning techniques
- *Open to any concept related to miner H&S*
- Planned funding for 3 projects related to automation
  - 2 OEMs
  - 1 University/OEM collaboration
- Announcements usually come out in November on the NIOSH Mining web page
  - Proposals up to \$650,000 over 5 years (typically 3-year, \$350,000 contracts)

# Primary Domains

Organizing the work of the mining program by work / topic areas to facilitate systems thinking

