

Enhancing Workplace Safety: Leveraging AI for Modern Safety Management

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GREEN BAY PACKAGING

SMART PARTNERS ... SMARTER SOLUTIONS

About the Speaker

- **Derek Botsford, CSP, ASP**
 - 10 years in the safety field
 - Past President of ASSP Nicolet Chapter
 - Current Role
 - Director of Safety
 - Green Bay Packaging, Folding Carton



The Evolving Landscape of Safety

- **Increasing Complexity of Workplace Safety Challenges**

- Resources – enough staffing?
- Regulations – can you remember that one?
- Data Volume – so much to do!
- Communication Needs

What if you had an intelligent assistant that could help you navigate this complexity, identify risks faster, and communicate more effectively, all while freeing up your time for proactive safety initiatives?



A.I. (Artificial Intelligence)



Artificial Intelligence At A Glance

Many Different Versions of A.I.

- ChatGPT
 - Google Gemini
 - Grok
 - CoPilot
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- Artificial Intelligence (AI) refers to the development of computer systems capable of performing tasks that typically require human intelligence, such as reasoning, learning, decision-making, and perception. AI encompasses a wide range of technologies, including machine learning, deep learning, and natural language processing.



Google Gemini



- **At A Glance**
 - Large language model, multi-modal (text, code, images), strong reasoning.
- Think of it as a highly skilled, incredibly fast research assistant, writer, and analyst all rolled into one.



Why AI For Safety?

- **Information Synthesis:** Quickly digest large volumes of safety data (regulations, incident reports, research).
- **Content Generation:** Draft policies, training materials, communications, pictures.
- **Problem Solving:** Brainstorm solutions, identify potential hazards.
- **Accessibility:** Easy to use, integrates with other tools (if applicable to your workflow).



Practical Applications: How I use Gemini in My Role

- **Problem:** Keeping up with changing regulations; drafting clear, concise policies
- **Gemini's Role:** Help me draft a policy

DEMO



Practical Applications: How I use Gemini in My Role

- **Problem:** Influx of minor head injuries with head bumps on equipment. Draft a communication for bump cap expectations.
- **Gemini's Role:** Content generation
- **Benefit:** Efficiency



draft a communication to set expectations for wearing bump caps when at risk for head injuries



Here's a communication to set expectations for wearing bump caps when there's a risk of head injuries:

Subject: Important: Setting Expectations for Bump Cap Usage to Prevent Head Injuries

Team,

Your safety is always our top priority. To ensure everyone goes home safe and sound every day, we're reinforcing our expectations for wearing **bump caps** in designated areas and during specific tasks where there's a risk of head injuries.

While bump caps aren't designed for protection against falling objects, they're incredibly effective at preventing minor head injuries like bumps, scrapes, and lacerations that can occur from hitting your head on stationary objects. Think of them as a crucial layer of protection in environments with low ceilings, exposed pipes, or during tasks that require working in confined spaces or around protruding equipment.

Here's what you need to know:

- **When to Wear Them:** You are required to wear a bump cap whenever you are working in areas or performing tasks identified as having a risk of head bumps or scrapes. We'll be clearly marking these areas and identifying specific tasks where bump caps are mandatory.
- **Your Responsibility:** It's everyone's responsibility to adhere to this safety expectation. If you're unsure whether a bump cap is required for your current task or location, please ask your supervisor.
- **Proper Fit:** Ensure your bump cap fits snugly and comfortably. A properly fitted bump cap offers the best protection.

Ask Gemini

+ Tools

2.5 Flash ▾



Practical Applications: How I use Gemini in My Role

- **Problem:** HR requests a job description for a safety admin role
- **Gemini's Role:** First draft
- **Benefit:** Efficiency





draft a job description for a part time administrative role for safety



Part-Time Administrative Assistant, Safety Department

Position Summary

We are seeking a detail-oriented and organized **Part-Time Administrative Assistant** to join our Safety Department. This role is crucial in supporting our team by managing administrative tasks, ensuring accurate record-keeping, and helping to maintain a safe and compliant work environment. The ideal candidate is proactive, proficient with office software, and has strong communication skills.

Key Responsibilities

- **Document Management:** Maintain and organize safety-related documents, including training records, inspection reports, and incident logs.
- **Data Entry:** Accurately enter and update information in our safety management software and spreadsheets.
- **Scheduling and Coordination:** Assist with scheduling safety meetings, training sessions, and equipment inspections.

• **Communication:** Serve as a point of contact for internal inquiries related to safety.

Ask Gemini



Tools



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Key Responsibilities

- **Document Management:** Maintain and organize safety-related documents, including training records, inspection reports, and incident logs.
- **Data Entry:** Accurately enter and update information in our safety management software and spreadsheets.
- **Communication:** Serve as a point of contact as part of active feedback for safety related programs
- **Office Support:** Perform general administrative duties such as filing, scanning, and preparing reports.
- **Facility Support:** Support other departments with minor administrative tasks.

Qualifications

- Proven experience in an administrative or office support role.
- Proficiency with Microsoft Office Suite (Word, Excel, Outlook).
- Strong organizational skills and attention to detail.
- Excellent written and verbal communication skills.
- Potential to handle confidential information with discretion.

Work Schedule & Benefits

- **Schedule:** This is a part-time position, with a flexible schedule of approximately 20 hours per week.
- **Compensation:** TBD

Practical Applications: How I use Gemini in My Role

- **Problem:** We needed a safety concern program
- **Gemini's Role:** First draft and brainstorming
- **Benefit:** Time and direction



Hello, Derek

Ask Gemini


+

Tools

2.5 Flash

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-  Create Image
- Write
- Build
- Deep Research
- Create video
- Learn

Practical Applications: How I use Gemini in My Role

- **Problem:** I needed Ice Breakers!
- **Gemini's Role:** Brainstorming
- **Benefit:** Time and ideas



Hello, Derek


Ask Gemini



Tools

2.5 Flash



 Create Image

Write

Build

Deep Research

Create video

Learn

Practical Applications: How I use Gemini in My Role

- **Problem:** Training and communication materials
- **Gemini's Role:**
 - Develop a 5-minute toolbox talk script on ladder safety for general industry workers.
 - Generate 10 multiple-choice questions for a fall protection quiz.
 - Write a safety alert email about recent heat stress incidents, emphasizing preventative measures.
- **Benefit:** Efficiency



Practical Applications: How I use Gemini in My Role

- **Problem:** Fire drills & evaluations
- **Gemini's Role:**
 - Draft a fire drill evaluation form
- **Benefit:** Starting point for evaluation form development

DEMO



Practical Applications: How I use Gemini in My Role

- **Problem:** Manual data crunching...yikes!
- **Gemini's Role:**
 - Analysis, potential focus areas, recommendations
- **Benefit:** Efficiency, analysis

DEMO



Best Practices & Considerations

- **Responsible Use of A.I. In Safety**

- **Human Oversight is CRITICAL:** Artificial Intelligence is a tool, not a replacement for human judgment, expertise, and empathy.
- **Fact-Checking:** Always verify information provided by A.I., especially for regulatory compliance.
- **Confidentiality/Privacy:** Be mindful of sensitive data. Avoid inputting personally identifiable information (PII) or highly confidential company secrets into public AI models.
- Discuss your company's policy if applicable.

- **Prompt Engineering**

- Briefly explain the importance of clear, specific prompts to get the best results.



The Future of A.I. in Safety

- Emerging trends: integration with other systems, more specialized AI models, predictive analytics.
- **Computer Vision (AI Cameras)**
 - AI use in camera systems that can help predict high risk work tasks
 - If PPE is worn
 - Non-ergonomic postures
 - Environmental conditions – air quality, temperature, toxic gas emissions – alerting personnel instantly.
- **Accident Forecasting:** Identifies patterns and trends to flag high-risk areas, machines, or shifts, allowing safety managers to implement targeted preventive measures.
- **Smart wearables:** Fatigue and vital sign monitoring



Costs

- Gemini
 - A.I. Pro - \$19.99/month
 - A.I. Ultra - \$124.99/ 3months
- gemini.google.com
- Grok
 - SuperGrok- \$30.00/month
 - SuperGrok Heavy - \$300/month
- grok.com
- ChatGPT
 - Plus - \$20/month
 - Pro - \$200/month
- chatgpt.com

