

Haultrax

FMS IMPLEMENTATION

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HAULTRAX

Company Background

WHO IS HAULTRAX?

At Haultrax, we believe in challenging mining operational paradigms. Mining the way we ‘always have’ over the last decade has kept our industry in a state of productivity stagnation. Our aim is to achieve a more productive operating culture through working with your company’s people (skills and knowledge), processes and equipment.

The Haultrax offices are based in Brisbane and Perth. On the West Coast our team based in Perth locally supports the Pilbara, Southwest and Goldfields regions. On the East Coast our Brisbane team services the Bowen, Hunter Valley, Surat and Galilee Basin.



Figure 1: Haultrax Australian Offices

Haultrax (HX) assists customers with the successful identification, selection, planning, deployment and operational support of mining technologies (inclusive of mining safety and automation). From our direct mining operational experience with technology selection, deployment and implementation projects; we understand the importance of people and process change activities, to ensure the technology delivers its promised value, and is suitable and sustainable in the mining environment.

The HX team prides itself on being mining and production engineering specialists, focusing on improving safety, productivity and cost. We believe this is achieved through the application of technology, controlled processes and culture.

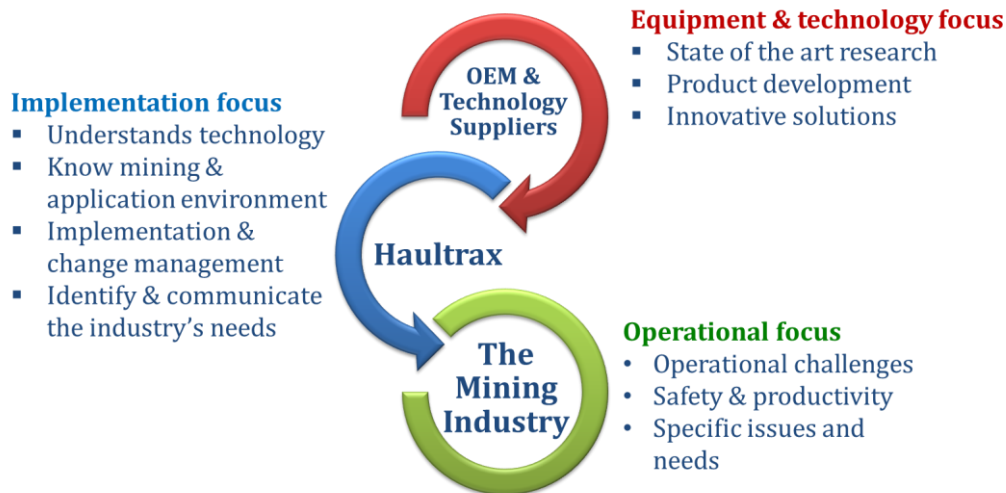


Figure 2: Haultrax industry position

Instances of Haultrax's previous work, which exemplifies this approach, is the implementation of CAS GPS product at BHP's Yandi, South Flank Operations and Mining Area C, Alcoa's Huntly and Willowdale mining operations. Through a direct technology and change effort, the operations personnel accepted the technology as it improved the safety of their working environment. Customer feedback that we have received place this particular implementation as one of the best applications of technology, acceptance and use that we as a company have seen in the industry.

COMPANY OBJECTIVES & FOCUS

Our company objective is:

To be the renowned and preferred value delivery company for mining customers

We will achieve this through providing our services to help customers with:

- Strategy, evaluation and selection of the right technology
- Operational readiness, implementation and change management
- Productivity improvement through deep data analysis targeting process variability

As a team we pride ourselves on being mining and technology specialist – focussed on safety, productivity and cost.

1. HAULTRAX FMS IMPLEMENTATION

Haultrax specialises in the area of operational and people readiness, and cultural change.

The role of Haultrax is to liaise with Operational stakeholders and Technology Vendor teams and delivery/ manage the following services:

- Program management – Oversee and manage the FMS implementation.
- Schedule management – Maintain project schedules, manage project risks and timelines.
- Deployment plan – Creation of a deployment/implementation plan for the site.
- Installation – Provide support and guidance during installation stage.
- Training – Support training execution; create training plans and manuals.
- Change Management – Provide coaching on operational process changes, support supervisors and crew in the use of the fleet management solution.
- Testing & data – Functionality testing of solution, reporting and data integrity.

The table below details an overview of activities we execute:

WBS Element	Detail of Activities
Safety	<ul style="list-style-type: none"> ▪ Project Risk Assessment – Project & Operational ▪ Oversee inductions and approvals for install works ▪ Ensure safety documentation is completed – JHA, Work instructions ▪ Manage safety reporting and improvement
Scoping	<ul style="list-style-type: none"> ▪ Coordinate scoping activities with installation vendor ▪ Engage operations for screen and other in-cab placement ▪ Documentation, scoping docs into work instructions ▪ Oversee approvals with Asset Owner and Maintenance team to approve scoping
Install Planning	<ul style="list-style-type: none"> ▪ Organise work area for installation ▪ Work with planners to set the installation schedule

WBS Element	Detail of Activities
Ops Readiness	<ul style="list-style-type: none"> ▪ FMS Vendor - RACI/Operating model for ongoing operation and support ▪ Identify changes to customer’s operational processes (training, pre-start checks, vehicle operating requirements) ▪ Identify training requirements ▪ Deployment strategy (testing, phased rollout – trucks, dig units, ancillary) ▪ Engage across all stakeholder groups
Change Management	<ul style="list-style-type: none"> ▪ Communication & change strategy ▪ Identify change leaders and form FMS focus group ▪ Crew engagement sessions ▪ Communications material ▪ Identify and communicate wins ▪ Manage technology supplier to deliver on their training requirements
Functionality Testing & Reporting	<ul style="list-style-type: none"> ▪ Develop deployment plan ▪ Define business/operational data and reporting requirement ▪ Ensure technology solution, data flow and reporting is inline with business requirements ▪ IT/OT readiness Conduct end to end testing on pilot fleet prior to bulk install ▪ Interface with technology supplier, integration partners/other OTM
Transition to Operations	<ul style="list-style-type: none"> ▪ Assisted operations ▪ Assisted support and transition to BAU for maintenance and support ▪ Ensure sustainable transition of support processes and responsibilities

2. HAULTRAX CONSULTING

Haultrax also specialises in the area of mine automation and technology implementation for customers in the mining industry. Our personnel have extensive experience in surface mining automation projects; having planned, procured, deployed, managed and operated autonomous haulage and drilling operations for large-scale mining companies since 2008.

We offer consulting services in the area of automation implementation (autonomous trucks, drills and dozers) from concept studies, pre- and feasibility (including RFP), through to operational readiness, deployment and operational improvement.

Specifically, in regard to the requested services, we provide an end-to-end service on feasibility studies to operations. Haultrax's resources are proficient in all of the following areas of what studies require:

- RFP – Developing requirements, analysing responses and completing the financial analysis
- Mining & operational strategy
- Training strategy – Training design and needs analysis
- People strategy – Organisational structure and role design to support autonomy
- Technology integration strategy and plan
- Community and external relations strategy assistance
- Commercial Stream – Key performance indicators, benchmarking and budgets
- Business case analysis – Full NPV analysis
- Communications strategy
- Operational & safety system risk assessments
- Project management plan for Department of Mines – Queensland and Western Australia
- Mine design, layout and infrastructure review
- Operational procedures and processes
- Operational and maintenance tactics