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Work Package PM.2.1

Scope and Budget

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| **Vehicle Interaction Control Improvement Project** | |
| **WBS Parent** | PM. Project Management |
| **WBS Reference** | PM.2 Planning |
| **Work Package** | PM.2.1 Scope and Budget |
| **Package Owner** | Project Manager |
| **Owner Organisation** | Your Company |
| **Participants** | Project Manager, Project Team |
| **Capability Required** | Project management experience with operational knowledge. |
| **Description** | **ICMM Initiative for Cleaner, Safer Vehicles – Vehicle Interaction Programme**  What is meant by a vehicle interaction ‘Capable Solution’ ready for global market uptake?   * A capable solution delivers better vehicle interaction control performance by improving the quality of decision-making from task execution through to mine operations and design. * A capable solution considers relevant aspects of the operating environment, production requirements and equipment design. * Where technology is a part of a capable solution, it is operationally integrated with existing controls.   This is a complex project that requires ongoing interactions with operations and sponsors through each phase. Time and cost estimates will need to be reassessed and updated over the life of the project.   1. Prepare an initial project scope based on the Work Breakdown Structure (WBS) and budget to complete Phases 1 and 2 2. At the end of Phase 2, review and update project scope and budget based on outcomes agreed with the client and sponsor 3. Phases 1 and 2 are required before technology selection and deployment for Phases 3 and 4 can be confirmed and fully costed 4. Phase 4 budgets must include technology capital costs (on equipment and infrastructure), installation costs, costs of pilot, estimates of ongoing maintenance costs, such as technician support, and data analysis for five years   Provisions to capture other costs: Business Inputs (BI’s) necessary to restore effectiveness of existing controls, personnel training, equipment downtime, production interruptions etc. over Phases 3 and 4 should be confirmed with the Project Sponsor. |
| **Completion State** | **Delivery of each phase of the project with an operational handover that maintains existing, enhanced and new vehicle interaction controls.** |

# Notes on budget and scope for project phases:

1. **Establishing a Vehicle Interaction Control Effectiveness Baseline using the Control Framework approach**
   * This is a low-cost step and can commence within six weeks of project initiation at the first site
   * Use divisional facilitators and site personnel to confirm external expectations, review site history and conditions and prepare VICE Baseline version 1
2. **Validate the baseline effectiveness and addressing any deficiencies.**
   * This is low-cost step can start immediately at each site after Phase 1
   * A constraint for large divisions is the developing facilitators having capable site personnel available for site workshops
   * For each operating site, use divisional facilitators and site personnel to run validation workshops with the broader workforce, and use workshop outputs to update to VICE Baseline version 2
   * Site personnel, supported by divisional facilitators to confirm site user requirements for vehicle interaction controls (from reference data set)
   * Operations commence rationalising, restoring, and integrating the existing vehicle interaction control plan (outside project scope)
   * Operations to confirm that existing vehicle interaction control plan will be maintained after project handover, as a precursor to moving to Phase 3
3. **Identifying and implementing enhancements for existing controls (EMESRT Level 1-7)**
   * Budget and scope determined by options chosen
   * As enhancements are considered and selected, confirm implications for project scope and budget with project sponsor and operations personnel
   * Some vehicle interaction control enhancement options will involve technology purchase, installation and maintenance
   * Other options for Control Levels 1-2 (design) may change traffic flows and layouts e.g. development of segregated access for light vehicles and pedestrians, introduction of hierarchy road rules
   * Options for Control Levels 3-6 (operate) can involve technology for monitoring and reporting mobile equipment operator performance in close to real time with exception data reporting
   * Options for enhancing Leveraging Performance (Phase 5) e.g. training of personnel and activation of OEM awareness technology, installation of additional cameras
4. **Identifying and implementing new intervention controls (EMESRT Levels 8-9)**
   * Phase 4 is the most complex step
   * Phase 4 budget and scope are determined by the options chosen. Reference the EMESRT Functional Performance Scenario Storyboards for technology scope deliverables
   * Consider company preferred technology before other options
   * Note that site technical customisation will increase cost and budget
   * Consider installation technology and ongoing performance requirements
5. **Leveraging Performance (Phase 5)**
   * Leveraging data flows from the Vehicle Interaction Control Improvement Project and future projects should be considered e.g. installation of supporting infrastructure, capacity to collect, report and analyse equipment and personnel / equipment data

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| **References**   * [EMESRT VICI Project Guide](https://emesrt.org/wp-content/uploads/2024/06/EMESRT-VICI-Project-Guide-2023.pdf) * Site and Company project management and budgeting processes |
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