

## VEHICLE INTERACTION CONTROL IMPROVEMENT WORK PACKAGE SUMMARY

<b>WBS Reference:</b>	2. Vehicle Interaction (VI) Control Baseline 2.2 Site Baseline
<b>Work Packages:</b>	2.2.1 Required Operating States 2.2.2 Incident Analysis 2.2.3 Site Conditions 2.2.4 Credible failure modes 2.2.5 Site Control Framework Baseline Preparation 2.2.5.1 Specify 2.2.5.2 Implement 2.2.5.3 Monitor
<b>Package Owner:</b>	Project manager
<b>Owner Organisation:</b>	Your company
<b>Participants:</b>	Project manager, project team to prepare CFW Version 1. Selected operations personnel, site and divisional HSE personnel, experienced workshop facilitators for validation workshop.
<b>Capability required:</b>	Cross sectional team with site operations knowledge and experience. Facilitators with CFW validation workshop experience. Oversight by project manager, project team and senior operations personnel.

### Description:

The Site VI Control Baseline is prepared by applying the EMESRT Control Framework (CFw).

The Control Framework approach is a methodology that is aligned with Failure Modes and Effects Analysis, Human Factors and the ICMM Critical Control Methodology. It considers required business outcomes and then maps in the real-world inputs required to achieve them with a focus on answering **'what has to be in place for work to go right?'**

Developing CFw requires a systematic review of the robustness and reliability of business inputs i.e. where the work is done.

It follows these steps:

1. Review and confirm that the *Required Operating States* (ROS) in the EMESRT VI Control Framework template are site relevant e.g. Operators Give Way
2. Review the *Credible Failure Modes* from EMESRT VI Control Framework template to

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- a. Confirm that they are site relevant i.e. they can compromise the *Required Operating States*
  - b. Analyse site, region, and sector incident information to confirm that all incident types can be assigned to *Credible Failure Modes*
  - c. As required add new *Credible Failure Modes*
  - d. Identify any *Credible Failure Modes* that are not site relevant
3. Use the EMESRT VI Control Framework template to map how each business input is specified, implemented, and monitored from:
- a. The table of requirements generated from 2.1.1, 2.1.2, 2.1.3 (outputs from the systematic review of general and specific vehicle interaction legislation, company standards and sector resources relevant to the operating site)
  - b. The table of requirements from 2.1.4 (outputs prepared from site documentation and knowledge on all aspects of vehicle interaction)

The output from this step is CFw Version 1 (baseline)

4. Present Control Framework Version 1 to experienced and knowledgeable employees in a validation workshop for review, updating and validation. The output from this step is Control Framework Version 2 (validated baseline)
5. From the validation workshop, identify opportunities to restore and maintain existing vehicle interaction controls, prepare a plan to close any gaps and present for senior management review and endorsement
6. Maintain and update CFw information as a key reference for subsequent project steps in phases 2, 3 and 4. When enhancing existing or adding new vehicle interaction controls identify:
  - a) The details of the new business inputs
  - b) Any new credible failure modes e.g. consider changes in operator or pedestrian behaviour
  - c) Consider and update impacts on existing credible failure modes
  - d) Consider and update impacts on associated business inputs
7. Over the life of the MEI Control Improvement project use the CFw to manage project risk and as a 'single point of truth' reference for all relevant company and external obligations, procedures, risk analyses and registers, documents, work processes, external guidance etc.

Provide the current CFw to the operating site as part of project handover.

### **Completion State:**

Control Framework Version 1 (Baseline) prepared during Phase 1 and ready for use at the validation workshop (Steps 1-4).

### **Case study:**

#### ***Glencore Coal Assets Australia – Vehicle Interaction Control Effectiveness Project***

#### ***Against primary objective – Technology Business Case***

1. *After 14 months of project work, Glencore Coal now has a deep, operations validated, industry benchmark understanding of the performance required of existing and future surface mining VI technology controls*

#### ***While delivering these further business benefits***

2. *Immediate site improvements - the consistent baseline workshops, held at 11 Glencore open cut mines, have improved understanding, increased capability, and delivered immediate practical 'fix, improve and maintain' approaches to current controls*

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3. *Group level understanding – validated by extensive mapping and review at all operating sites, Glencore Coal now has a deep and precise understanding of the vehicle interaction controls currently deployed across open cut sites organised into a consistent and logical structure allowing for the identification of leading practice and informing decisions on appropriate consistency*

*Repeatable practical ACARP and ICMM aligned process - the project approach applied is both scalable and repeatable; it refines risk and control understanding, works directly with operations to deliver short, medium, and long-term site business improvements*

4. *Industry benchmark - through a preparedness to share the success of the VICE project, Glencore Coal is recognised as setting benchmarks in the practical implementation of control thinking to improve the reliability of vehicle interaction controls in the resources industry*

**External Review of GCAA Vice Project 2016**

- *There were significant business drivers for this work*
- *A project management approach was taken*
- *The process is well defined and created by applying design principles in an iterative practical way*

**References:**

- PMBOK Version 6, 2017 Project Management Institute – Project Risk Management p 395
- EMESRT VI Control Framework template (being developed)
- EMESRT Self-Assessment Review Guideline VI Control Improvement (being developed)

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