

# Megatrends and AIHA's Content Priorities

Presented by:



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# Intro

- Agenda
  - Development of AIHA content strategy & priorities
  - 5 global trends and how they impact the IH community
  - 7 AIHA content priorities to address global trends
- Value
  - Perspectives on what may affect our work in going forward
  - Awareness of resources under development by AIHA
  - Identify opportunities for engagement to influence our industry

# Content Portfolio Advisory Group (CPAG)

- Provides input & advice to AIHA board and staff regarding AIHA content
  - e.g., documents, articles, white papers, fact sheets, PDCs,
  - development & research agendas
  - identify emerging topics and content needs
  - review proposals & funding requests
  - review existing content and make product lifecycles
- Membership
  - Six members, 3-year term, two rotate off each year
  - Application process, balanced representation (industry sectors, career phase, area of practice/specialty)

# Global Megatrends

*How will they impact the IH profession?*

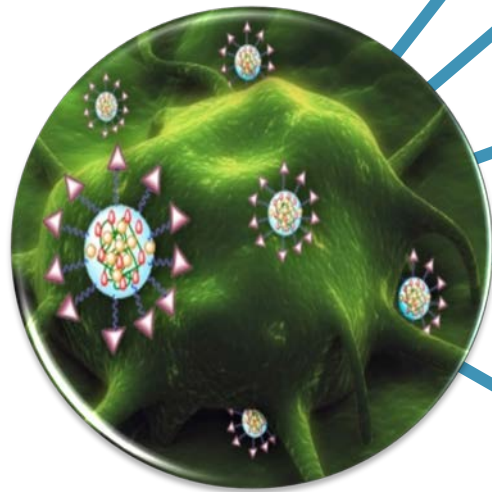
# Environmental Scanning Process

- Engagement of outside research firm
- 5 broad research categories:
  - Technology & Innovation
  - Global Change & Markets
  - Changing Society & Workplace
  - Policy & Regulation
  - Knowledge, Education, & Research
- For each category
  - key elements of importance
  - forecast trends
  - potential impacts to industrial hygiene

# Technology & Innovation

## • Impacts?

- Better ID of risks across workers & workplaces
- Personalized IH & health impacts
- Crowd sourced data & analysis
- Risks of "silicon workers"
- New exposures/risks



New Exposures  
(syn bio,nano,3D)

Internet of  
things

On-body  
sensors

Cognitive  
applications

Personalized  
genetics

# Global Change & Markets

- Impacts?

- Supply chain transparency, responsibility
- IH's reaching across borders
- Emerging market IH infrastructure needs
- Emerging market companies meet advanced market environment



Regulations & Standards

Imported Dangers

Risk tolerance

Rapid development

Emerging markets

# Changing Society & Workplace

- Impacts?

- IH in a telecommuting & porous job market
- Tracking exposures/health across jobs
- Older worker risks, leveraging knowledge
- New worker outreach & education
- IH's addressing risk at design level



New STEM jobs/workers

Aging workforce

Fluid workplace

Total worker health

Focus on prevention



# Policy & Regulation

- Impacts?

- Erosion of faith in traditional scientific research
- Rising influence of popular campaigns
- Diminishing risk tolerance
- IH's in procurement & design
- IH's in worker wellness



Citizen science

Scientific authority

Online issue campaigns

Reduced risk tolerance

Stewardship & wellness

# Knowledge, Education & Research

- Impacts?

- Changing face of worker training
- Changing face of IH learning
- Cognitive collaboration (people/AI)
- Big data analysis, online torrent
- Credibility of science, trust



Learning analytics

Online vs. traditional

Augmented reality

Machine learning

Big data analytics

# AIHA Content Priorities

*Where are our efforts focused?*

# Content Strategy

- Process
  - Discovery, Prioritization
  - Research
  - Development
  - Evaluation
- 7 Content Priorities
  - Focus on what is important for bridging the gap from where we are to where we want to be
  - Focus to ensure we are equipping IHs to work effectively into the future

# Occupational Exposure Banding

- What is it?
  - OELs only exist for about 2-10% of chemicals with significant use and face challenges in staying current.
  - OEBs help set benchmarks for exposures and controls when current OELs are not available.
- Initiatives?
  - Develop resources to advocate hazard banding as an effective industrial hygiene practice
    - **body of knowledge**
    - educational resources for membership (publications, courses)
    - online/collaborative tools for creating, sharing and using OEBs

# IH Business Case Development

- What is it?
  - Communicating IH relevancy in a competitive EHS marketplace
  - Communicating value of IH to C-suite and general public
- Initiatives?
  - Improving & characterizing the IH practice from a business perspective
    - **insert business case narrative into existing/new products**
    - **identify & promote existing business case products**
    - outreach to internal & external stakeholders to enhance products
    - PDCs, road courses, webinars for members

# Sensor Technologies

- What is it?
  - Addressing the challenges of the rapid increase the diversity of remote sensors and volume of deployment
- Initiatives?
  - Ensuring quality data collection and data interpretation
    - **direct reading instrument (DRI) body of knowledge**
    - **DRI certificate program**
    - Engage with NIOSH Center for Direct Reading and Sensor Technologies
    - DRI quality assurance and evaluation program
    - Partner with sensor developers to address IH needs & value

# Big Data

- What is it?
  - Massive increase in available exposure and health related data
  - Rapid advancement in data analytics
- Initiatives?
  - Develop resources to assist IH's in evaluating and leveraging large datasets, as well as related tools for data analytics
    - **mapping of big data development plan**
    - collaborative IH databases
    - IH focused analytical tools
    - educational resources (e.g., PDCs, webinars)



# Total Worker Exposure

- What is it?
  - Addressing the worker *exposome*, or total set of exposures experienced by workers both on the job and outside of work
- Initiatives?
  - Promoting IH engagement in improving overall worker health
    - **content gap analysis of NIOSH total worker health resources**
    - educational tools and content for membership
    - environmental scan on workforce demographics across changing landscape of employment, both nationally & internationally

# Global IH / OH Standard of Care

- What is it?
  - Companies are assuming IH responsibilities from one end of the supply chain to the other, crossing borders and risk environments
  - Movement toward a universal OEHS standard of care
- Initiatives?
  - Repurposing existing content to international context and engage stakeholders/partners to develop a universal OEHS standard of care
    - **align current international strategy**
    - engage international partners to repurpose content
    - identify emerging market partners and experts
    - establish consistent guidelines and auditing

# Emergency Preparedness & Response

- What is it?
  - Engaging IH skill sets in the preparation and response to natural disasters, chemical/biological/radiological releases, and terrorism events.
- Initiatives?
  - Development and promotion of IH role in mitigation, planning, response and recovery phases of incidents
    - **develop a body of knowledge**
    - Create modules & webinars to support BoK
    - Continue to support and promote ERPGs
    - Outreach/registries for instrumentation & emergency responders

# Moving Forward

*Where do we take it from here?*

# What can you do?

- Anticipate, recognize, evaluate and take control
  - Understand how these trends impact your work as an IH and take measures to address them
- Engage and advance our profession
  - Volunteer group projects to support content priorities
  - Provide input regarding scanning activities and evaluation of content
  - Apply to serve on CPAG

# Thank You!