



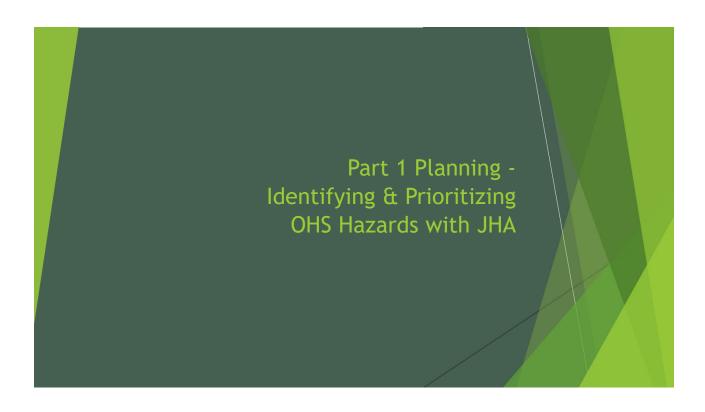
## Introduction

- ▶ E-tools are a significant emerging trend in OHS Management
  - ▶ Wearables heat stress, heart rate, shock sensors
  - ► Artificial Intelligence Videocam input
  - ▶ Cloud-based JHA Relational Database Applications Our focus of this presentation
- ► Kevin Lehner CHMM, EMS-LA Background & Experience
- ► E-tools & OHS Management Systems
  - ▶ Recent Harvard & Duke Research Supporting OHS Management Systems Approach
  - Best OHSMS use PDCA, are well organized to produce evidence quickly during audits
  - ▶ Cloud-based apps make great things happen to OHSMS









# JHA Definition OSHA (2002)

▶ A job hazard analysis is a technique that focuses on job tasks as a way to identify hazards before they occur. It focuses on the relationship between the worker, the task, the tools, and the work environment. Ideally, after you identify uncontrolled hazards, you will take steps to eliminate or reduce them to an acceptable risk level.

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# Background for JHA & Risk Assessment

- ▶ Job Hazard Analysis = Job Safety Analysis
- ▶ Inventory of OHS hazards for specific jobs (plan part of PDCA)
- ► Traditional JHA includes
  - ▶ The name of the job
  - ▶ A description of the hazard
  - ▶ A description of the control in place to "address" the risk
- ▶ JHA processes are beginning to use modern risk assessment techniques.
- ▶ The purpose of this presentation is **NOT** to teach you how to do ISO or a JHA
- ▶ The purpose also **NOT** to teach you how to do risk assessment.

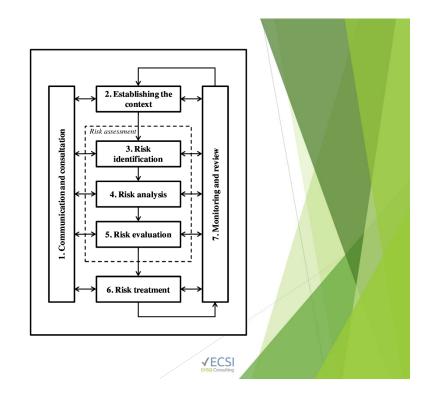




### Risk Management Resources

- ► ISO 31000:2018 Risk management Guidelines
- ➤ ISO 31010:2019 Risk management - Risk assessment techniques
- Popov & Lyons book <u>Risk</u>
   <u>Management Tools for Safety</u>

   Professionals
- ASSP and the National Safety
   Council Webinars and Training



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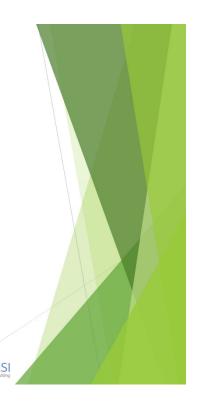


# Learning objectives

After this presentation you will be able to use a cloud-based application to:

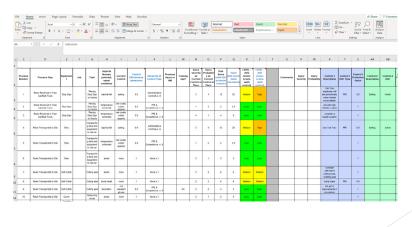
- ▶ Record the results of your JHA.
- ▶ Assess OHS hazards and estimate risk.
- ▶ Apply the hierarchy of controls to estimated risk values
- ▶ Evaluate remaining estimated risk and determine if it is acceptable.
- Create risk reduction tasks to investigate and implement additional controls.
- ▶ Plan and execute OHS risk control internal audits.
- ► Follow-up on OHS audit findings.
- ► Communicate the progress of OHS risk management to leadership



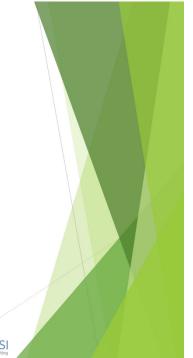


# JHA Applications Vs Spreadsheets

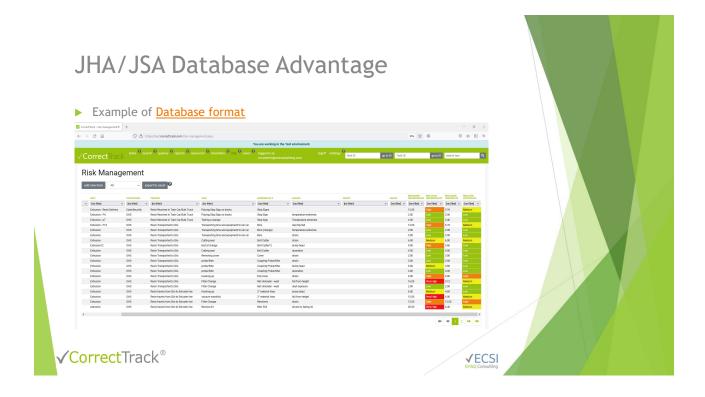
Example Excel format for JHA with semi quantitative risk assessment.







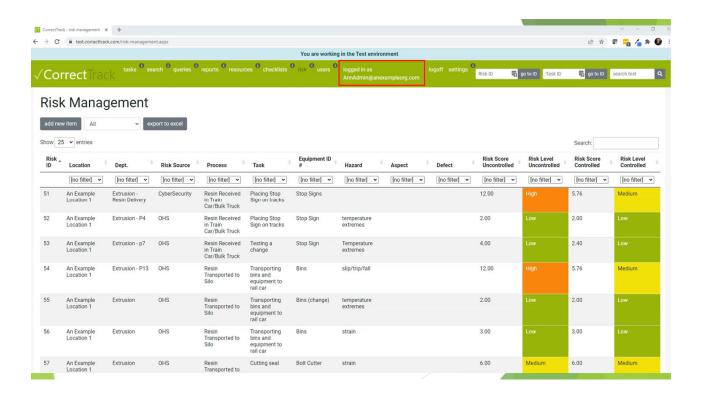


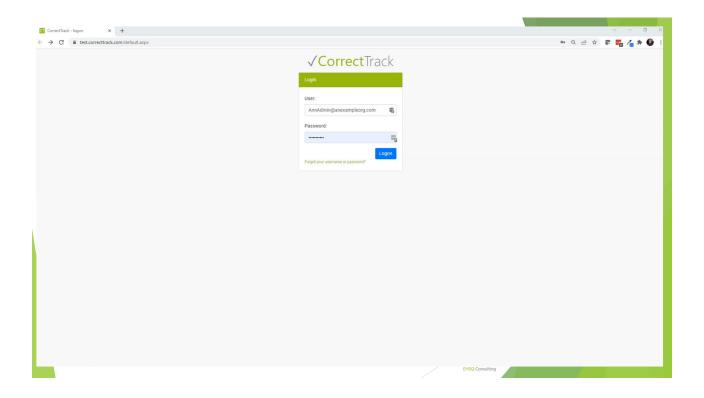




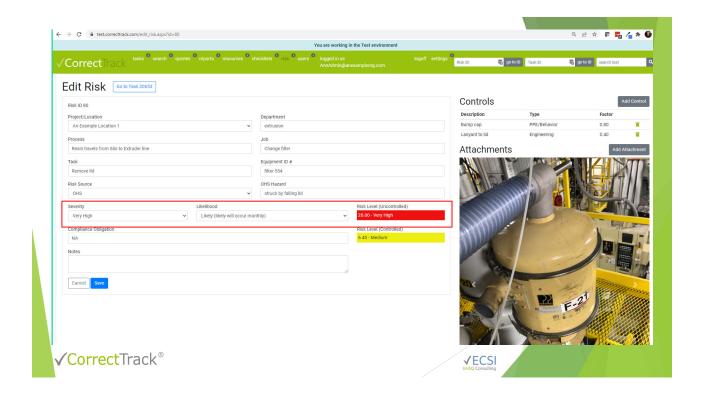
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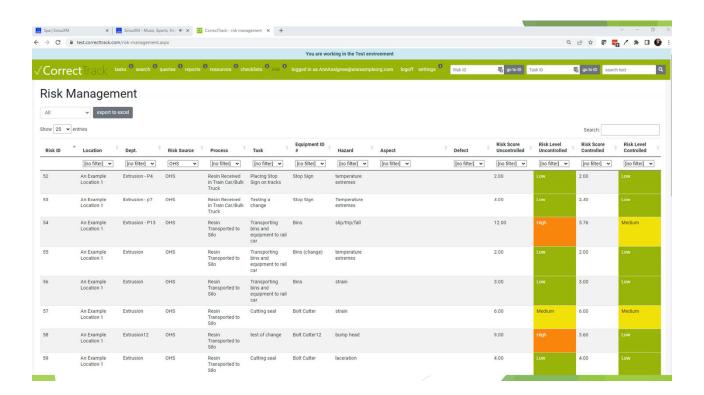




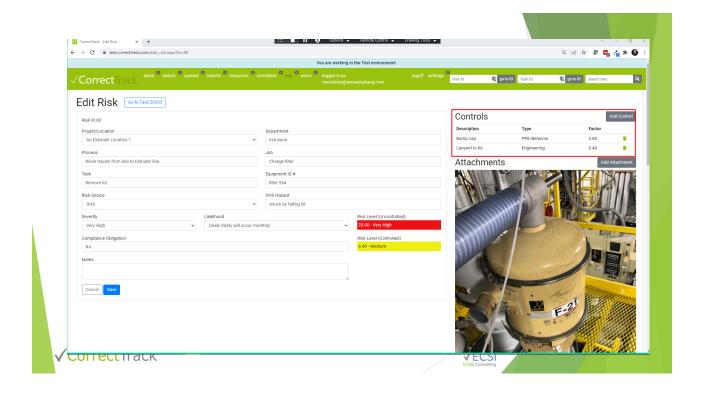










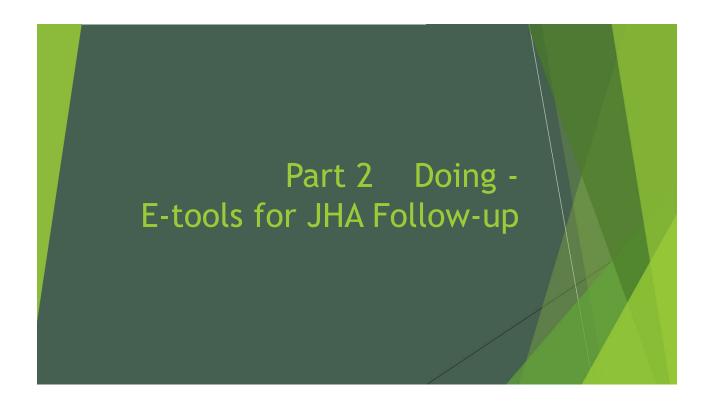


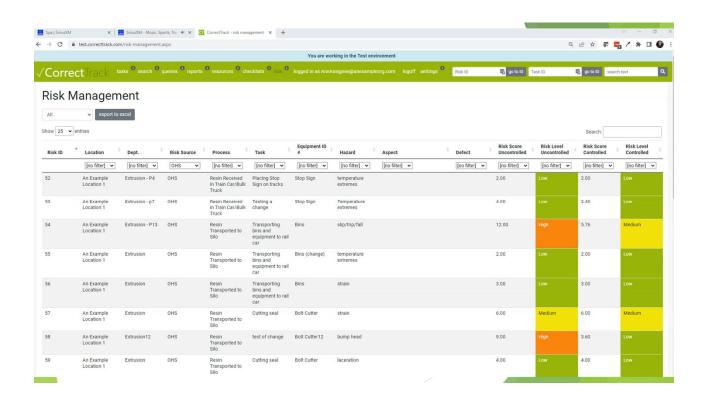
### **Apply HOC Protection Factors** HOC Protection Factor (Multiply Risk By) Hierarchy of Control 0.0 Effective Eliminate the hazard Substitute with less hazardous 0.2 processes, operations, materials or equipment (80% risk score reduction) Control Effectivness Use of Engineering Controls and reoganization of work (60% risk score reduction) Use Administrative Controls in-0.6 cludign training Use adaquate personal protective 0.8 (20% risk score reduction) equipment (PPE) 1.0 No Control (0% risk score reduction)



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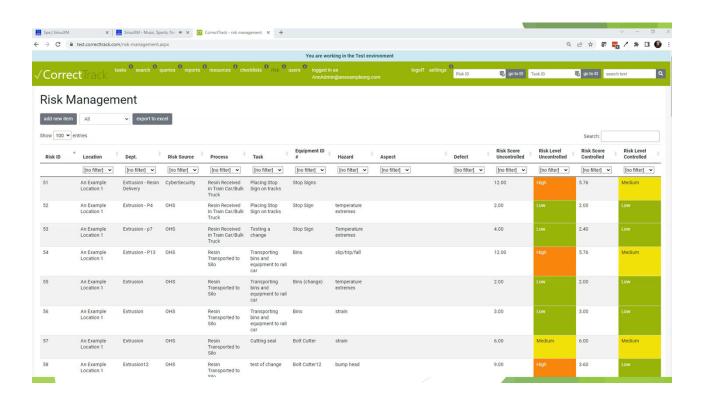




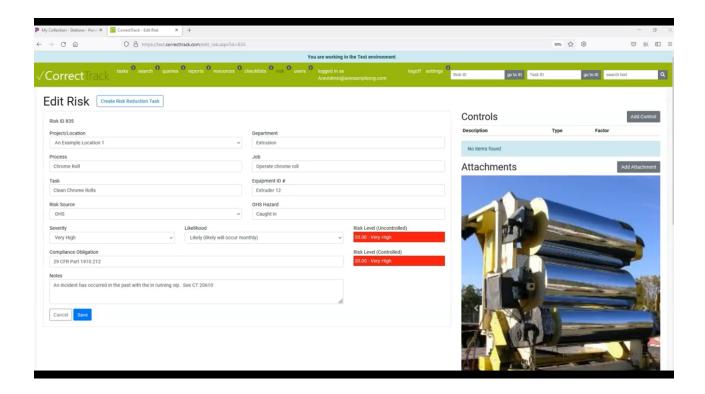


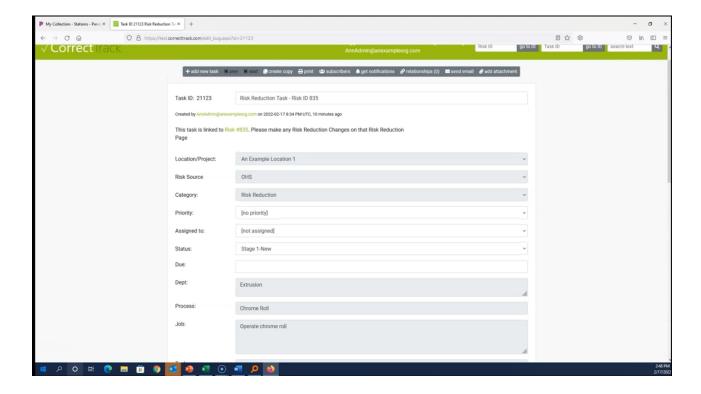




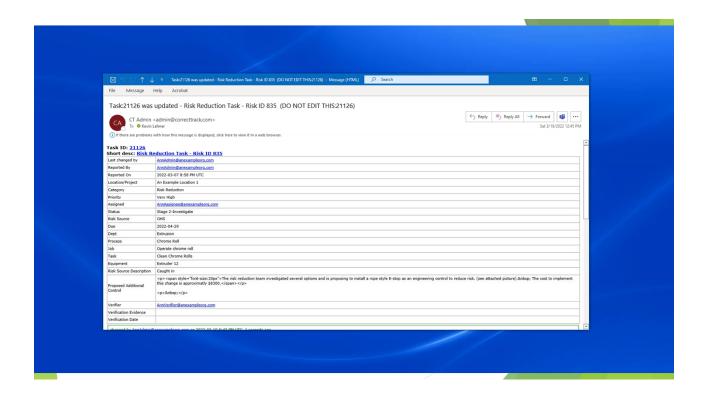


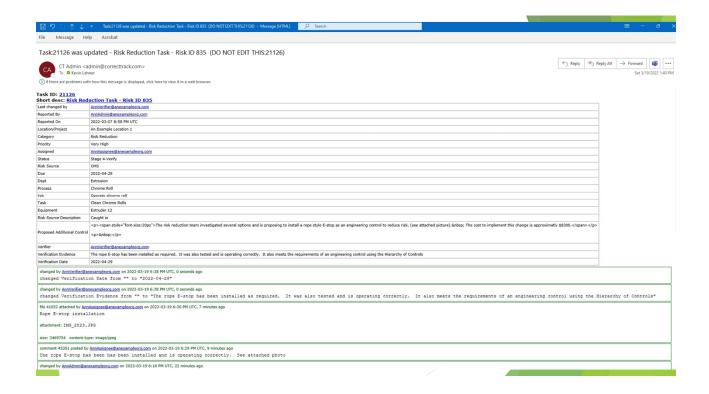






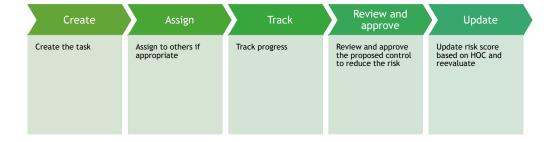


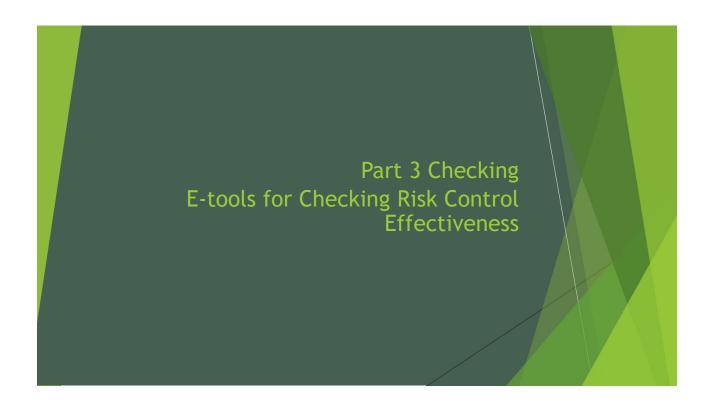




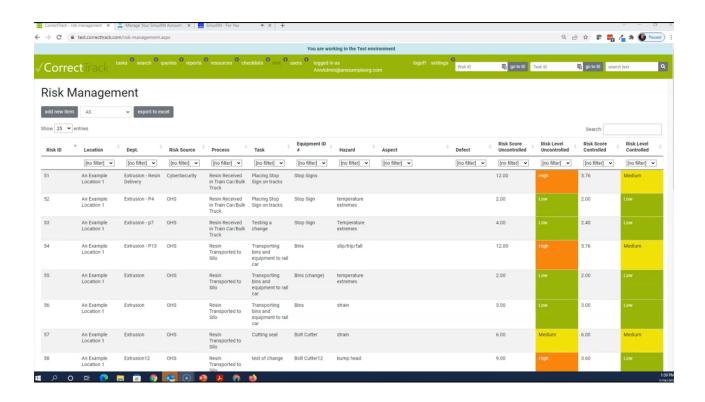


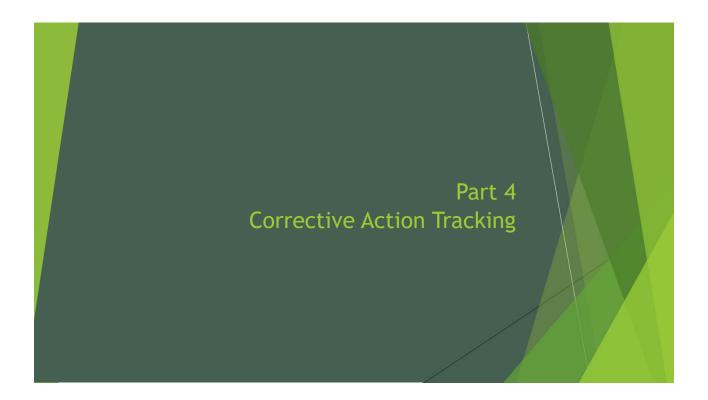
# Create Risk Reduction Task Flow



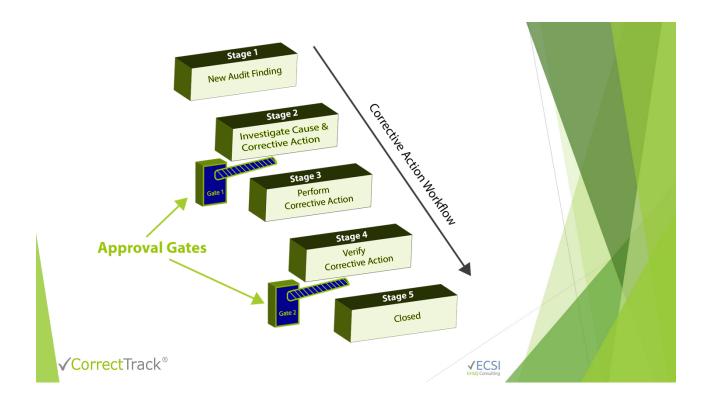






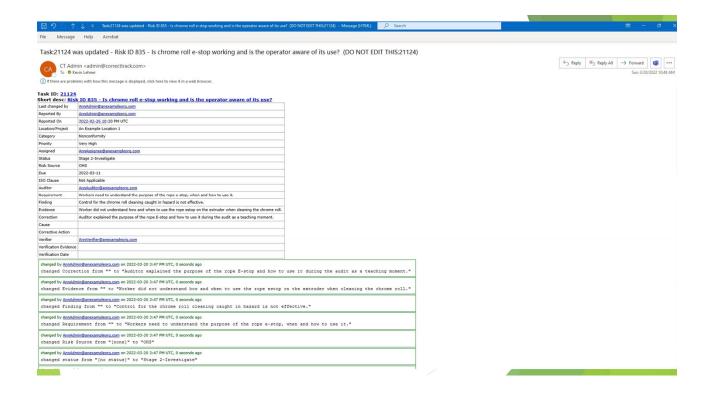


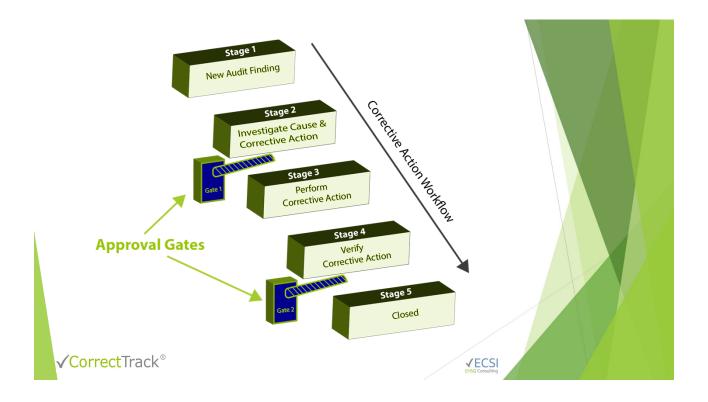




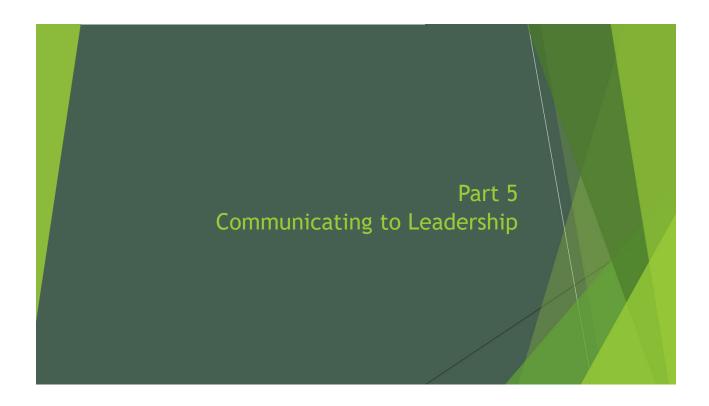


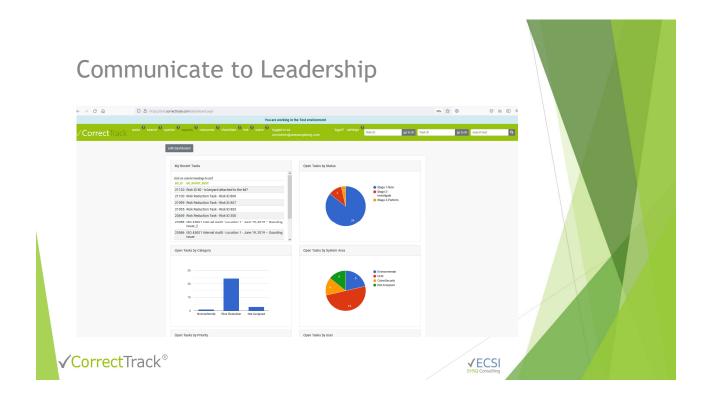














# Other Benefits of Cloud-Based Apps Improved communication Workers & supervisors can quickly review JHA information Train employees Maintain records of changes A platform for elements of a JHA and an OHS management system ✓ CorrectTrack®



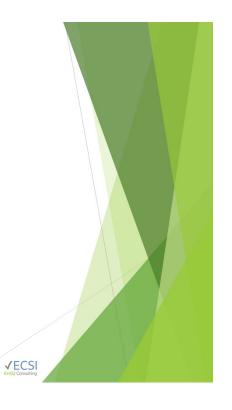


# In Summary

- ▶ How to use e-tools to create OHS JHA and risk assessment
- Prioritize additional risk control
- ▶ Perform internal audits for risk control
- ▶ Follow-up on audit nonconformance
- ► Communicate results to leadership

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# Conclusion

- You should now be able to:
  - ▶ Use cloud-based database application to record the results of you JHA/JSA.
  - Assess OHS and other risk sources (hazards, env. aspects etc) and determine the "raw" uncontrolled risk for these risk source type.
  - Apply the hierarchy of control protection factors to and recalculate residual risk score.
  - ▶ Evaluate residual risk scores and determine if they are acceptable.
  - ▶ Create risk reduction tasks to investigate additional controls.
  - ▶ Use the cloud-based database application to plan and execute internal audits.
  - ▶ Use the application to follow-up on audit nonconformance.
  - ▶ Communicate the status of the risk management program to leadership







