



HEALTHIER WORKPLACES | A HEALTHIER WORLD

CPAG Content Priorities Summary Document

Revised November 2020

Part 1: Introduction

What Every OEHS Professional Should Know About AIHA Content Priorities

Content Priorities are a critical component of AIHA's strategy for ensuring organizational success and relevance into the future. Likewise, understanding these Content Priorities can help shape strategies for individual career success and globally promote the relevancy of the occupational and environmental health and safety profession in the marketplace of tomorrow. Key questions and answers to help understand and apply AIHA Content Priorities are provided below.

What is a "Content Priority"?

Content is considered any offering produced in conjunction with AIHA for use for by members or non-members (e.g., publications, webinars, Professional Development Courses (PDC), conferences, JOEH/Synergist articles, etc.). Content Priorities are concepts or themes which have been identified as having the greatest impact on the value of AIHA content.

How are Content Priorities determined?

AIHA works with outside professionals to conduct research on the global trends most likely to impact the occupational and environmental health and safety profession in the future. This research, along with internally gathered data, is used to conduct a series of surveys and focus groups involving both AIHA members and non-members. CPAG reviews this data and recommends a set of Content Priorities for approval by the AIHA Board. This process occurs approximately every five years, with at least annual "pulse checks" to ensure the selected priorities remain the most relevant.

How are Content Priorities used?

AIHA Content Priorities are promoted to help volunteer groups and other contributors generate content ideas with increased potential for impact on the occupational and environmental health and safety industry and with associated stakeholders. These ideas may be in the form of content primarily focused on an identified priority, or content that integrates one or more priorities in the course of addressing a given hazard or environmental health and safety issue. The Content Priority Advisory Group (CPAG) facilitates the development of priority-focused content through interactions with volunteer groups and other stakeholders. In addition, CPAG is tasked by the AIHA Board with reviewing certain content proposals and making recommendations to the Board. The Board, and other entities that ultimately approve submitted content for development, consider proposals that integrate the Content Priorities.

What are the current AIHA Content Priorities?

A summary of each of the AIHA Content Priorities and the future trends that influence them are provided on the following pages. More in-depth information is provided in a "dashboard" for each priority which contains vision statements of desired future states, ideas for potential content initiatives, and information regarding initiatives in progress or completed. AIHA members can access these dashboards and engage in Content Priority related conversations and activities by going to the [Catalyst Community Webpage](#).

Part 2: Summary of Priorities



Big Data and Sensor Technology: New applications of sensor technologies are allowing for the faster collection and communication of data across a broader set of agents. At the same time, advancements in data analysis and Artificial Intelligence are combining formerly disparate data sets and automating decision-making. Together these developments will fundamentally alter the role of health and safety professionals. This priority focuses on helping OEHS professionals leverage cutting-edge technologies for collecting and integrating data to inform risk assessment and management decisions, and to stay relevant in the face of transformative change. Future Trends: *Dark Data, Anticipatory Intelligence, Human – Machine Incorporation, Personalized Artificial Intelligence, and Fast Data* (see Part 3).



Total Exposure Health: Human health outcomes are being recognized as the result of a complex interaction of factors including exposure to environmental agents, socioeconomic stressors, personal behaviors, and individual genomics. Advancements in science and technology are allowing for the more robust collection and integration of these factors to inform interventions and decision-making. This priority focuses on ensuring OEHS professionals are positioned to be valued participants in this discourse (e.g., Total Worker Health, Exposomics, Total Exposure Health) and recognized as the preeminent experts in the anticipation, recognition, evaluation, and control of exposures to environmental agents in the workplace, home and community. Future Trends: *Personalized AI and Rejection of Expertise* (see Part 3).



Exposure Banding: The continued addition of chemicals and other exposure hazards impacting the community and workplace far exceeds the capacity of the environmental health community to develop exposure level guidelines. As such OEHS professionals are often left with few resources to help evaluate exposures and make appropriate risk management decisions using traditional methods. In response, NIOSH and other entities have developed an occupational exposure banding process for use in exposure risk assessments. This priority focuses on educating OEHS professionals on how to apply banding concepts in evaluating exposures and controls across environments, and on exploring how they relate to technological advancements involving integrated decision-making. Future Trends: *Bifurcated Workforce and Anticipatory Intelligence* (see Part 3).



Communicating OEHS Concepts: Increasing growth and diversification in information sources and communication channels is continuing to dilute the influence of science-based expertise. At the same time, public skepticism toward traditional experts is growing in the face of unresolved concerns and perceived biases as various advocacy groups leverage scientific systems for their benefit. These trends couple with technological advances around data analysis and Artificial Intelligence to further diminish the reliance on scientific expertise. This priority focuses on developing the “soft skills” of OEHS professionals to listen, relate, communicate and collaborate effectively with a broad spectrum of stakeholders in order to promote the influence and value of the OEHS profession in the modern social-technological landscape. Future Trends: *21st Century Guilds, Rejection of Expertise, and More Human Humans* (see Part 3).



Serving the Changing Workforce: People are increasingly engaging in nontraditional work arrangements such as gig work, contract work, telecommuting and working for multiple employers. In addition, the workforce is aging, raising issues around health, chronic disease, and information processing. Couple with global economic shifts and migration, these changes will significantly impact the evolution of occupational and environmental health concerns and how they are managed. This priority focuses on educating OEHS professionals on the circumstances driving these changes, the implications they will have, and how the OEHS community can respond to protect human health in the workplace and community. Future Trends: *More Human Humans, New Forms of Work, Aging, and 21st Century Guilds* (see Part 3).

Part 3: Global Trends

AIHA teamed with other professional associations to commission a study of drivers of change impacting associations and their communities. Below is a summary from this study of the key future trends seen as impacting the occupational and environmental health and safety profession.

- **Rejection of Expertise:** Public skepticism toward well-credentialed experts is growing, in part because of a perception that they have failed to recognize or address persistent sociopolitical problems. Expert pronouncements are having less impact on public perception, with the public turning instead to non-credentialed and “unofficial” sources for guidance and information. At the same time, information is increasingly able to route around gatekeepers, diminishing their influence and ability to shape discussion and debate.
- **Anticipatory Intelligence:** Predictive analytics will be used to anticipate needs, opportunities and threats in the environment. Big data, data analytics, and artificial intelligence are enabling predictive analytics used to anticipate needs, opportunities, and threats in an organization’s environment. The market for predictive analytics is growing rapidly, and major computing companies are key players. Organizations view predictive analytics as one of the most important ways to leverage big data.
- **Dark Data:** Rapidly accumulated data that is rarely used (IBM estimates that 90% of sensor data accumulated is never used). The drive to leverage big data will lead to more data-gathering and better use of existing data. According to Gartner, dark data are “information assets that organizations collect, process, and store in the course of their regular business activity but fail to use for other purposes.” A significant fraction of sharing on the internet is “dark social” sharing links via instant messaging, email, and text—communication that often is not recorded or studied. New approaches will allow better gathering, management, and exploitation of ever-expanding data.
- **Fast Data:** Emphasis on real time decision; processing and acting on the data with speed creates value. “Fast data” emphasizes real-time decision making, based on the idea that the greatest value from data comes when the analytics can be used immediately. Examples include fraud detection, recommendation engines, personalization, and real-time demand forecasting. In all these cases, the value comes from quickly processing and acting on the data—and this value can diminish quickly as the data get stale.
- **Personalized AI:** Increasing proliferation of sensor technology, wearables and human-machine hybrid work. Rapidly advancing machine learning is combining with data analysis to enable software equipped with increasingly accurate pictures of consumers’ lives and likes. This technology can support personalized microtargeting and allow organizations to offload customer service work to chatbots and other interfaces. Individuals may interact more and more with software that seems to know and understand them, sometimes better than their friends.
- **More Human Humans:** Accelerating speed of change and continual needs for retraining, adapting to new technologies. Automation will steadily increase the relative value of certain human qualities in work, including social skills and creativity. In the age of artificial intelligence, humans will remain relevant not by knowing but by thinking, listening, relating, and collaborating at the highest level.
- **Aging World:** Implications of an aging workforce. Most of the world’s societies are aging, with the shares of elderly poised to rise steeply in both the advanced economies and most emerging economies. This could reshape political, financial, and social priorities as countries grapple with issues related to aging populations, such as rising dependency ratios, retirement and the workforce, and costs of caring for older citizens. These issues will play out for associations in areas such as workforce and benefits.

- **21st Century Guilds:** Growing advocacy needs for an increasingly independent workforce. Deep structural changes in the world of work—automation, the gig economy, and broader economic trends— are shifting the balance of power between employers and workers in ways that favor employers. Millions of people are finding their livelihoods put at risk by 30-hour workweeks, smart machines, and the erosion of middle-class occupations, among other trends. New kinds of entities are arising to support workers' rights and protections in the face of inexorable change.
- **Bifurcated Workforce:** Differentiation between mission-critical employees and task-oriented workers. Trends may create two classes of American workers: mission-critical players who move the organization forward, and foot-soldiers who do the basic work. The latter are regarded by employers as relatively disposable, with lower prestige and pay. Such a two-tiered workforce is not assured, but it is being driven by deep structural forces including the expansion of gig and freelance work and the rising inequality of opportunity for workers.
- **New Forms of Work:** Ever changing workplace environment. Freelance, gig, contract, and temporary work and the infrastructure to support them (e.g., online platforms and reputation systems) are growing. The number of independent professionals is expanding, and networked organizations rely on them. Associations will have new opportunities to serve these workers and advocate for their interests.
- **Human – Machine Cooperation:** Increasing need for soft skills, mentoring, experiential learning. Though many forecasts include substantial job losses due to automation—and such losses are indeed already occurring— many jobs will rely on cooperation between humans and machines. While less disruptive than total automation, human–machine cooperation will be a massive shift, with entire work processes becoming machine-oriented and humans learning to complement automation's role.