SIX EMERGING TECHNOLOGY TRENDS RESHAPING ERGONOMICS & OEHS

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AGENDA

As occupational and environmental health and safety (OEHS) pushes to advance beyond reactive compliance toward a model of predicting and preventing injuries in the workplace, emerging technologies are redefining how organizations manage ergonomics, risk, safety, and performance in industrial environments.

This session explores six critical technology trends that will define the next decade of OEHS innovation, helping leaders understand how their business can excel across critical categories in OEHS management.

OEHS managers and executives will:

- gain insight into the business benefits, opportunities, challenges, and risks these technologies present.
- learn how to position their organizations for competitive advantage.

TOP 3 EHS TRENDS

01

REDUCING SERIOUS INJURIES AND FATALITIES (SIFS)

The significance of this goal is growing.
40% of organizations ranks SIFs as top EHS priority.
The frequency of SIFs remain high.

Source: Verdantix Global Corporate Survey 2025: EHS Budgets, Priorities And Tech Preferences.

TOP 3 EHS TRENDS

02

EMBRACE A HOLISTIC APPROACH TO WORKER WELL-BEING

Physical risks are a focal point. More holistic approach to worker well-being.
Account for both physical and mental health, to avoid blind spots and to interconnect disparate data.

TOP 3 EHS TRENDS

03

FOCUS FOUNDATIONAL ELEMENTS OF TECHNOLOGY STRATEGY

Poor data quality is the key obstacle to successfully deploying AI.
Overcome desperate and inconsistent processes, & data.
Build solid data infrastructure to get any value from AI.

TOP WORKPLACE SAFETY & HEALTH TRENDS FOR 2026

1

AI Needs a Foundation: Clean, Connected Data

Poor data quality is the #1 barrier to deploying AI

- Build solid EHS data infrastructure

2

Serious Injuries & Fatalities (SIFs) Take Center Stage

40% of organizations rank SIF reduction as a top priority

3

Worker Well-Being Goes Holistic

Account for both physical and mental health

- Avoid blind spots in assessing risks

Source: Verdantix Global Corporate Survey 2025: EHS Budgets, Priorities And Tech Preferences.

What AI Is (and Isn't)

- Can it see and recognize?
  → Computer Vision
- Can it find patterns in data?
  → Analytics
- Can it recommend actions?
  → Machine Learning

AI enhances human judgment – it doesn't replace it.

Context, nuance, and experience remain uniquely human.

"Use AI to outsource your tasks, not your critical thinking."

AI democratizes information, not wisdom.

TECHNOLOGY TRENDS

EMERGING TECHNOLOGIES ARE REDEFINING HOW ORGANIZATIONS MANAGE RISK, SAFETY, AND PERFORMANCE IN INDUSTRIAL ENVIRONMENTS.

TECHNOLOGY TRENDS

Emerging technologies are redefining how organizations manage risk, safety, and performance in industrial environments.

This session explores six critical technology trends that will define the next decade of Environmental, Health, and Safety (EHS) innovation.

Executives will gain insight into the business benefits, opportunities, challenges, and risks these technologies present. And, how to position their organizations for competitive advantage

Trend #1: Perform AI Agents & Assistants

Trend #2: Learn AI-Enhanced Data Management

Trend #3: See Computer Vision & Video Analytics

Trend #4: Copy Digital Twins

Trend #5: Connect Autonomous & Connected Worker Technologies

Trend #6: Collect Control of Work Platforms

TREND #1: PERFORM AI AGENTS & ASSISTANTS

Intelligent systems that autonomously complete EHS-related tasks and interact conversationally with humans.

Trend #1: Perform AI Agents & Assistants

TECHNOLOGY TRENDS

	DRIVERS	BENEFITS	OPPORTUNITIES	CHALLENGES	RISKS
TREND #1: PERFORM **AI AGENTS & ASSISTANTS**	Reduce workload Increase efficiency	Automate routine compliance, reporting, and documentation	Integrate into EHS workflows	Trust, data governance, and transparency in AI decisions	Over-reliance on automation without human oversights
TREND #2: LEARN **AI-ENHANCED DATA MANAGEMENT**	Speed up data management Augment tedious data management	Enables search, performance dashboards, scenario modelling, and predictive analytics	Integrate multiple data streams	Data quality, privacy, and interoperability	Misrepresentation of instructions and poor-quality data
TREND #3: SEE **COMPUTER VISION & VIDEO ANALYTICS**	Proactively address issues Low hardware cost, fast ROI	Proactive risk prevention and reduced human supervision	Integration with wearables and control systems for closed-loop safety	Privacy and workplace acceptance	Data security breaches, bias in recognition algorithms

TREND #2: LEARN AI-ENHANCED DATA MANAGEMENT

Machine learning (ML) and Multi-Layer Perceptron (MLP)-driven tools that cleanse, find, organize, and analyze EHS data for insights.

Trend #2: Learn AI-Enhanced Data Management

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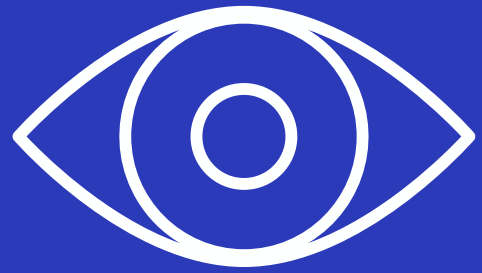
TREND #3: SEE COMPUTER VISION & VIDEO ANALYTICS

AI-driven video systems that detect hazards, unsafe behaviors, or non-compliance in real-time.



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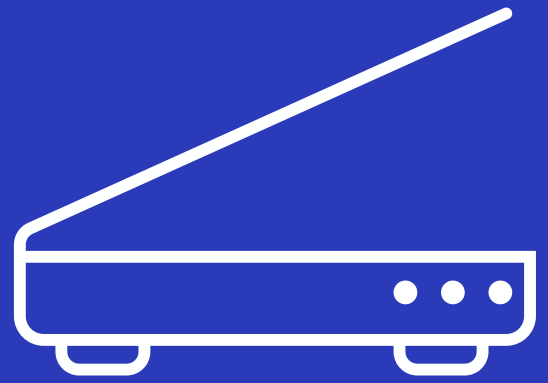
TREND #4: COPY DIGITAL TWINS

Virtual replicas of physical assets or systems used to simulate operational and safety scenarios.



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TECHNOLOGY TRENDS

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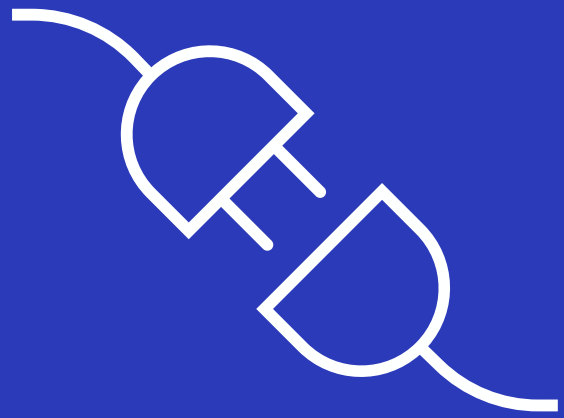
TREND #5: CONNECT AUTONOMOUS & CONNECTED WORKER TECHNOLOGIES	Improve efficiency, minimize errors, perform hazardous tasks	Automate hazardous tasks Monitors worker vitals, fatigue, and location	Integration of robotics and AI to augment worker capabilities	Worker acceptance High capital costs	Data privacy, cybersecurity, and interoperability gaps
TREND #6: COLLECT CONTROL OF WORK PLATFORMS	Reduction of SIFs	Reduces paper, improves visibility, ensures proper authorization	Integration with contractor management	Resistance to changes from manual systems	Overcomplex configurations Poor training reducing adoption

TREND #5: CONNECT AUTONOMOUS & WORKER TECHNOLOGIES

Autonomous mobile robots (AMRs), wearable sensors, and connected safety platforms integrating human-machine collaboration.



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TREND #6: COLLECT CONTROL OF WORK PLATFORMS

Software integrating permits, risk assessments, and lock-out/tag-out procedures into digital workflows.

Trend #6: Collect Control of Work Platforms

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TECHNOLOGY TRENDS

INTERCONNECTED ECOSYSTEMS

DATA, DEVICES, AND DECISIONS CONVERGE

EHS IS EVOLVING FROM REACTIVE COMPLIANCE TO PREDICTIVE INTELLIGENCE

EXECUTIVE INSIGHTS

Business Value: Reduced incidents rates, improve efficiency, faster compliance, and better foresight.

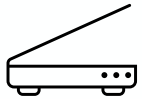
Leadership Readiness: Technology alone will not deliver safety. Culture and integration will.

Leadership Call: Transition EHS from compliance enforcer to strategic risk intelligence function.

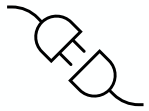
- By 2026, AI-enabled EHS platforms will become industry standard.

- Data mastery is now the foundation of EHS digitization, enabling automation, AI, and advanced analytics

- Computer vision is becoming a core EHS capability. Scalable across operations. Measurable ROI.



- Digital twins shifts EHS from incident analysis to continuous operational foresight.



- Expect rapid convergence of robotics, wearables, and AI analytics to redefine frontline safety management.

- A digital CoW platform is the nervous system of industrial risk control. Vital for operational integrity.

QUESTIONS?

WHITE PAPER: WHY EHS PROFESSIONALS CAN'T AFFORD TO IGNORE AI

SCAN THE QR CODE TO DOWNLOAD & LEARN:

- Trends in rates of serious injuries, and their causes
- How AI can help identify potential for serious injuries and fatalities (PSIF) risks
- Use cases of AI to predict and prevent injuries
- What to look for when evaluating EHS vendors and AI software