Request for Research Proposal

Protecting Worker Health through Sensor Technologies

Introduction to AIHA

The American Industrial Hygiene Association is one of the largest international associations serving occupational and environmental health and safety (OEHS) professionals practicing industrial/occupational hygiene in large corporations, small businesses and as independent consultants. Industrial hygienists anticipate health and safety concerns and design solutions to prevent them, applying science to identify and solve health and safety problems. Industrial/occupational hygienists also unite management, workers and all segments of a company behind the common goal of health and safety. AIHA’s 10,000 professional members anticipate, recognize, evaluate, and control environmental factors arising in or from the workplace that may injure, sicken, impair, or affect the well-being of workers and members of the community. They work in all industries with the largest numbers in manufacturing, government including the military, oil and gas industry, in various services, engineering and consulting firm, and in construction and utilities. More than half of AIHA’s members are certified industrial hygienists (CIHs), and many hold other professional designations. AIHA administers comprehensive education programs that keep OEHS professionals current in the field of industrial hygiene.

In 2013 AIHA approved a new content strategy to aggressively research and develop content that will define the field and advance the association’s leadership as a scientific and technical organization. After extensive environmental scanning and opportunity assessment, the Content Portfolio Management Team (CPMT) recommended six areas for investment. This recommended portfolio is well balanced between developing and strengthening current content and researching new areas of promise for industrial hygiene. The top 2015 research priority is exploring and accelerating the development of sensor technologies in industrial hygiene and occupational health and safety.

Research Project Objectives and Potential Methodology

Currently sampling technology exists for many known hazards/chemicals and unknown chemicals. However there is lack of reliable, cost-effective sensor technology to detect all the hazards in the workplace. Sensors are increasingly ubiquitous, intimate (on-body and in-body), and networked. Industrial/occupational hygienists need sensor technologies to offer real-time detection and provide real time response. IHs can use and interpret data from these technologies to keep up with new hazards and better capture current exposures. Data from sensor technologies can be used to increase credibility and promote risk communication in occupational health and safety. In the future citizens and workers
may also deploy their own sensors to detect potential health risks adding a new dynamic to occupational health and safety and risk assessment.

**Proposed Research Questions:**

1. What emerging sensor capabilities could be effectively deployed in hazard detection, management & communication in industrial hygiene and occupational health and safety?

2. What are the priority needs and development opportunities for new sensor technologies for industrial hygiene and occupational health and safety?

3. How will sensor technologies challenge existing IH/OH practices and training and what will IH/OHs need to take full advantage of emerging capabilities?

4. Are there any potential risks and unintended consequences to be understood and managed?

**Project Phase 1: Establish Research Knowledge Base**

To establish a research base, this project begins with an in-depth scan and analysis of emerging technological capabilities to:

- Create a framework for mapping and understanding the business landscape of this transformation.
- Identify companies active in developing this business. (The intent it not to promote specific companies. The research report need not name companies except where doing so illustrates proof of a technology’s capabilities and deployment.)
- Anticipate potential rates of adoption, describing need and possible barriers.
- Define the strategic opportunities for IH/OH and AIHA in accelerating these technologies.

**Project Phase 2: IH Needs Assessment**

This assessment would reach beyond the AIHA membership if possible to create the most complete picture. To be sure the needs assessment uses relevant language, we will pretest the needs assessment survey with selected IH volunteer working groups.

**Project Phase 3: Scientific Summit**

The scientific summit will occur in Q1 2016 with an exclusive gathering of key leaders positioned to establish AIHA’s credibility and commitment to promoting sensor technologies for industrial health and occupational health and safety. About 100 participants will be invited to a two day meeting. This will be a facilitated working meeting with clear objectives and outcomes. The purpose will be to analyze the implications of the AIHA research and propose a roadmap for developing sensor technologies for IH/OH. This roadmap will define the needs, strategic opportunities for progress, and the roles & responsibilities of those with a stake in successfully advancing a sensor technologies agenda.
**Throughout the Project: Industry Partners Collaboration**

Once potential companies active in this business are identified, AIHA will invite the most promising industry partners to a meeting to explore opportunities for developing sensor technologies for IH/OH. We will offer a preview briefing of the scan research to encourage participation. Those companies indicating strong interest in collaborating with AIHA will be invited to participate in the scientific summit.

**Seeking Proposals for Research Expertise**

AIHA is seeking qualified researchers to identify and analyze sensor technologies for applicability, potential development and rapid deployment in industrial hygiene and occupational health and safety. The critical expertise in this research project is the ability to analyze technologies and assess their viability in the next 3-5 years. If the research firm does not have adequate expertise in industrial hygiene and occupational health and safety, AIHA can identify and recruit an industry subject matter expert with good knowledge of current hazard assessment practices and needs to advise the project.

AIHA is also seeking a qualified survey research firm to conduct the proposed needs assessment. AIHA recognizes that some firms may not qualified to perform both research tasks. We will accept either comprehensive or separate proposals for the technology analysis scan and the needs assessment.

Proposing firms should specify their relevant expertise to conduct projects of this type. The credibility of the research will be essential to AIHA’s ability to organize industry interest and influence the direction of sensor technologies development in industrial hygiene. The research reports must serve a dual purpose of accelerating technology development and educating industrial hygienists in how their work will evolve with these new capabilities. This dual purpose requires research that while technical, also translates well and inspires action by industry leaders and policy makers. AIHA will be developing other content such as strategy toolkits, webinars and workshops to help members be at the forefront of sensor technologies. Your research deliverables should be easy to repurpose into these additional channels and media.

**Project Timetable and Deliverables**

The deadline for submitting research proposals is March 25. As we would like the Phase 1 research to commence in April, we plan to expedite our review and selection process. We will advise you of our target date for the decision once we can assess the number and complexity of proposals to be reviewed.

Since the technology analysis research will inform the needs assessment survey, we would like the first draft of this research to be complete by June 30. Our proposed timeframe for the needs assessment survey is August/September. The final research report, including the survey findings, should be complete by November 25.
We are seeking dates for the scientific summit late February/early March 2016. Your proposal should include a possible research presentation and participation in this two-day summit as a technical advisor. You will not be responsible for summit design or producing the summit report and roadmap.

The research report, survey results and other project materials are considered a work-for-hire and AIHA will retain the copyright for this research. AIHA will consider and may approve other authorized uses of this research if they are consistent with our project objectives and content strategy.

In this RFP, we have outlined a proposed research methodology. However, we welcome your expertise and ideas in proposing how we can best achieve our desired outcomes.

Application and submission information

Successful respondents to this RFP must describe how their proposed research methodology and deliverables will support AIHA’s objectives as outlined above. Your response should not exceed 10 pages and include:

- Proposed methodology, work plan, approach and timelines for completing the project
- A breakdown of the content elements to be included in the research report, and if known, a description of the format
- Your proposed research team and their qualifications
- Project budget with fees and anticipated expenses, preferably delineating what the essential tasks are as well as options that might strengthen the research. (AIHA is a nonprofit with finite resources and necessarily seeks the best value to accomplish credible research.)
- At least three references for work on similar projects and processes for similar organizations.
- If available, reports or samples of your work related to this type of project with similar organizations (as an addendum to your proposal).

All responses to this RFP are due by March 25. In advance of this deadline, we would appreciate an email confirming your intent to respond. AIHA aims to expedite the review and selection within two weeks. If we cannot meet this date, you will be kept apprised of the status of your proposal. We appreciate and recognize the time and work it takes to design and propose a project of this scope.

If you have questions about this RFP, you may contact Marsha Rhea, CAE, AIHA’s project advisor and research strategist, president of Signature i, LLC, at mrhea@signaturei.net. This project is under the supervision of Mary Ann Latko, AIHA Managing Director, Scientific and Technical Initiatives, mlatko@aiha.org.

Proposals may be submitted electronically to both Mary Ann Latko and Marsha Rhea. Any prior work reports and materials that cannot be submitted electronically should be mailed to the attention of Mary Ann Latko, AIHA, 3141 Fairview Park Drive, Suite 777, Falls Church, VA 22042 USA.