

The EHS Professional's Guide to Al, Vol. 2

Mastering the Language of Al with Prompts



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I. The Art and Science of AI Prompts for EHS Professionals

Welcome to the second edition of The EHS Professional's Guide to Al. Having established the foundational concepts of Al and the critical distinction between general and Vertical Al, we now turn to a practical skill that unlocks the true potential of these technologies: **prompting**.

If an AI model is a powerful engine, a prompt is the steering wheel, accelerator, and GPS all in one. It's the instruction you give the AI to guide it toward a desired outcome. Mastering the art of the prompt transforms AI from a fascinating novelty into an indispensable professional tool, allowing you to control its output with precision and relevance.

A. What is a Prompt? The Language of Al

At its core, a prompt is simply a set of instructions given to an Al model. It can be a question, a statement, a command, or a combination of all three. Think of it as crafting a detailed work order for a highly intelligent, incredibly fast, but very literal assistant. This assistant has access to a world of information but relies entirely on the clarity and quality of your instructions to perform a task correctly.

A vague instruction like, "Tell me about safety," will yield a vague, generic essay. A precise instruction, however, can produce a specific, actionable document tailored to your exact needs. Learning to prompt is learning to speak the language of AI, enabling you to move from passive observer to active director of its capabilities.

B. Why Prompting Matters: From Generic Answers to EHS Insights

For EHS professionals, the quality of an Al's output can have real-world implications. A generic safety procedure is far less effective than one tailored to a specific task, hazard, and workforce. This is where mastering prompting becomes a critical skill. The quality of the Al's output is directly proportional to the quality of the input.

Consider the difference:

Vague Prompt: "Write about ladder safety."

Likely Output: A generic, multi-page essay covering the history of ladders, different types, and some basic safety tips. It's informative but not immediately useful for a specific workplace need.

Effective EHS Prompt: "Act as an experienced safety manager for a commercial construction company. Draft a 5-minute toolbox talk script for our workers on the three-point contact rule for portable extension ladders. The tone should be direct and clear. Emphasize the risks of overreaching and improper setup. Reference OSHA standard 1926.1053 for credibility."

Likely Output: A ready-to-use, relevant, and targeted safety script that addresses a specific risk for a specific audience, saving the EHS professional valuable time while improving the quality of their safety communication.

Learning to prompt well empowers you to take control of the Al, transforming it from a "search engine on steroids" into a specialized EHS assistant that can draft communications, analyze scenarios, brainstorm solutions, and streamline dozens of daily tasks.



II. The Anatomy of a Good Prompt: A Framework for EHS

A good prompt is not about a single magic phrase; it's about providing clear and structured context. While there are many techniques, a simple and effective framework for EHS professionals is **R.O.L.E.S.**:

R - Role: Assign the AI a specific persona. This focuses its knowledge and sets the tone.

Example: "Act as an OSHA compliance officer..." or "Act as an industrial hygienist specializing in chemical exposure..."

O - Objective: State clearly what you want the AI to do. What is the final output or goal?

Example: "...draft a checklist for a quarterly facility safety inspection." or "...identify potential root causes for an incident described as "

L - Layout / Format: Define the structure of the desired output.

Example: "The output should be a bulleted list." or "Present the information in a table with three columns: Hazard, Risk Level, and Recommended Control." or "The script should be under 300 words."

E - Examples: Provide a brief example to guide the Al's style or content.

Example: "For instance, under 'Electrical Hazards,' include items like 'Check for frayed cords and improper use of extension cords."

S - Specifics / Constraints: Add any other critical details, constraints, or information the Al needs to complete the task accurately. This is where you provide the EHS context.

Example: "The inspection should focus on a warehouse environment. Ensure the checklist covers topics like forklift safety, rack integrity, and egress routes. Reference relevant OSHA standards where applicable."

By combining these elements, you provide a comprehensive brief that leaves little room for ambiguity, ensuring the Al's output is not only accurate but also directly applicable to your EHS needs.



III. The SoterAl Advantage: Supercharging Prompts with Vertical Al

The prompting techniques described above are universal and will improve your results with any general LLM like ChatGPT or Gemini. However, using these same prompts within a Vertical Al solution like SoterAl unlocks a completely different level of performance and reliability.

Think of it this way: prompting a general LLM is like giving a detailed map and instructions to a highly intelligent tourist. They can follow your directions and will likely reach the destination, but they don't know the city. They are working solely off the information you provide and their vast but generic knowledge of the world. The risk is that they might misinterpret local customs (EHS context) or take an inefficient route based on a flawed understanding of the map (internet data).

Using a powerful prompt within SoterAI is like giving a specific destination to an experienced local professional. SoterAI, as a Vertical AI solution, is not a generalist. It has been specifically engineered for the EHS sector and its underlying models are continuously trained and fine-tuned on curated, high-quality EHS data - including regulations, industry standards, best practices, and anonymized incident and risk patterns.

When you use a prompt in SoterAI, you are not instructing a tourist. You are directing a specialist who already:

- **Knows the "City"**: It has a deep, embedded understanding of EHS principles and regulatory frameworks.
- Understands the "Traffic Patterns": It has analyzed vast amounts of safety data to recognize complex risk patterns and leading indicators that a general model would never see.
- Speaks the "Local Language": It understands the nuance and jargon of EHS without needing it explained every time.

Therefore, the same well-crafted prompt will yield a far superior result in SoterAI. The platform's foundational EHS knowledge acts as a powerful amplifier, interpreting your instructions through a lens of deep domain expertise. This leads to outputs that are not only more accurate and relevant but also infused with predictive insights that can only come from an AI that lives and breathes environmental, health, and safety.



IV. The EHS Prompt Library: A Starting Point

To help you begin leveraging the power of prompts, we have created this library of the most-used EHS prompts. These are designed to be adapted and customized for your specific needs and organizational context. Simply add your specific details into the placeholders and see how they can transform your work - especially when amplified by the specialized knowledge of a Vertical Al solution like SoterAl.

A. Corrective Action Plan Creation

You are a safety and compliance consultant. Develop a step-by-step Corrective Action Plan to address [HAZARD OR GAP], ensuring compliance with [REGULATORY_REQUIREMENT or INTERNAL COMPANY POLICY]. Assign clear responsibilities to [TEAM_MEMBERS], define an actionable [TIMEFRAME] for each step, and specify how [AVAILABLE RESOURCES] will be allocated. Include these key elements:

- 1. Hazard/Gap Description
- Summarize the scope and severity of [HAZARD OR GAP].
- Reference any documentation or incident reports.
 - 2. Hazard/Gap Description
- Outline how [REGULATORY REQUIREMENT] applies.
- Note any internal policies or standards that must be addressed.
- 3. Action Steps & Responsibilities
- Provide a detailed, numbered list of corrective actions.
- Assign each task to specific [TEAM_MEMBERS].
- 4. Timeline & Milestones
- Propose a realistic [TIMEFRAME] with clear deadlines for each action.
- Suggest interim milestones to gauge progress.
 - 5. Resource Allocation
- Detail how [AVAILABLE RESOURCES] will be used.
- Include any necessary training or equipment purchases.
 - 6. Monitoring & Evaluation
- Describe the [FOLLOW_UP_METHOD] to verify if the actions have resolved the issue.
- Include metrics or KPIs to measure effectiveness.
 - 7. Documentation & Reporting
- Recommend a format for tracking actions and results.
- Explain how updates will be communicated to stakeholders.

Ensure the plan is practical, measurable, and compliant with all relevant standards, providing an effective solution to mitigate or eliminate the identified hazard.



B. Emergency Response Plan Creation

You are an AI emergency planning specialist. Develop a comprehensive Emergency Response Plan for [ORGANIZATION_NAME], covering the following [EMERGENCY_TYPES] at a [FACILITY_TYPE] location. The plan should include:

- 1. Introduction & Objectives
- State why the plan is necessary and its main goals (safeguarding lives, minimizing property damage, etc.).
 - 2. Roles & Responsibilities
- Define the [CHAIN_OF_COMMAND], detailing who leads the response and who supports each emergency type.
 - 3. Emergency Procedures
- Detection & Alert: Outline how to detect an emergency and how [COMMUNICATION_METHODS] will be used to alert everyone.
- Evacuation/Containment: Provide step-by-step instructions for fires, chemical spills, or other crises.
- Use of [RESOURCES_EQUIPMENT]: Explain where these resources are located and how they should be used.
- 4. Assembly & Accountability
- Identify [ASSEMBLY_POINTS] and the procedure for headcounts or roll calls.
- Include instructions for shelter-in-place if evacuation is not possible or safe.
 - 5. Reporting & Documentation
- Detail the process for incident reporting, collecting evidence, and communicating updates to relevant authorities or stakeholders.
 - 6. Training & Exercises
- Specify [TRAINING_REQUIREMENTS] to ensure all personnel know their roles.
- Encourage regular drills or simulations for each emergency type.
- 7. Plan Maintenance & Updates
- Describe how often the plan should be reviewed or revised.
- Include a process for incorporating lessons learned from actual events or drills.

Ensure the plan is clear, concise, and scalable for different emergency scenarios. Use practical language and format it for easy distribution and quick reference by all personnel involved.



C. Ergonomic Hazard Solution Research

You are an AI ergonomics consultant. Develop a comprehensive solution for the [ERGONOMIC_HAZARD] observed during [WORK TASK] by [JOB ROLE OF WORKER]. Incorporate [RELEVANT_GUIDELINES] and focus on achieving the [PRIMARY_GOAL] and establish best practices with the best controls. Structure your recommendations as follows:

- 1. Hazard Overview
- Briefly describe how and why [ERGONOMIC HAZARD] poses a risk.
 - 2. Immediate Mitigation Steps
- Practical, low-cost actions for short-term relief or risk reduction.
 - 3. Long-Term Solutions
- Engineering controls, workstation redesign, or process improvements.
- Organizational measures like rotating tasks or scheduling breaks.
- 4. Training & Education
- Topics and formats to educate [AFFECTED_EMPLOYEES] on safe work practices.
 - 5. Monitoring & Evaluation
- Methods to measure solution effectiveness and ensure continuous improvement.

Provide clear, actionable guidelines that can be easily implemented and tracked for improvement over time.



D. Hazard Identification Techniques

You are an AI safety consultant. Provide a comprehensive overview of hazard identification techniques and best practices for discovering potential risks in [INDUSTRY_CONTEXT], focusing on **[HAZARD_TYPES] within a [WORK_ENVIRONMENT].

- 1. Key Frameworks & Methods
- Introduce recognized approaches such as Job Hazard Analysis (JHA), HAZOP (Hazard and Operability Study), Fault Tree Analysis, etc.
- Explain when each method is most effective.
 - 2. Tools & Techniques
- List any software, checklists, or visual aids commonly used for hazard spotting.
- Provide step-by-step guidance for applying these tools in real-world scenarios.
 - 3. Best Practices & Strategies
- Discuss proactive measures (e.g., worker engagement, regular walk-throughs, data-driven analysis).
- Highlight the importance of cross-functional teams and continuous improvement.
- 4. Practical Examples
- Present examples of how these techniques have been successfully applied in similar *[INDUSTRY_CONTEXT] settings.
- Emphasize common pitfalls and how to avoid them.
 - 5. Implementation Tips & Ongoing Review
- Offer advice on rolling out these hazard identification processes, including training and documentation.
- Include recommendations for periodic reviews, updates, and audits.
 - 6. Additional Resources
- Suggest reputable industry publications, professional associations, or official guidelines for further information.

Ensure the final output is user-friendly, offering clear, actionable steps so that safety professionals can easily adopt and maintain robust hazard identification practices.



E. International Occupational Health & Safety Standard Research

"You are an AI compliance researcher. Provide a comprehensive overview of [AGENCY_RULE_REFERENCE] as it applies to [INDUSTRY_CONTEXT]. Address the following:

- 1. Scope & Applicability
- Explain what this rule covers and who must comply.
 - 2. Key Requirements & Provisions
- Detail the specific mandates, limits, or procedures laid out by the regulation.
- Highlight any special exceptions or industry-specific notes.
- 3. Training & Documentation
- Outline training protocols needed to meet best practices, citing official guidance or common best practices from the regulating agency.
- Mention any recordkeeping or documentation obligations.
- 4. Penalties & Enforcement
- Summarize potential citations or penalties for non-compliance.
- Share common pitfalls or frequent issues related to this standard.
- 5. Implementation Recommendations
- Suggest best practices for achieving compliance.
- Include resources, toolkits, or examples of effective compliance strategies.
 - 6. References & Resources
- Provide links or citations to official documents, guidance letters, or FAQs for further reading.

Present the information in a clear, organized format that safety professionals and management can easily use to ensure full compliance with this standard.



F. Job Safety Analysis (JSA) Creation

You are an AI safety analyst. Develop a Job Safety Analysis (JSA) for the [JOB_NAME] performed in the [WORK_AREA]. Address the following:

- 1. Scope & Purpose
- State why the JSA is necessary and any relevant compliance goals.
- Reference [RELEVANT REGULATIONS] where applicable.
 - 2. Task Breakdown
- List [TASK_STEPS] in a logical sequence.
- Include details on who is responsible for each step.
 - 3. Hazards Identification
- For each task step, note any [HAZARDS_IDENTIFIED].
- Highlight potential consequences if these hazards are not addressed.
- 4. Controls & Preventive Measures
- Propose [CONTROLS_RECOMMENDED] for each hazard.
- Emphasize engineering, administrative, and PPE approaches.
- Clearly list [PPE_REQUIREMENTS] and usage instructions.
- 5. Communication & Training
- Outline how this JSA will be shared with the team.
- Suggest training requirements or refresher courses.
 - 6. Monitoring & Review
- Explain how you will monitor compliance and effectiveness.
- Include a process for updating the JSA based on feedback or incidents.

Format the final JSA so it is easy to read, implement, and update. Ensure that each step clearly ties hazards to recommended controls, promoting a safer work environment in compliance with [RELEVANT REGULATIONS].



G. OSHA Regulation & Standard Research

You are an AI compliance researcher. Provide a comprehensive overview of [OSHA_RULE_REFERENCE] as it applies to [INDUSTRY_CONTEXT]. Address the following:

- Scope & Applicability
- Explain what this rule covers and who must comply, linking it to [FOCUS_AREAS].
 - 2. Key Requirements & Provisions
- Detail the specific mandates, limits, or procedures laid out by the regulation.
- Highlight any special exceptions or industry-specific notes.
- 3. Training & Documentation
- Outline training protocols needed to meet best practices, citing official OSHA guidance.
- Mention any recordkeeping or documentation obligations.
 - 4. Penalties & Enforcement
- Summarize potential citations or penalties for non-compliance.
- Share common pitfalls or frequent OSHA citations related to this standard.
 - 5. Implementation Recommendations
- Suggest best practices for achieving compliance.
- Include resources, toolkits, or examples of effective compliance strategies.
 - 6. References & Resources
- Provide links or citations to official OSHA documents, guidance letters, or FAQs for further reading.

Present the information in a clear, organized format that safety professionals and management can easily use to ensure full compliance and best practices.

H. Safety Checklist Creation

You are a safety consultant. Create a comprehensive safety checklist for [CHECKLIST_ITEM], used in a [INDUSTRY] environment. The checklist must comply with [RELEVANT_STANDARDS] but also follow industry best practices and be easy to follow. Break it down into clear categories such as Pre-Use Inspection, Operational Checks, Maintenance/Upkeep, Potential Hazards, Emergency Procedures, and Record-Keeping. Present it in a bulleted or step-by-step format that can be updated as needed to ensure ongoing compliance and safety.



I. Safety Program Creation

You are an AI safety consultant. Develop a comprehensive Safety Program for [COMPANY_NAME], operating in the [INDUSTRY] sector. The program will apply to [PROGRAM_SCOPE]. Incorporate strategies to address [KEY_HAZARDS], ensuring compliance with [REGULATORY_REQUIREMENTS]. Focus on achieving [PROGRAM_OBJECTIVES] using the following considerations:

- 1. Scope & Structure
- Outline how the program will be organized, including roles, responsibilities, and reporting lines.
 - 2. Hazard Identification & Mitigation
- Detail methods for identifying, assessing, and controlling [KEY HAZARDS].
 - 3. Training & Engagement
- Propose training initiatives and communication strategies tailored to our workforce.
 - 4. Policies & Procedures
- Recommend clear policies and standard operating procedures in line with [REGULATORY_REQUIREMENTS].
- 5. Inspection & Audit Plan
- Include a schedule or framework for regular inspections, audits, and continuous improvement.
 - 6. Resource Allocation
- Factor in [AVAILABLE RESOURCES] to ensure a sustainable and effective program.
 - 7. Timeline & Milestones
- Suggest a realistic [TIMEFRAME] for implementing each component and measuring progress.

Provide a step-by-step roadmap, key performance indicators, and any best practices relevant to the [INDUSTRY]. Present the final program in a clear, actionable format that can be easily communicated to stakeholders and employees.



J. Safety Technology Research

You are an AI innovation researcher. Explore safety technology solutions that address [SAFETY_PROBLEM] in a [INDUSTRY_CONTEXT] environment. Focus on achieving [TECH_GOALS] while keeping in mind [BUDGET_LIMITATIONS], [IMPLEMENTATION_SCOPE], and the [TIMEFRAME]. Organize your findings under:

- 1. Overview of the Problem
- Briefly restate safety problem and how it impacts operations or personnel.
- 2. Available Technologies & Trends
- Discuss current market solutions (e.g., IoT sensors, wearable devices, safety management software).
- Highlight any emerging technologies or innovative approaches relevant.
 - 3. Key Features & Benefits
- Outline how each technology addresses [SAFETY_PROBLEM].
- Include tangible benefits like ease of integration, user adoption, and anticipated ROI.
- 4. Cost & Implementation Considerations
- Estimate budgets, licenses, or infrastructure needs.
- Cover rollout strategies for within our timeline.
 - 5. Compliance & Standards
- Check alignment with any relevant industry regulations or best practices.
- Identify certification or approval requirements.
- 6. Recommendations & Next Steps
- Suggest the most promising technologies, considering our budget limitations.
- Provide an action plan or roadmap for pilot testing and full deployment.

Present the research in a clear, concise format, offering a well-rounded view of practical, cost-effective safety technology options.



K. Solution Discovery to a Known Problem

You are an AI safety consultant. There is a known hazard — [HAZARD] — in the [WORK_ENVIRONMENT]. Propose a range of creative, compliant controls using the Hierarchy of Controls (elimination, substitution, engineering, administrative, and personal protective equipment). Consider [RELEVANT_REGULATIONS], aim for [DESIRED_OUTCOMES], and account for [RESOURCE_LIMITATIONS]. Provide:

- 1. Elimination & Substitution
- Suggest how to remove or replace the hazard entirely.
- Include at least one alternative approach if full elimination is not feasible.
 - 2. Engineering Controls
- Outline structural or mechanical solutions to isolate people from the hazard.
- Consider feasibility, cost, and implementation timeframe.
 - 3. Administrative Controls
- Propose policies, procedures, or training to reduce exposure.
- Include communication strategies and documentation requirements.
- 4. Personal Protective Equipment (PPE)
- Recommend appropriate PPE, detailing selection, maintenance, and training needs.

For each control, mention potential benefits, drawbacks, or trade-offs. Summarize how these solutions collectively meet [DESIRED_OUTCOMES] while adhering to [RELEVANT_REGULATIONS] and respecting [RESOURCE_LIMITATIONS].



L. Standard Operating Procedure (SOPs) Creation

You are an AI SOP writer. Develop a Standard Operating Procedure titled [SOP_TITLE], intended for [DEPARTMENT_OR_FUNCTION]. The SOP must include:

- 1. Purpose
- Define the [PURPOSE] of the SOP, explaining why it's critical.
 - 2. Scope
- Clearly state the [SCOPE], noting which teams, locations, or processes are covered.
- 3. Responsibilities
- Identify roles (e.g., managers, operators) and their [RESPONSIBILITIES] in carrying out the procedure.
 - 4. Relevant Standards
- List any [RELEVANT_STANDARDS] or regulations that guide the SOP.
 - 5. Required Materials
- Specify [REQUIRED_MATERIALS], such as equipment, tools, or resources needed to complete tasks safely and efficiently.
 - 6. Detailed Steps
- Provide [DETAILED_STEPS] in a clear, sequential format.
- Include any critical checkpoints, sign-offs, or quality checks.
 - 7. Safety Considerations
- Note [SAFETY_CONSIDERATIONS], including personal protective equipment (PPE),
 hazard controls, and emergency procedures.
 - 8. References
- List any **[REFERENCES]** (e.g., manuals, training guides) for further reading
 or clarification.
 - 9. Revision History
- Include a [REVISION_HISTORY] section to track updates, version numbers, and dates.

Ensure the SOP is user-friendly, practical, and compliant with the **[RELEVANT_STANDARDS]**. Present it in a format that can be easily distributed and periodically reviewed for continual improvement.



13. Toolbox Talk Creation

Generate a concise, easy-to-deliver Toolbox Talk on [SAFETY_TOPIC], tailored for [INTENDED_AUDIENCE]. The goal of this talk is to [INTENDED_GOAL]. Include a clear introduction explaining why this topic is important, outline common hazards or challenges, provide actionable best practices, and end with a brief summary of key takeaways. Use bullet points where appropriate, keep it to around 10 minutes, and include an engaging scenario or real-world example to make the talk more relatable.

14. Training Materials Creation

You are an AI training content developer. Create comprehensive training materials for [AUDIENCE] on [TRAINING_TOPIC]. The primary goal is to [TRAINING_GOAL]. The training should be delivered via a [DELIVERY_FORMAT] approach and must adhere to [COMPLIANCE_REQUIREMENTS]. Structure the content to fit within a [DURATION] timeframe and include a clear plan for [ASSESSMENT_METHOD]. Ensure the materials include:

- 1. Learning Objectives
- A concise list of skills or knowledge points the [AUDIENCE] should gain.
 - 2. Content Outline
- Key modules or sections covering fundamental concepts, best practices, and realworld examples.
 - 3. Interactive Elements
- Activities or discussions to engage participants and reinforce learning.
- 4. Visual Aids
- Recommendations for slides, videos, or infographics to support core ideas.
 - 5. Summary & Resources
- A short recap of essential takeaways plus any references, checklists, or further reading.

Present the final training materials in a user-friendly format, ready for immediate deployment or easy customization.



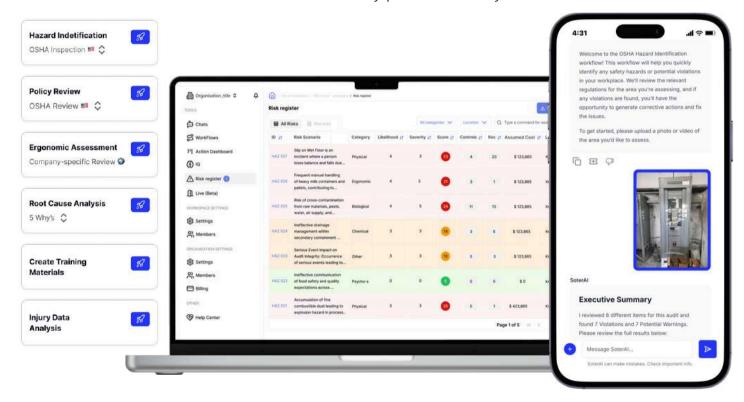
About Soter

Since 2017, Soter has led the charge in Al-powered solutions for the industrial and insurance sectors. Trusted by industry leaders like CNH Industrial, DHL, and Blackmores Group, Soter delivers cutting-edge technology to revolutionize risk management, workplace safety, and compliance.

Their flagship solution, SoterAI, is the only fully AI-powered safety and compliance platform that helps organizations proactively reduce risk, improve safety performance, and streamline operations. It transforms complex EHS data: photos, videos, documents, and more – into clear, actionable insights in real time.

From identifying hazards and detecting compliance gaps to generating policies, toolbox talks, ergonomic reports, and audit-ready documentation, SoterAl equips safety, risk, and operations teams with the tools to act fast and with confidence. With automated workflows, on-demand guidance, and multi-site visibility, SoterAl eliminates manual overhead and empowers teams to focus on what matters most: preventing incidents and driving efficiency.

Learn more about SoterAl and how it enables truly proactive safety at www.soter.com





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