EVOTIX

eBook

The EHS&S Leader's Guide to **Implementing AI**

A practical roadmap to smarter, safer operations with AI.

The Pressure to Do More with Less

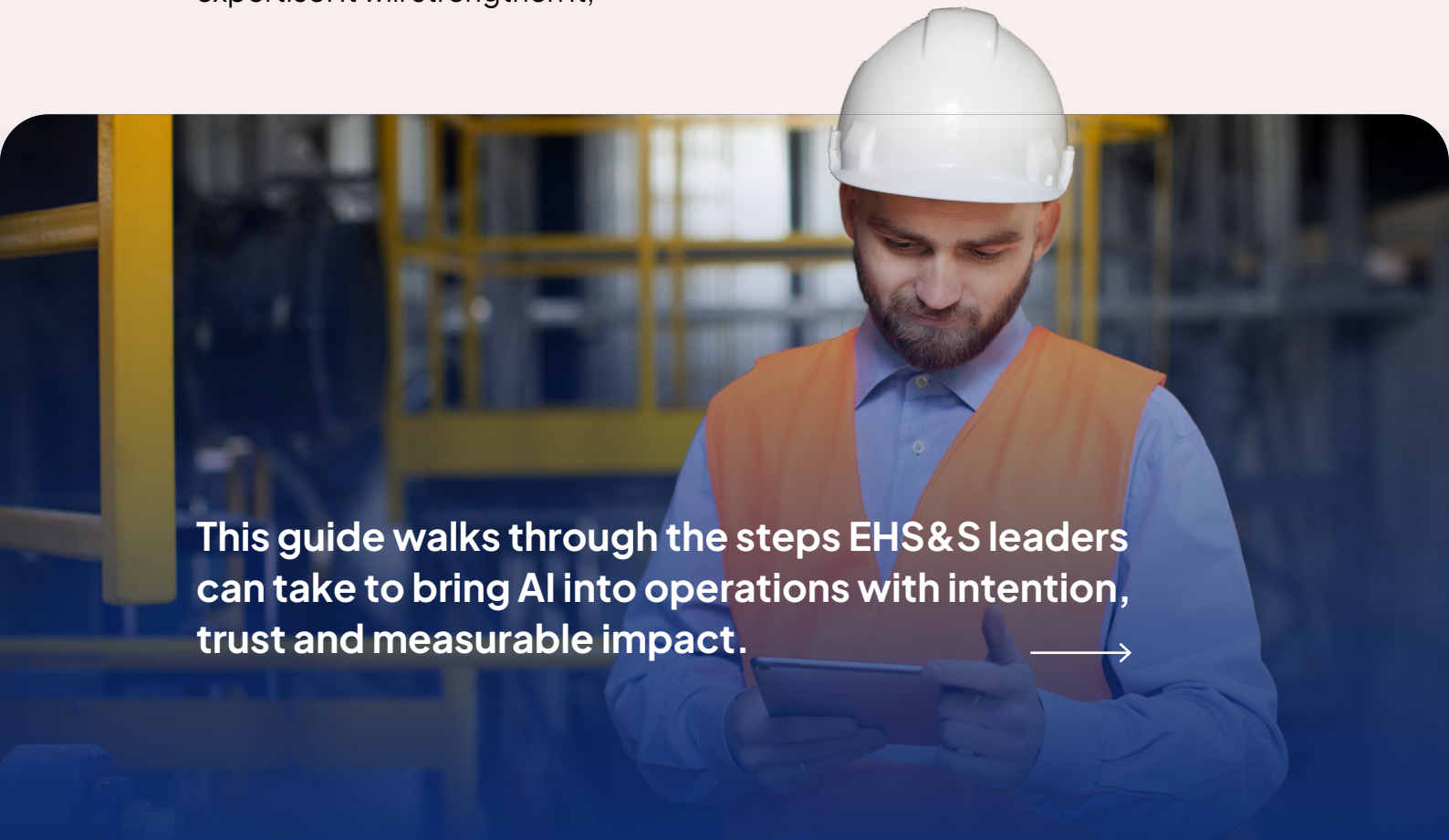
If you lead environment, health and safety or sustainability at your organization, you know the balancing act:

You're expected to reduce incident rates, support ESG reporting, prove program ROI and build accountability all while managing siloed data and systems that were never designed to talk to each other.

You don't need another point solution that adds complexity. You need technology that gives you back time, visibility and confidence.

That's where AI can help. It's a practical, incremental way to modernize how EHS&S work gets done. AI won't replace your expertise. It will strengthen it, automate what's repetitive, surface what's invisible and give your team space to focus on building smarter health, safety and sustainability initiatives.

However, many organizations are struggling to get started with these new innovations. In fact, research from a 2025 Executive Roundtable and EHS Strategy & Innovation Survey facilitated by What Works Institute and Evotix suggests that most organizations find themselves at early exploratory stages. They're experimenting with what AI could do before fully integrating it in their core processes. As organizations navigate these technological advances, taking a strategic approach to integration will be pivotal to success.



This guide walks through the steps EHS&S leaders can take to bring AI into operations with intention, trust and measurable impact.

Step 1: Audit Your Current System

Most EHS teams already have more data than they realize. It's just trapped in inconsistent forms, file shares or separate systems.

AI can't fix bad or fragmented data. It will simply automate the mess. A proper audit helps you understand where you stand and where AI can deliver value.

Start with a Data Reality Check

Ask yourself:

- How are incidents, near misses and observations captured today?
- Are reports consistent across sites or business units?
- How easily can you extract a trend report or root cause summary?
- Do attachments follow a predictable naming structure?
- Are taxonomies aligned (e.g., hazard types, risk levels, energy sources)?
- How easily can you extract a trend report, SIF precursor profile or root cause summary?
- Do sensors or monitoring systems require calibration or standardization?
- Is any critical information still stored in email, personal drives or pdfs?

> **AI is only as good as the data you can feed it. If your data's scattered, all you're doing is automating the mess.**

Mike Swain
Technical Enablement Manager, Evotix

What the Research Shows

Findings from a 2025 Executive Roundtable and EHS Strategy & Innovation Survey facilitated by What Works Institute and Evotix highlight a consistent concern across organizations: while enthusiasm for AI is strong, practitioners worry that **"garbage in, garbage out"** will undermine any initiative built on low-quality or inconsistent data.

In fact, inconsistent and messy EHS records were the number-one challenge cited by respondents in applying AI. Many leaders acknowledged their internal data isn't yet reliable or structured enough for machine learning to interpret safely.

One survey respondent put it bluntly: **"Current EHS incident data lacks the precision needed for reliable AI analysis."**

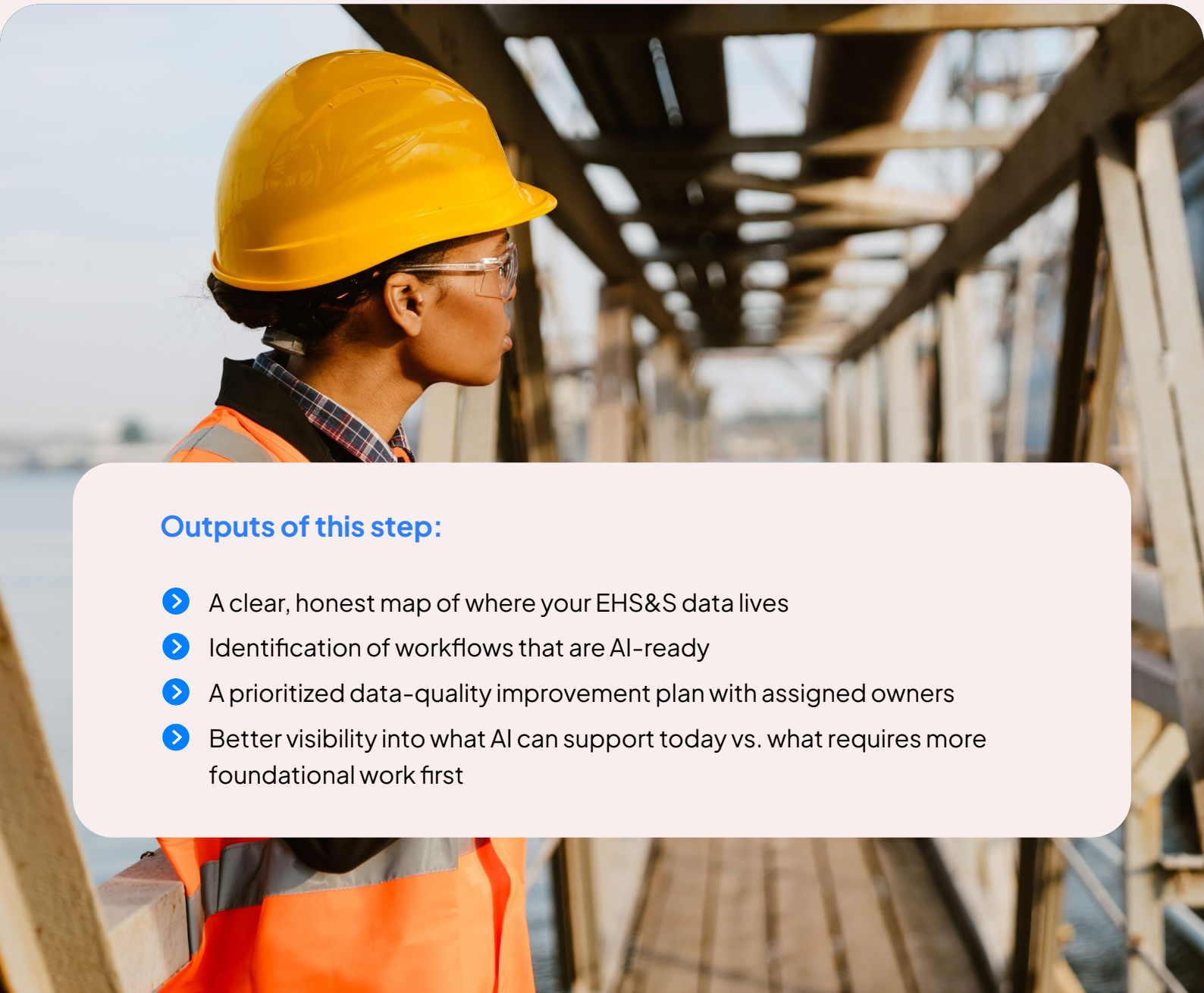
If half of all near-miss reports are incomplete or categorized differently across sites, an algorithm can learn the wrong lessons and reinforce noise rather than identify true patterns.

This is why a data cleanup effort is often the first precursor to AI success: standardizing how incidents are logged, aligning taxonomy and ensuring sensors and reporting systems are calibrated and consistent across the organization.

Audit Checklist: What to Review

Area	What to Check	Why It Matters
☐ **Data Capture**	How incidents, inspections, near misses, observations and environmental data are logged. Are required fields filled? Are free-text entries consistent? Are attachments labeled and relevant?	AI models rely on recognizable patterns. Missing fields, inconsistent phrasing or unlabeled attachments break the pattern.
☐ **Storage & Access**	Is data centralized or siloed across Excel, SharePoint and SaaS tools? Are permissions clear?	RAG, search and large language models (LLMs) can only analyze what they can access. Fragmented storage prevents AI from connecting insights across workflows.
☐ **Taxonomy & Language**	Consistency of hazard categories, energy sources, risk levels, environmental classifications and root-cause codes. Are terms aligned across sites?	NLP-based AI struggles when the same concept is described differently in different locations. Misaligned taxonomies create misleading correlations.
☐ **Metrics**	Do you track both leading (observations, training, inspection frequency) and lagging (TRIR, LTIFR, SIFs, environmental incidents) indicators?	AI requires multiple data types to identify patterns, forecast trends or detect emerging risks. One dataset alone isn't enough
☐ **Change Log**	Can you trace updates to procedures, audits, CAPAs, risk assessments or environmental controls? Is historical context preserved?	Auditability and explainability are essential for AI — regulators may ask where a recommendation came from.

Area	What to Check	Why It Matters
☐ **Calibration & Source Integrity**	Are sensors, monitoring systems, environmental readings, mobile reporting tools and workflows calibrated and used consistently?	Faulty inputs skew analysis. If a sensor under-reports, or inspectors score risk inconsistently, AI will produce unreliable results.
☐ **Data Ownership & Accountability**	Who maintains each dataset? Who is responsible for its accuracy? Are roles clear across EHS, operations and sustainability teams?	AI readiness is technical and operational. Clear ownership prevents data decay over time.



Outputs of this step:

- A clear, honest map of where your EHS&S data lives
- Identification of workflows that are AI-ready
- A prioritized data-quality improvement plan with assigned owners
- Better visibility into what AI can support today vs. what requires more foundational work first

Step 2: Identify High-Value Use Cases

Before you think about vendors or integration, pause and look at where your team is losing the most time, data or trust. AI works best when it's solving a problem you already understand deeply.

AI adds the most value where work is repetitive, data-heavy or time-sensitive. These are the places where pattern recognition, summarization and automation can reduce load and improve quality.

Start with the Patterns You Already Know

Look across EHS&S: Safety workflows, environmental monitoring, sustainability reporting and compliance administration.

Identify where your teams spend hours moving data, validating information, rewriting reports or following up for clarity. Those are your high-value candidates for AI.

Workflow	Current Pain	What AI Can Do
Incident Intake	Incomplete forms, vague narratives, multiple follow-ups	Natural-language guidance prompts reporters for missing fields and pre-categorizes by type, severity and root cause hints.
Hazard Spotting	Reactive inspections, subjective risk scoring	Computer vision flags in-image attachments for PPE gaps, obstructions and missing signage.
Audits & Inspections	Static checklists, delayed summaries	Auto-generates executive summaries, CAPA lists and flag non-compliance.

Workflow	Current Pain	What AI Can Do
Training & Communication	Overloaded inboxes, disengaged staff	Automatically turn workplace assessments into toolbox talk briefs.
Risk Flagging	Reactive risk management, unclear follow up	Review health test data to flag high risk results and receive suggested follow up tests based on the individual's exposure group.
Permit to Work & Contract Pre-Qualification	Incomplete documentation, unqualified contractors	Analyze forms to instantly surface risky applicant information or missing documentation

Assess Each Use Case Like You'd Assess a Risk

Use the same structure you'd apply to a risk assessment: likelihood, impact and control effort.

Factor	What to Ask	Why It Matters
Frequency	How often does this task occur across EHS, environmental compliance, operations or sustainability reporting?	High-frequency, low-value tasks are prime for automation.
Impact	If AI improved this by 20%, what would it mean? Fewer incidents, fewer exceedances, better ESG scores?	Turns technical improvement into ROI leadership understands.

Factor	What to Ask	Why It Matters
Data Quality	Is the underlying data complete and consistent across sites?	Prevents false positives and hallucinations (AI-generated answers that look confident but aren't correct)
Human Judgment Needed	Can AI assist without replacing expertise?	Ensures ethical deployment.
Cultural Readiness	Will staff trust AI recommendations here?	Determines adoption likelihood.
Regulatory Sensitivity	Will outputs influence compliance, environmental permits, or public reporting?	Some areas require higher accuracy and oversight.

Outputs of this Step:

- Prioritized list of 1–3 workflows to pilot AI
- Documented pain points and measurable success metrics
- Alignment across EHS, operations, environmental and sustainability stakeholders
- Clear criteria for what success looks like before implementation begins

Step 3:
Invest in the Right Tools and Partners

Once you know where AI can help, take time to evaluate your options with clear criteria. It's easy to get swept up in fancy demos and overpromises. What matters most is finding a solution that fits your current level of maturity and supports the people doing the work every day.

Use this checklist for vendors:

- [ ] Can the tool integrate with your existing EHS platform or ERP (API / RAG access)?
- [ ] Is the model explainable and auditable for regulators?
- [ ] Can your safety, ESG or operations teams configure it without relying on IT?
- [ ] What guardrails exist around data privacy, residency and security (GDPR, SOC2, ISO27001)?
- [ ] How does the vendor handle mobile workflows, field use and on-the-go data capture?
- [ ] How quickly can you see return on investment?
- [ ] How does the AI handle data uncertainty and hallucinations?
- [ ] Is the autonomy of AI agents trackable and bounded? How much control is given to the AI agent, and how are guardrails put in place?
- [ ] How are teams encouraged to use AI, and how accessible is it to them?

If you want AI designed for the way work actually gets done, look for solutions built into your platform rather than bolted onto it. Evotix takes this approach with EvoAI and its suite of prebuilt Assistive Agents. EvoAI sits inside the 360 system and is ready for you to use from day one.

It reads documents and images, links insights across modules and provides suggestions inside forms and mobile workflows. That structure helps teams work faster and with fewer errors, without adopting another standalone tool or changing how they capture information.

Start small. Prove it with evidence.

Begin with a focused pilot. Measure the impact on time saved, data quality, visibility, reporting speed and how your team feels about using the tool. A good pilot provides clarity, momentum and executive support.

Translate health, safety and sustainability benefits from AI into operational KPIs such as:

Begin with a focused pilot. Measure the impact on time saved, data quality, visibility, reporting speed and how your team feels about using the tool. A good pilot provides clarity, momentum and executive support.

- **Hours reclaimed from manual data entry**
- **Audit closure rate improvement**
- **Faster investigation cycles (mean days open -> closed)**
- **Reduction in duplicate findings**
- **Proactive risk flagging tied to reduced incident frequency**

Frame AI as a practical way to cut cost, reduce risk and improve productivity.

Output of Step 3:

- A clear vendor shortlist and selection criteria
- Pilot scope defined with measurable success targets
- Governance and data safeguards in place

Step 4: Train and Empower Your Team

By step 4, you've already laid the groundwork. You've built strong data hygiene, identified meaningful use cases and selected the right technology partners. But even with all of that in place, AI won't succeed unless the people using it understand it, trust it and feel supported. The rollout phase is where culture matters most.

The What Works Institute and Evotix research notes that most organizations are still in the exploratory stage with AI. That's why training and communication matter. Workers need to understand what a new AI tool will actually do, what it won't do and how their roles might change or stay the same. If AI feels like a mysterious black box making decisions, trust erodes. If it feels like a smart assistant that helps them work safer and easier, they embrace it.

Make Training Practical, Transparent and Two-Way

- Explain the "why." Show how AI reduces admin and allows teams to focus on field work. Reiterate that AI isn't taking people's jobs but acting as a helpful "assistant".
- Demystify the "how." Walk through where data comes from and what oversight remains human.
- Create early champions. Select respected team members to pilot and share success stories.
- Reinforce human oversight. Every AI output should be reviewed by a competent person.
- Track trust and feedback. Gather field reactions early to identify gaps or confusion. Call out successful use cases and encourage employees to share their wins.

Build Governance into Culture

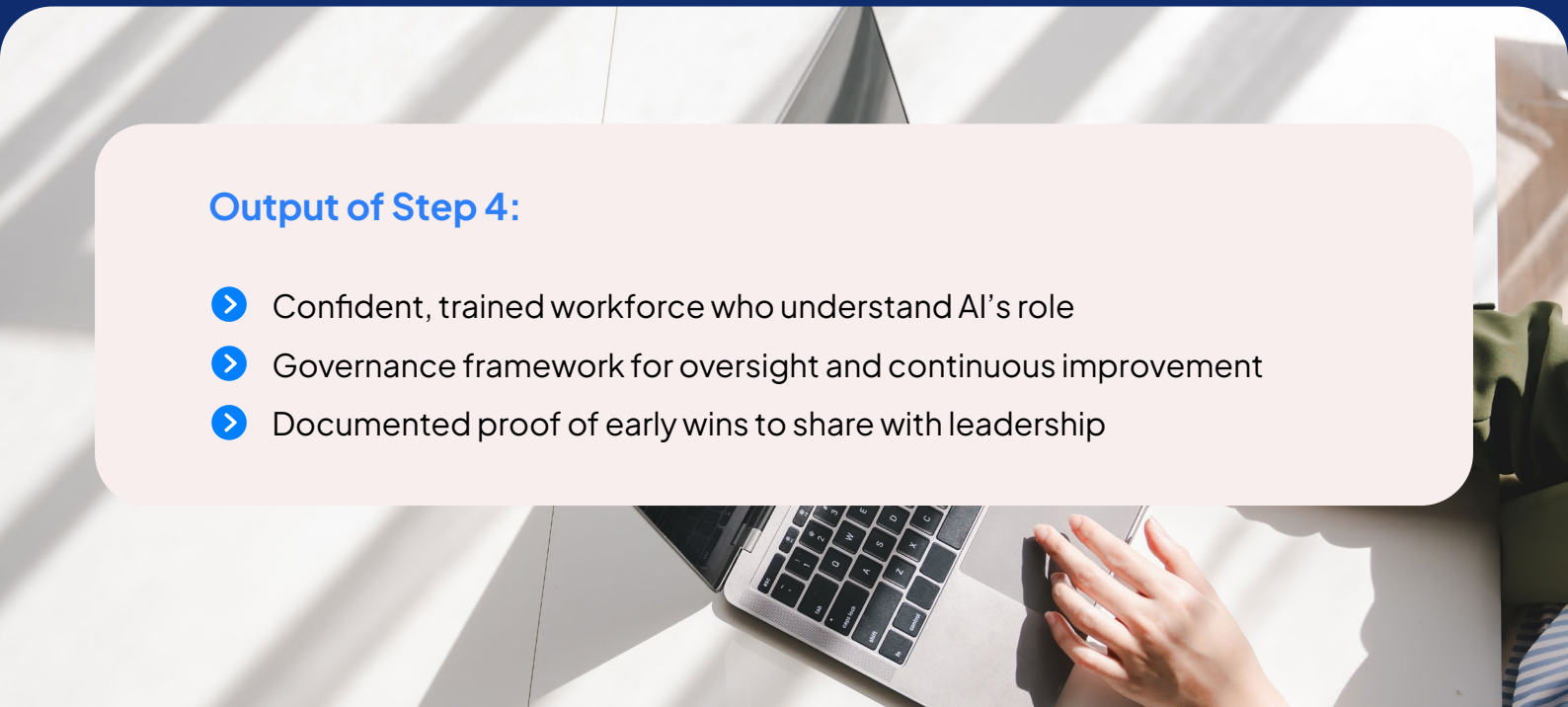
Transparency: Every recommendation can be explained and traced.

Accountability: People remain responsible for the decisions AI supports.

Privacy: Personal or sensitive data is protected by default.

Continuous Review: Periodically test AI for accuracy and bias.

Sustainability: Select systems that align with your ESG commitments.



Output of Step 4:

- Confident, trained workforce who understand AI's role
- Governance framework for oversight and continuous improvement
- Documented proof of early wins to share with leadership

Bringing it All Together

Implementing AI in EHS&S is not a single project. It's a series of intentional steps that build on each other: strengthening your data foundation, identifying meaningful use cases, selecting the right partners and preparing your people. When these pieces come together, AI becomes a practical way to reduce risk, reclaim time and improve decision-making across your operations.

EHS&S leaders are being asked to do more with less. AI won't change the heart of your work. But it will help you see patterns earlier, act faster and spend more time where you make the biggest difference.

And when you're ready to explore what this looks like inside a modern platform, Evotix provides AI that is already aligned to these principles: built into workflows, grounded in your data and designed to support the way your teams work.

EvoAI: Intelligence Built Into the Fabric of EHS Work

AI becomes truly useful in EHS when it supports the work that is already happening. EvoAI moves across records, connects information and provides guidance inside the same workflows your team uses every day. Because it sees the full picture, it offers context that bolt-on or module-based tools simply cannot.

EvoAI sits at the center of the Evotix system and works in real time. It reads documents and images, pulls key details from past records, links information across modules and places helpful prompts directly inside forms and mobile. Users do not need extra steps or separate systems. The support is immediate and built into the flow of work.

This platform approach gives leaders a single, connected view of incidents, risks, audits, contractors and actions. It improves data quality, speeds up decisions and removes the blind spots created by isolated tools with limited context.

Core Capabilities

EvoAI strengthens the work of safety and operational teams with capabilities that include:

- Document and image reading that extracts **steps, PPE requirements, first-aid details, JHA information and rules** directly from files
- A no-code setup studio that lets admins **change fields, prompts and flows** from day one, without relying on IT
- **Review and approval checks** that keep human oversight in place
- **Complete audit trails** and version history that show who changed what and when
- **Hybrid search** that combines keyword and vector results for faster, more accurate retrieval
- **Mobile-optimized** suggestions that reduce mistakes in the field
- Enterprise-grade security that protects sensitive information with **SOC 2 compliance** and strong encryption
- **Automatic flagging** of elevated risk based on health test data
- Missing or incomplete permit or prequalification information to keep workflows **compliant and moving**
- **Clear summaries and commentary** on inspection non-conformances to speed investigation and follow-up
- Identification of **hazards and incidents** with potential SIF exposure
- Targeted corrective action suggestions focused on **preventing incident recurrence**

Organizations gain:

- Clearer, more reliable data for trends and forecasting
- Faster cycles for incidents and audits
- Stronger documentation for regulators
- More consistent handoffs between teams
- A unified picture of risk across the organization

Evotix's AI-powered capabilities are designed to meet EHS leaders exactly where they are with tools that turn data into insight and insight into action. EvoAI is grounded in your data, so context is already established from day one. It connects information, reduces manual effort and guides decisions as work happens, giving teams the confidence to proactively predict and prevent issues.

EvoAI has clearly bounded autonomy, meaning important EHS decisions stay in the hands of your safety professionals. Evotix's responsible AI ethos ensures safety remains a priority, keeping EvoAI consistently auditable and safely managed.

If you're exploring how AI can strengthen your safety performance, Evotix can help you assess readiness, prioritize use cases and implement tools that make a measurable difference.

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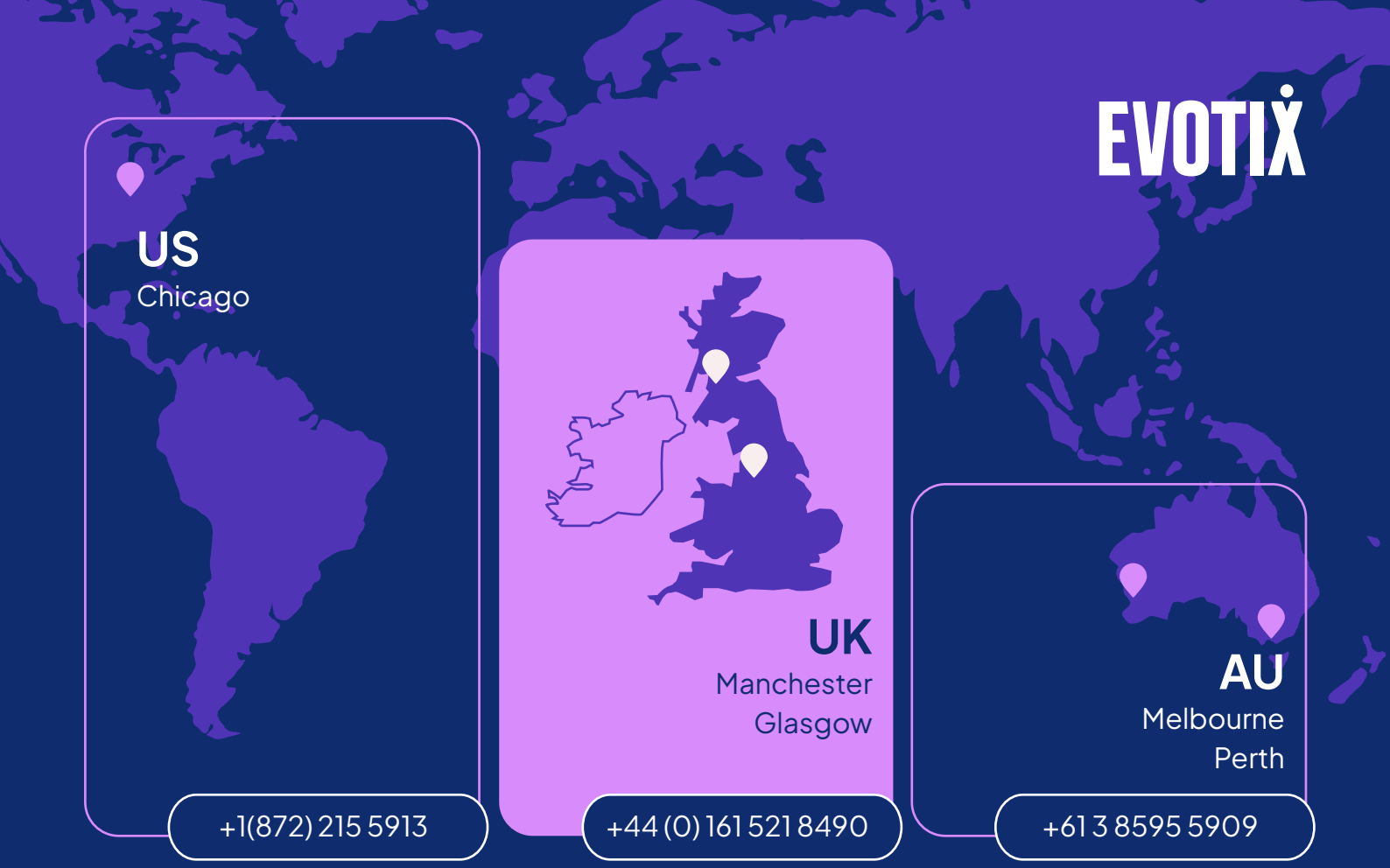

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Let's chat

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Evotix is a global leader in environmental, health, safety and sustainability (EHS&S) software solutions for midsize and enterprise markets. With more than 25 years of experience and a global team of EHS&S experts, Evotix serves more than 800 customers worldwide across industries. Evotix's all-in-one, no-code platform centralizes incident management, audits, inspections and risk mitigation, automating workflows and digitizing procedures to enhance regulatory compliance and data management.

Evotix's mobile app provides workers with on-the-go training and safety guidelines to ensure they receive health, safety and sustainability information anytime, anywhere.