



AMERICAN SOCIETY OF
SAFETY PROFESSIONALS

Trust, Ethics and Governance: How Safety Leaders Are Thinking About and Using AI

Supported by the ASSP Foundation

Table of Contents

01

Executive
Summary

03

The AI-EHS
Adoption
Journey

06

What's Driving
Adoption: Goals,
Applications
and Outcomes

09

Ethics and
Governance

12

Implementation
Readiness and
Barriers

14

Building AI-
EHS Literacy
and Workforce
Readiness

17

What This
Means for the
Profession and
ASSP's Role

19

About This
Research:
Methodology

20

About ASSP

Executive Summary

Artificial intelligence (AI) is changing rapidly, and its role in environmental health and safety (EHS) is taking shape in real time. Organizations are approaching AI in different ways, with limited information about how others are navigating adoption and what they are learning along the way.

Based on a survey of nearly 1,000 safety professionals, research from the American Society of Safety Professionals (ASSP) provides a benchmark for this changing landscape. AI-EHS adoption is a staged progression, not an overnight shift. The survey data suggests that organizations typically take one to two years to move from discovery and experimentation toward scaling and integration, and just 5% currently consider themselves fully integrated.

For organizations still on the sidelines or very early in the journey, the timeline itself is significant. The capabilities that support more advanced AI use develop over time, suggesting organizations that begin building experience now may be better positioned as AI becomes more deeply embedded in EHS.

But simply moving forward does not guarantee steady progress. Organizations can realize practical benefits early, while more sophisticated applications and outcomes take longer to develop. Data readiness, governance, ethical concerns and workforce capabilities all influence that progress, highlighting the organizational foundations needed to put AI to work effectively in EHS.

Key Findings

1. Culture, ethical concerns and data quality stand out as strong predictors of AI adoption.

Organizations further along in AI adoption place greater importance on AI, report fewer ethical concerns and have higher-quality data. Among organizations with AI integrated into their EHS programs, 77% consider it critically or very important, compared with 29% of those at the earliest stages.

2. Quick wins emerge early, while more ambitious outcomes take time.

Reducing repetitive work and generating actionable insights are among the earliest returns of AI adoption. More sophisticated outcomes are not widely achieved until organizations fully integrate AI into their operations, while serious injury and fatality (SIF) reductions and cost savings remain largely out of reach.

3. Experience shrinks ethical concerns, but human oversight remains essential.

Ethical concerns increasingly center on decisions regarding worker safety, SIF risks, interventions and discipline. Governance grows with adoption, yet nearly half of organizations lack AI ethics policies.

4. Data quality remains a challenge throughout the AI-EHS journey.

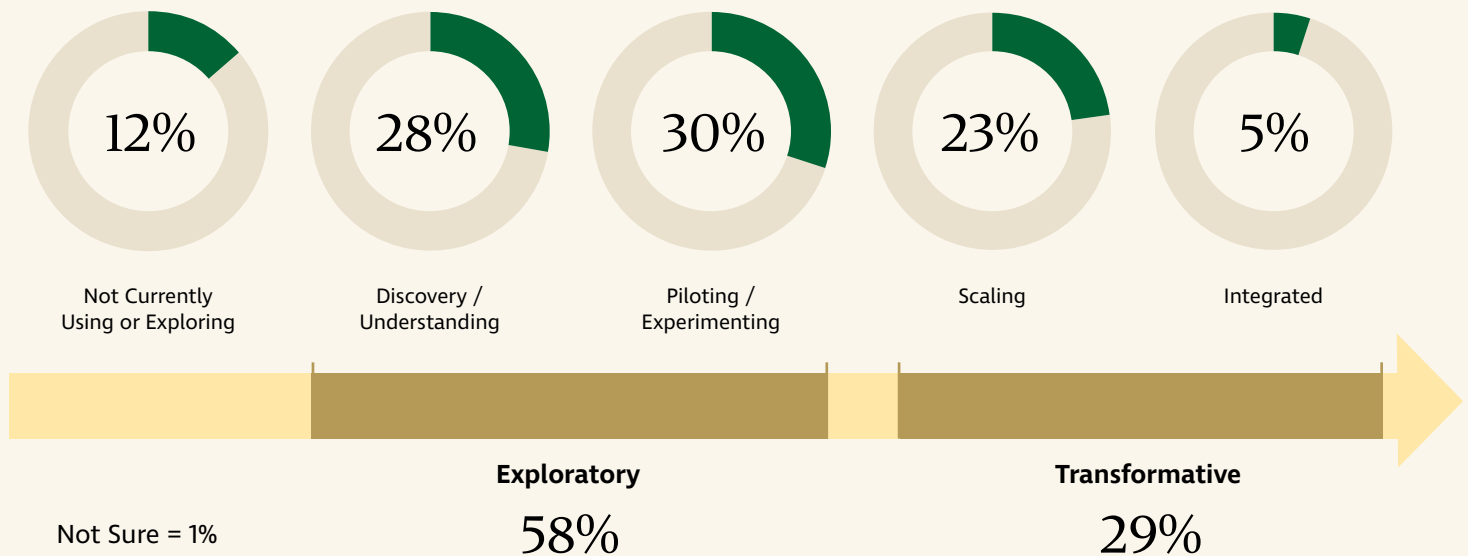
Data quality is a barrier for 62% of organizations, and the challenge persists across every adoption stage. Reliable, usable data remains a fundamental requirement for more sophisticated AI applications.

5. Training is linked to stronger AI-EHS knowledge and confidence.

Safety professionals who have attended AI training report greater knowledge, comfort interpreting AI-generated metrics, and perceived impact on safety decision-making. Yet about 2 in 5 have received no formal AI training, and EHS-specific AI education is even more limited.

The AI-EHS Adoption Journey

AI Adoption Journey



AI adoption in EHS is not a single step. Organizations progress as they build knowledge, test applications, expand their use of AI and eventually integrate it more fully into EHS operations. The research identifies five stages along that journey:

- 1. Non-adopters:** Not currently using or exploring AI for EHS.
- 2. Discovery/understanding:** Learning how AI works and exploring potential use cases and tools.
- 3. Piloting/experimenting:** Running a limited number of pilot projects focused on narrowly defined use cases.
- 4. Scaling:** Applying AI more widely across the organization to support strategic business objectives.
- 5. Integrated:** Fully operationalizing AI and integrating it across departments and teams.

Throughout this report, discovery and piloting organizations are considered exploratory, reflecting the earlier stages of the AI-EHS journey. Scaling and integrated organizations are transformative, reflecting more mature adoption, more advanced AI applications and greater realization of AI's potential benefits.

66% of organizations began their AI-EHS journey in the last 18 months

The Predictors of Adoption

The analysis revealed three strong predictors of AI adoption:

- 1. **Organizational culture:** A culture or perception that AI is critical or very important to the success of the organization’s EHS programs. Organizations further along in their adoption journey are more likely to have this view — a full 77% of EHS professionals at integrated organizations compared with just 29% of those in the discovery stage and 15% of non-adopters.
- 2. **Ethical concerns:** Low levels of concern about the ethical implications of AI relative to other organizations.
- 3. **Data quality:** High-quality EHS and workforce data is associated with more advanced, transformative adoption.

Adoption varies by organization size and industry.

AI Adoption, by Organization Size

5,000+ employees	Under 250 employees
45% transformative 7% non-adopters	19% transformative 16% non-adopters

Insurance Leads AI Adoption by Industry



Half of insurance organizations are transformative, compared with one-third or fewer in every other industry surveyed.

An Accelerating Road Ahead

Today's adoption curve may look very different within two years. While most organizations are in the exploratory stages, more than half expect to be in the transformative stages within two years.

Today 1 in 20
are *fully integrated*

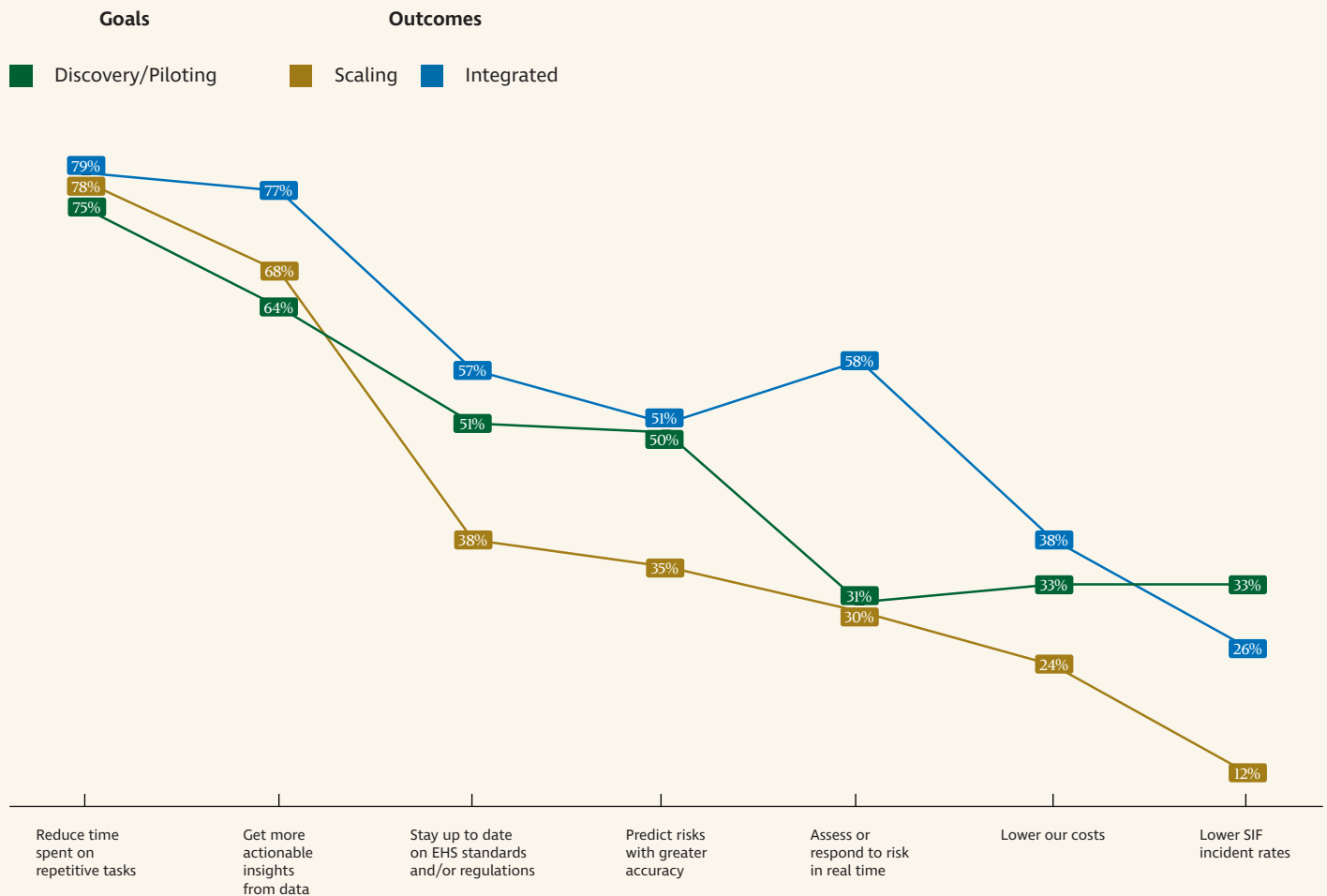
In two years
1 in 5
Expect to be *fully integrated*

What Does a Transformative AI-EHS Organization Look Like?

- Prioritizes AI as important to EHS success
- Shows greater confidence in AI's role in EHS
- Expresses lower ethical concerns about AI
- More likely to have AI-EHS governance in place, including policies and strategies
- Reports higher-quality data and collects more types of workplace data
- Builds greater AI knowledge and training, though gaps remain
- Has more experience with AI, often with a journey spanning one to three years or longer

What's Driving Adoption: Goals, Applications and Outcomes

AI-EHS Goals and Outcomes by Adoption Journey



Organizations don't have to reach full AI integration to see results. Some quick wins emerge early, particularly around saving time and getting more insights from data. But realizing more complex applications of AI, such as predicting and responding to risk, is not widely achieved until full integration. Some outcomes, like SIF reductions and cost savings, remain largely out of reach.



Practical Benefits Emerge Early

Early AI applications tend to tackle individual, approachable tasks. Report development and tailored education and training are among the more accessible applications and are perceived as some of the most effective applications.

They also line up with two clear benefits: reduced time on repetitive tasks and more actionable insights from data. Organizations begin realizing both early in their AI journey.

More Advanced Outcomes Emerge in Late-Stage Adoption

The path gets bumpier as organizations move into more advanced applications. The goals-and-outcomes data shows a clear pattern:

- **Quick wins stick.** Productivity and data benefits remain strong as organizations scale.
- **More ambitious outcomes take time.** AI integration enables organizations to stay current with EHS requirements, predict risk and respond to risks in real time — capabilities that are not widely achieved at earlier stages.

Some Outcomes Remain Difficult to Realize

Cost and SIF rate reductions remain largely out of reach, even for organizations with fully integrated AI.

For cost savings, timing may be part of the story, with upfront AI investments potentially outpacing returns.

SIF reduction presents a different challenge. EHS professionals express far more confidence in AI's ability to organize information, automate reporting, evaluate data and detect patterns than in its ability to identify or mitigate SIF-related risks.

Real-time monitoring and alerts may sit at that boundary. The application remains limited and has the lowest effectiveness rating studied. For now, AI appears strongest at helping EHS professionals understand and apply information. As AI moves from helping EHS professionals understand information to informing real-time safety decisions, human oversight remains critical in evaluating AI's outputs, applying professional judgment and determining how to act on the information it provides.

48%

of safety professionals express a great deal of concern about automatically generated discipline, interventions or risk-cause assignments

Applications, by Stage & Effectiveness

Applications generally emerge at different stages of AI-EHS adoption. Percentages show the share of users who rate each application as effective.

Entry Level

- Report development: 79%
- Tailored education and training: 68%

More Advanced

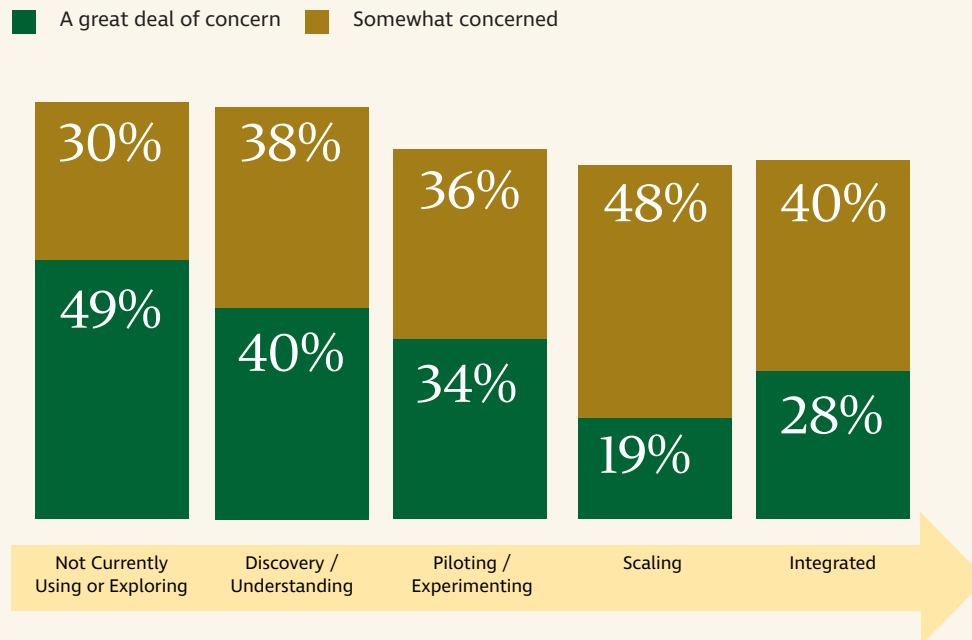
- Incident analysis and pattern recognition: 70%
- Resource optimization: 64%
- Predictive analytics/predictive resource management: 61%
- Automated compliance: 60%

Limited Adoption

- Real-time monitoring and alerts: 49%

Ethics and Governance

Concerns Over Ethical Questions and Risks With AI for EHS, by Adoption Stage



Safety professionals are particularly attuned to the ethical implications of using AI in the workplace. Experience with AI appears to temper some ethical concerns, but it does not erase them. About 5 in 10 non-adopters express a great deal of concern about the ethical questions and risks associated with AI for EHS, compared with about 3 in 10 professionals at integrated organizations.

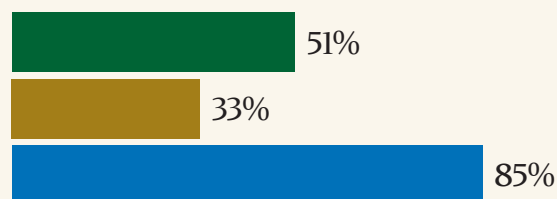
More telling is where concern remains strongest. EHS professionals are less worried about using AI for routine tasks than about what happens when its outputs begin shaping decisions and actions.

Human Oversight Remains a Clear Boundary

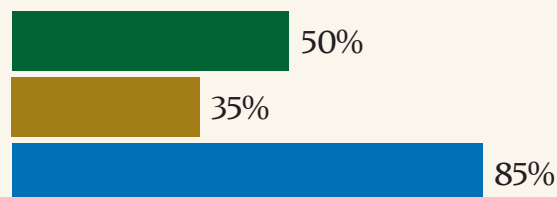
■ A great deal of concern ■ Somewhat concerned ■ Overall

The stakes rise when AI informs decisions about worker safety, SIF risks, interventions or discipline. Without human context and validation, inaccurate or incomplete information can have dire consequences. AI tools can also be misused or applied beyond their intended purpose. Human oversight provides an important check on both.

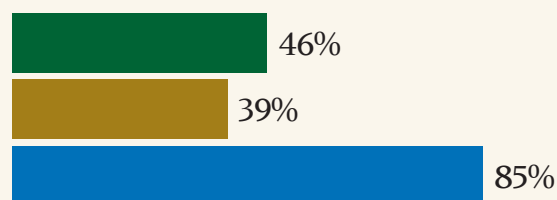
Decrease in human oversight judgment, ownership or accountability:



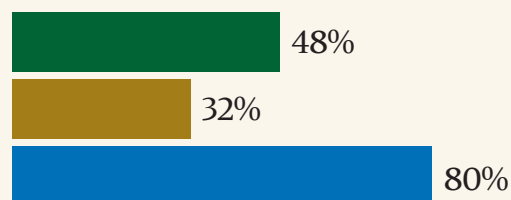
Decisions made based on inaccurate information, AI hallucinations, out-of-context judgments:



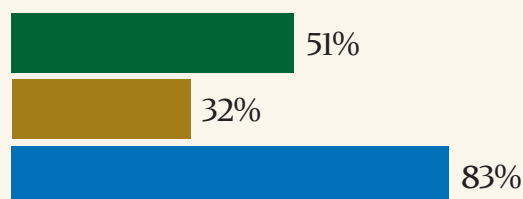
Poor or incomplete data or misclassification may lead to inaccurate or unfair actions:



Automatically generated actions such as disciplinary actions, interventions or risk-cause assignment with little or no human validation or oversight:



Data privacy and security:



Validation needs to be part of the process to assure inputs are being utilized correctly and outputs are real. No hallucinations.” (Discovery, Insurance)

Governance Has Not Kept Pace With Adoption

Organizations build more guardrails as their AI use matures. For example, 62% of integrated organizations have AI-EHS ethics policies or guidelines, compared with just 20% of organizations in discovery. But adoption is still moving faster than the governance needed to guide it.

Gaps Remain in AI-EHS Governance and Policies for All Organizations

40%

Without any measured governance

55%

Without AI-EHS policies

49%

Without having AI ethics policies/guidelines

58%

Have at least one governance measure

35%

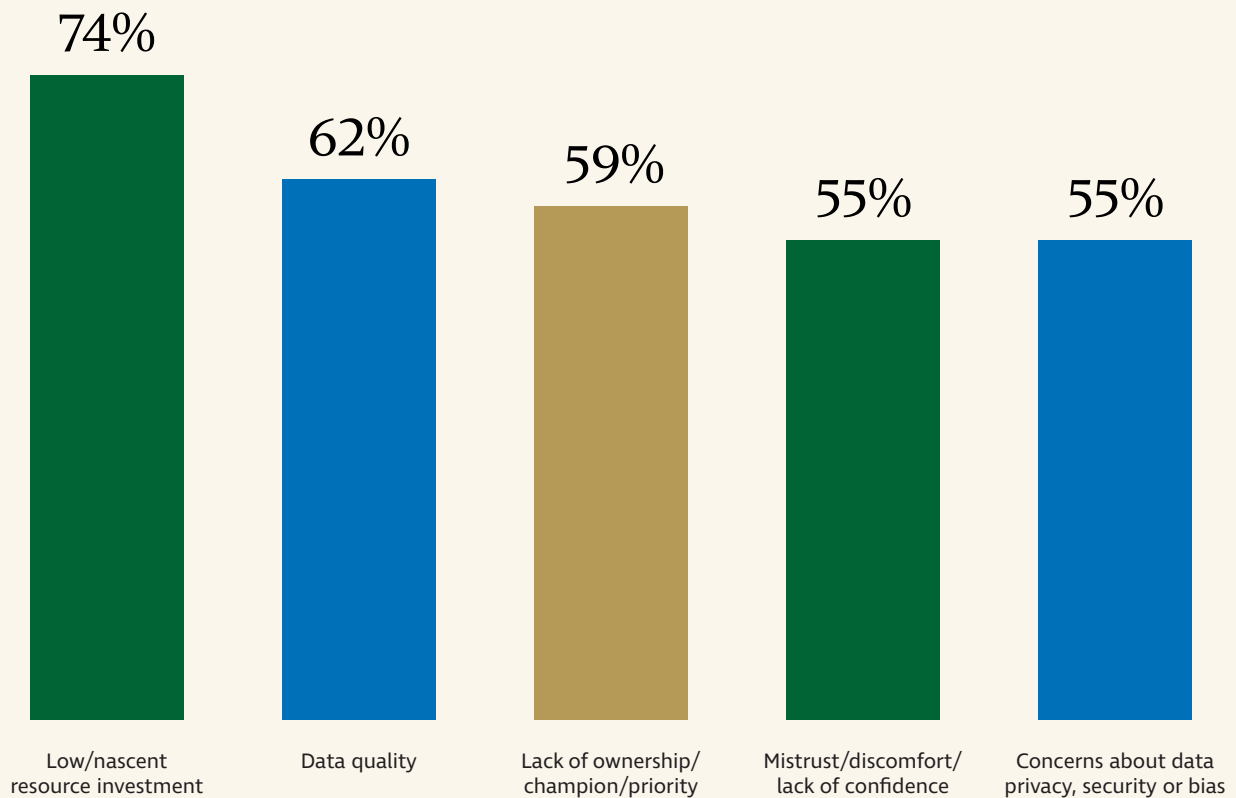
Have AI-EHS policies

35%

Have AI ethics policies/guidelines

As organizations expand their use of AI, governance needs to define the boundaries around that use: what AI can and cannot do, when human validation is required, how data is collected and used, and who remains accountable for decisions and outcomes.

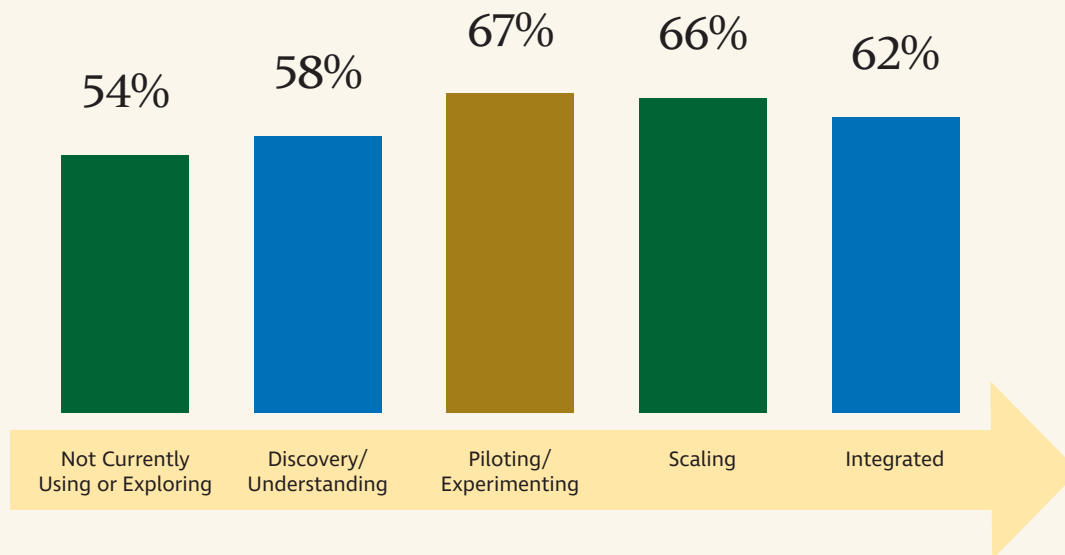
Implementation Readiness and Barriers



Organizations face practical barriers at every stage of the AI-EHS journey. But resources are only part of the readiness equation. Data quality issues persist throughout the adoption journey.

AI Readiness Starts With Data

Organizations Reporting Data Quality as a Barrier



Better data creates a stronger foundation for more sophisticated AI applications. Organizations that used predictive analytics before adopting AI report higher-quality data, suggesting that AI readiness starts well before an organization adopts the technology.

Readiness also depends on the data organizations collect and are comfortable using:

- Incident data is well established. About 85% of organizations collect it, with similarly high levels of comfort around its use.
- Equipment and environmental data have room to grow. About half of organizations collect this data, although nearly three-quarters are comfortable doing so.
- Ergonomic data presents a greater challenge. Organizations are less likely to collect it and are less comfortable with its use.

- Biometric data remains largely outside organizational comfort zones. Only 8% of organizations are collecting biometric data today and the majority are not comfortable collecting it.

Together, the findings point to a basic requirement for AI readiness: Organizations need reliable, usable data before they can expect reliable, usable AI.

Although organizations report better data quality as adoption advances, the issue does not disappear. Only 33% of discovery organizations rate their data quality as good or excellent (4 or 5 on a 5-point scale), compared with 56% at scaling and 70% at integration.

Building AI-EHS Literacy and Workforce Readiness

AI training is associated with greater knowledge and confidence. Safety professionals who have attended training report stronger results across AI-readiness measures.

AI Knowledge, Confidence and Perceived Impact, by Training Experience

AI-EHS knowledge

56% vs. **75%**
No training Training

Comfort interpreting AI metrics

61% vs. **79%**
No training Training

AI improves safety decision-making

59% vs. **76%**
No training Training

Knowledge and comfort percentages represent respondents who selected very or somewhat. Decision-making percentages represent respondents who said AI significantly or somewhat improves the quality of safety-related decision-making.

EHS-Specific AI Training Remains a Gap

Formal education has not kept pace with adoption. About 2 in 5 EHS professionals have never attended any formal AI training. Even among transformative organizations, 1 in 4 report no formal training.

Among those who have received training, general AI use and prompting are the most common topics. EHS-specific education is much less common: Only 32% of safety professionals at integrated organizations have received EHS-focused AI training.

EHS professionals also highlighted areas where they need more support.

Top 10 Training Topics

- Time savings with AI: 63%
- Incident analysis and pattern recognition: 62%
- Validating AI-generated output: 50%
- Predictive analytics: 50%
- Prompting: 46%
- Building an AI strategy for an EHS program: 42%
- Data cleaning/data hygiene: 41%
- Ethical considerations/implications: 41%
- Measure and benchmark AI impact on EHS: 41%
- Incorporating AI into organizational culture: 39%

Confidence Grows With Experience

Training is one part of the picture. Confidence also rises as organizations gain experience with AI. Comfort interpreting AI-generated metrics increases from 54% among discovery organizations to 73% at piloting, 87% at scaling and 98% at integrated organizations.

The progression suggests that practical experience reinforces AI literacy.



Experience Changes How Safety Professionals View the Future

Experience also coincides with less concern about what AI could mean for the profession. Fear of AI-related job loss falls from 46% among non-adopters to 21% among those in integrated organizations. Meanwhile, the share expecting no change in the number of EHS jobs rises from 20% to 42%, while the share anticipating a net gain increases from 7% to 15%.



What This Means for the Profession and ASSP's Role

AI adoption in EHS is a multi-year journey, and the profession is still relatively early in that transition. Organizations are finding practical value today while building the data, skills, governance and organizational readiness needed for more advanced applications. Progress depends on more than technology. Strong data, AI literacy, effective governance and human oversight all shape how successfully organizations can put AI to work.

Supporting the Profession in an AI-Enabled Future

The research reinforces the value of education and professional development. EHS professionals who have attended AI training report greater knowledge and confidence, yet formal training, particularly EHS-specific education, remains limited.

The findings point to areas where ASSP may be positioned to support the profession, including practical AI skills, data quality, output validation, ethics and governance. The association can also support EHS professionals as they chart a path through AI experimentation and integration, and build the professional judgment needed to use AI both effectively and responsibly.

“

It is crucial that human judgment validate AI outputs when final decisions may have an impact on safety and implementation of a process that could have an impact on safety.”



The Road Ahead

This research provides a benchmark for where the profession stands today and a framework for understanding how its needs evolve.

AI tools and applications will continue to change, but the role of informed human judgment remains central.

Interested in continuing the conversation? ASSP's AI in Safety Standards-Based User Group brings practitioners together to explore many of the same implementation, readiness and governance questions present in this research. Visit [ASSP.org/AI](https://assp.org/AI) to learn more.



About This Research: Methodology

ASSP conducted the online survey in partnership with Kalorama Research from July 6 through August 2, 2026. A total of nearly 1000 safety professionals completed the survey, which was distributed to ASSP members, lapsed members and nonmember customers.

The survey examined AI use and decision-making, adoption, effectiveness and confidence, ethical considerations, governance, literacy and resources, future outlook, and respondent demographics.

This research was made possible with philanthropic support from the ASSP Foundation.



About ASSP

Since 1911, ASSP has helped EHS professionals protect people, property and the environment. The nonprofit society is based in Chicago's suburbs. Its global membership of more than 35,000 professionals develops safety and health management systems that prevent injuries, illnesses and fatalities. ASSP advances its members and the safety profession by providing member communities, serving as a trusted advisor and elevating safety through workforce development.