

MINING

CONTINUOUS
IMPROVEMENT
REVOLVES
AROUND

ORBIZ

ORBIZ. WHO WE ARE

Continuous Improvement is about perpetual progress.

It is founded on the principle of positive, ongoing change – the virtuous cycle[®]. A concept that defines our core ethos at ORBIZ – the *Performance Specialists*.

We are a team of experienced and dynamic Lean management consultants driven by a passion for delivering strategic performance improvement outcomes in business operations and financial metrics across all sectors, geographies and organisation types.

THE ORBIZ PROMISE

“ High performance outcomes, enabled by simplified processes, engineered by committed people, and inspired by a powerful purpose - in a continuous improvement cycle. ”

At ORBIZ, we pride ourselves on consistently delivering to this promise by embracing our clients' strategic imperatives, embedding the best people who spread a high-performance culture, and implementing efficient processes that eliminate waste and enhance quality to produce targeted results.

Typical outcomes include reducing costs and increasing capacity, utilisation, throughput, revenue, profitability, and customer value.

THE ORBIZ DIFFERENCE

We believe simple thinking can lead to solid results when clarity, competence and commitment converge.

An idea that permeates everything we do and is encapsulated in the ORBIZ tagline:

***“Simplifying operations.
Amplifying outcomes.”***

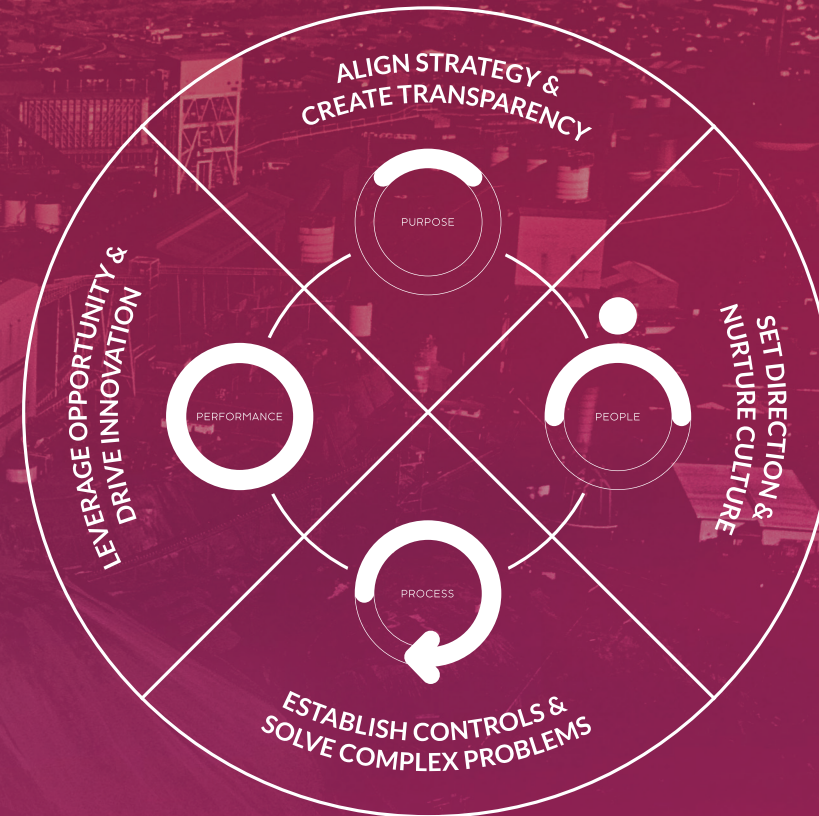
ORBIZ has extensive experience in delivering outstanding performance improvement outcomes in challenging environments through the utilisation of best practice Lean management principles. Our expertise and services cover all industries, including mining, construction, rail, aviation, oil and gas, healthcare and all sub-sectors of the manufacturing industry.

Our people are industry professionals driven to achieve sustained results through the development of trusted relationships.

Plus, with a presence across Asia Pacific, Europe, the Middle East, Africa, and the Americas, our global team is there for you, whenever and wherever you need us.

THE ORBIZ WAY

VIRTUOUS CICLE[®]



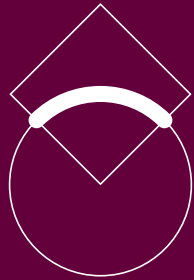
The VIRTUOUS CICLE[®] embodies the core principles of Lean Thinking that underpin the ORBIZ Way.

CI represents Continuous Improvement, which is the very reason we exist.

When aligned into practice, the VIRTUOUS CICLE[®] deploys eight integrated modules enabling organisations to sustainably increase performance and establish a platform for operational excellence.

THE VIRTUOUS CICLE[©]

Each module in the VIRTUOUS CICLE[©] is integral to the development of Operational Excellence.



PURPOSE

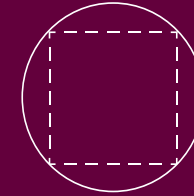
STRATEGY DEPLOYMENT

Align strategy across each level of the organisation



VISUALISATION

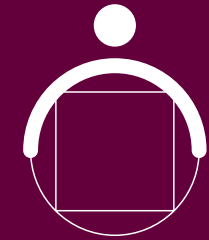
Create transparency of performance to enable focused dialogue



PEOPLE

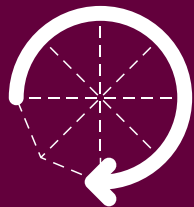
LEAN LEADERSHIP

Set direction and desired behaviour through modelling and recognition



PERFORMANCE CULTURE

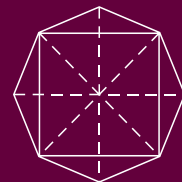
Nurture a culture of Continuous Improvement



PROCESS

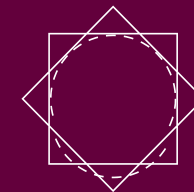
SHORT INTERVAL CONTROL

Establish controls to correct course ahead of deviation from standard



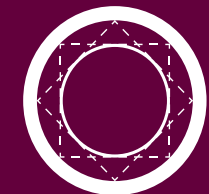
PROBLEM SOLVING X

Solve complex problems to deliver sustainable outcomes



OPPORTUNITY MANAGEMENT

Leverage every opportunity for Continuous Improvement

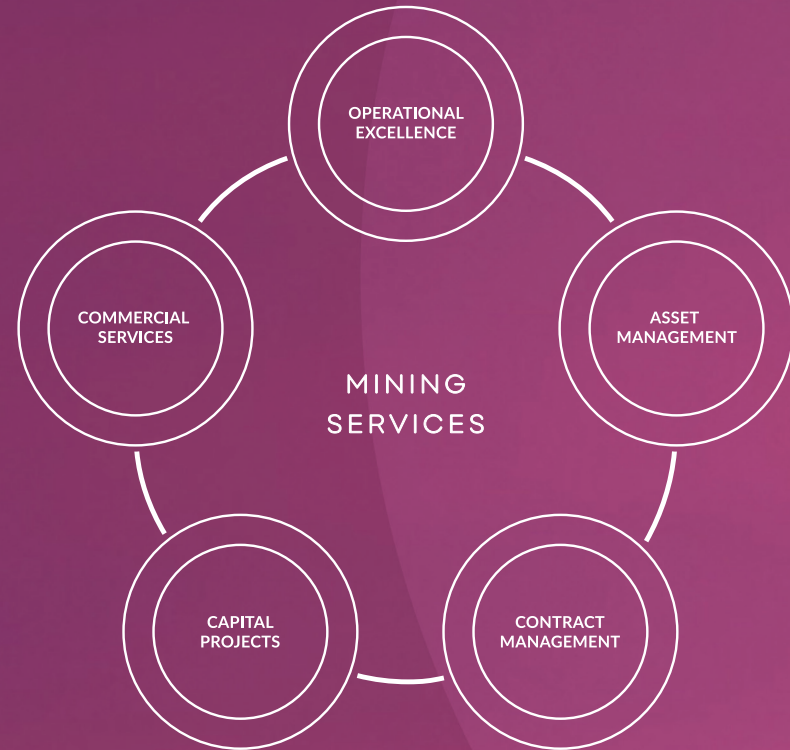


PERFORMANCE

BREAKTHROUGH EVENTS

Drive periodic innovations through step-change improvements

MINING SERVICES

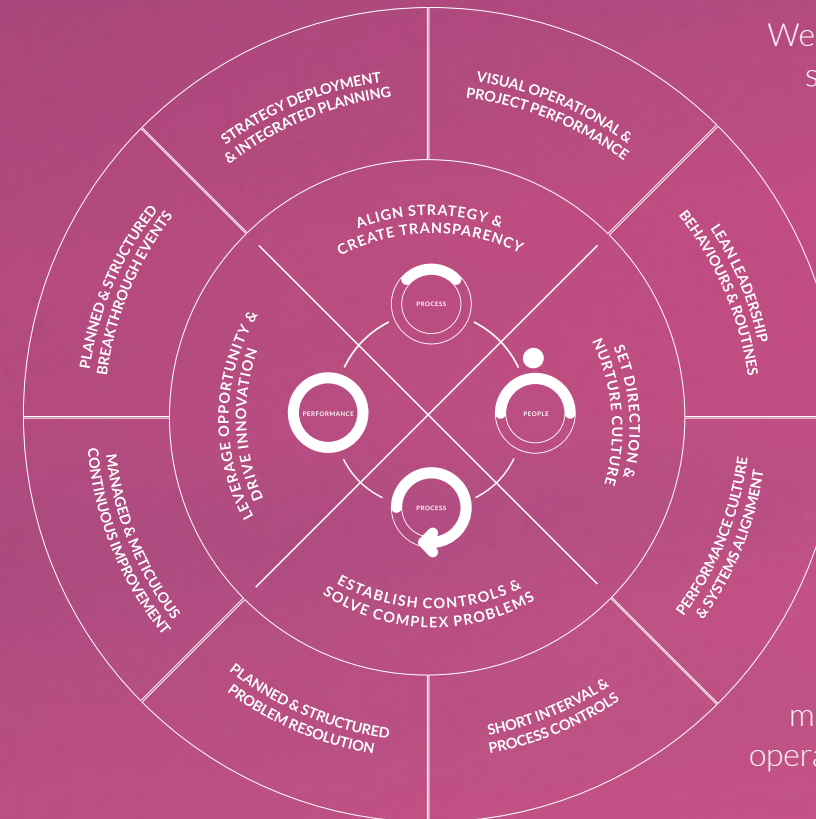


ORBIZ provides a range of products and services that enable significant and sustainable performance improvement across the mining industry.

Through the application of Lean and continuous improvement principles, we help our clients increase commercial performance throughout the value chain and across all types of assets and minerals.

OPERATIONAL EXCELLENCE

ORBIZ MOS CICLE



We deploy Lean management systems that create performance transparency and accountability, enabling our clients to make step-change improvements across the value chain through exploration, mining, processing, and transportation.

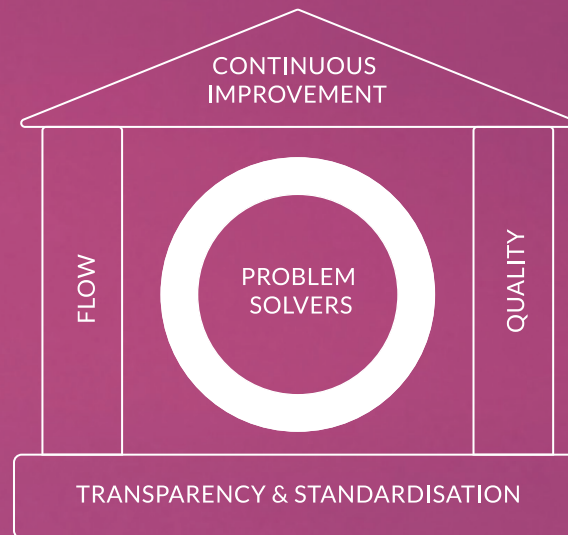
Through the deployment of complete Management Operating Systems (MOS) or local performance management processes, we enable our clients to execute on corporate strategy and life-of-mine plans whilst making significant operational and financial improvements.

ASSET MANAGEMENT

We facilitate deep-dive studies that enable our clients to understand their maintenance inefficiencies and implement the Lean maintenance systems required to transform underperforming asset performance.

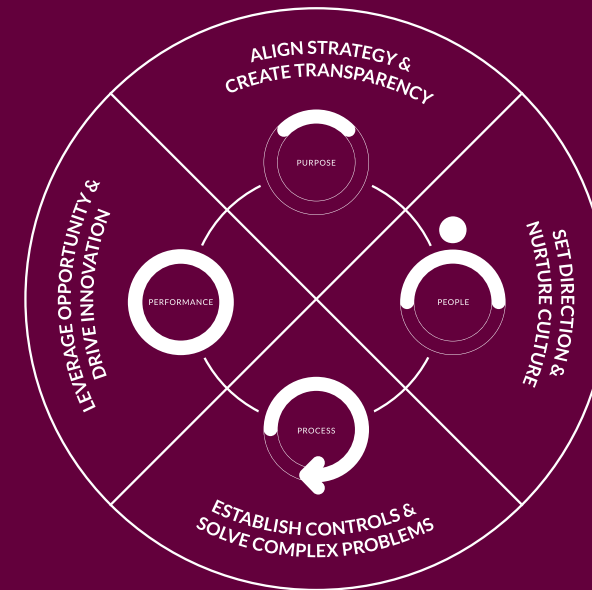
Our capability includes all asset types, including mobile fleet, fixed plant and rolling stock, and asset management settings, including operational maintenance, heavy maintenance and overhaul, technology upgrade, shutdown, testing, and commissioning.

THE ORBIZ LEAN TEMPLE



CONTRACT MANAGEMENT

ORBIZ VIRTUOUS CICLE®



The VIRTUOUS CICLE® system brings transparency to commercial deliverables at all organisational levels, creating a platform of accountability that enables effective governance, continuous improvement and innovation.

Throughout the end-to-end contract lifecycle, the VIRTUOUS CICLE® provides an integrated performance management framework that highlights risks, delays, and underperformance in real-time, facilitating structured problem-solving to enable corrective actions to be quickly developed and effectively deployed.

CAPITAL PROJECTS

Through a range of products and services, we significantly increase project delivery capability and commercial performance across all aspects of the capital project lifecycle. By applying Lean Construction principles, we enable our clients to improve governance, reduce risk, and control commercial outcomes.

Supporting specialist project teams through the commissioning phase of greenfield and brownfield asset development, we ensure on-time delivery of operational milestones. By applying Lean methodologies to testing and commissioning activities, we help our clients to accelerate and recover stressed programs.

COMMERCIAL SERVICES



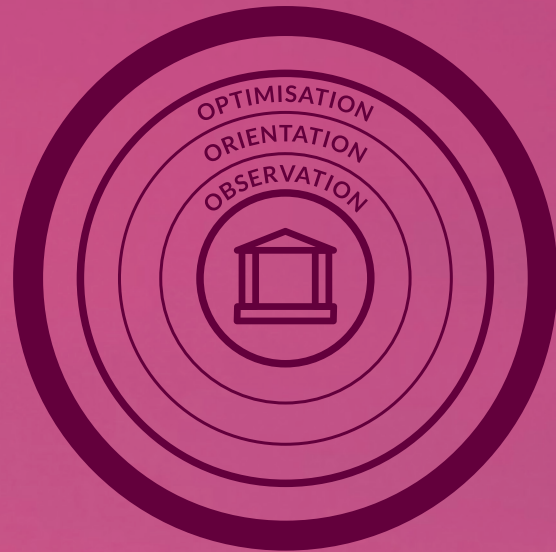
We support service providers to develop and deploy work winning systems that increase their effectiveness and efficiency through the tendering process, resulting in an improved win ratio and lower cost of participation.

Through the deployment of Lean management systems, we create transparency and accountability for commercial performance across corporate settings enabling our clients to make step-change improvements across asset groups.

A TYPICAL ORBIZ ENGAGEMENT

Each ORBIZ engagement, be it large or small, strategic or tactical, utilises our simple three-phased approach as the guiding principle.

THE VIRTUOUS CICLE[®]



OBSERVATION OPPORTUNITY ASSESSMENT

Our team undertake a thorough assessment by observing, reviewing and analysing all systems, processes, data and organisational behaviours within our agreed scope.

We objectively assess what is performing well and where opportunity resides, identify gaps, and provide recommendations based on objectives, budget, and time horizons.

ORIENTATION STRATEGIC ALIGNMENT

With the outcomes agreed, we orient our findings against the organisation's overall context, overlaying our client's strategic plans and priorities to determine bridging requirements.

Once the strategy is agreed we facilitate the development of a detailed project roadmap. The nuts and bolts of the program are discussed throughout the organisation to ensure clear, consistent and cohesive communication.

OPTIMISATION PROGRAM DELIVERY

The mechanics of implementing Lean methodologies vary depending on each client's needs, so we utilise our experience to facilitate a tailored and adaptable program to deliver optimal outcomes.

Our hands-on approach to leading the implementation by engaging, collaborating and transferring knowledge enables sustainable change, empowering teams to thrive in a high-performance culture.

CASE STUDY

DEPLOYING OPERATIONAL STRATEGY THROUGH A VISUAL MANAGEMENT CENTRE

OBSERVATION

The site leadership team had recognised that ownership of deliverables in the operational strategy was unclear, leading to consistently missed daily, weekly, and monthly deliverables.

The need to implement cascading visual management forums to enable the operational KPIs to be understood and managed was clear. Increasing the governance of site projects and improvement initiatives was also required.

ORIENTATION

A sitewide implementation strategy was developed, including cascading action plans and a supporting governance process. Following this activity, the team then set out to facilitate the implementation of eight Visual Management Centres (VMC), including a formal problem-solving process across the value stream of the business.

ORBIZ mirrored the Improvement Engineer's roster for two swings to fully immerse in the business, primarily focusing on the detail behind the current operational performance and existing improvement projects.

OPTIMISATION

The development of localised VMCs and a new project governance process was facilitated with the full engagement of the site leadership team. The new systems were then implemented with a tailored training program.

Once the new systems were in place, hands-on coaching and mentoring were provided, enabling the users to effectively utilise the new processes and sustain the new ways of working.

IMPACT

- ***\$21.6m pa revenue increase delivered through 64kt uplift in ore tonnage***
- ***\$6m pa cost saving by projects selected and delivered through the new governance process***
- ***17.5% reduction in shift changeover duration through quick changeover initiative***

CASE STUDY

GOLD MINING OPERATIONAL PERFORMANCE IMPROVEMENT THROUGH VISUAL MANAGEMENT PRINCIPLES

OBSERVATION

An ASX-listed mid-tier gold mining company engaged ORBIZ to implement tiered visual management systems across their five assets in Australia. The program's high-level objectives were to stabilise operational performance at each site, increase capacity, reduce cost and foster a continuous improvement culture across the workforce.

The program would be the first phase of a Lean Management Operating System (MOS) implementation to drive performance from mine to mill at each site and support the company's vision is of "creating a premier global gold company" with a portfolio of world-class assets.

ORIENTATION

With three sites in regional Queensland, one in New South Wales and one in Western Australia, ORBIZ deployed a full-time consultant to each location to work alongside the local leadership teams whilst establishing overall governance with the COO through head office.

The project started at a pilot site in Queensland to trial the project approach with the client's workforce and design the visual management structure to enable quicker deployment at later locations.

Each local leadership team mapped the value stream from mine to mill to study the flow and understand where the constraints resided. This approach also allowed each site to define the performance metrics they would use to manage their business.

OPTIMISATION

Each site implemented a tiered system of Visual Performance Centres (VPCs), with Level 1 being the site level VPC owned by the General Manager and a series of Level 2 VPCs owned by each Functional Manager.

Project Performance Centres (PPC) were introduced to provide structure and governance to capital projects and large improvement initiatives that required cross-functional collaboration. One site utilised this system to stabilise and accelerate its Life of Mine program, which required the exploration of twenty-three mining tenements to be planned and executed.

Visual management forums utilising a weekly planning process for short-range forecasting, including governance of plan adherence, were also implemented in underground mine settings.

The project also produced a series of unplanned initiatives, including a simple Ideas Generation & Implementation process to improve Safety, Productivity

and Cost performance embraced by one site as a component of its Act Like an Owner (ALO) program. This visual process engaged the workforce to submit ideas to be assessed using a cost-benefit matrix, then assigned ownership for implementation with a tracking system and originator feedback. The program had a variety of commercial impacts across the sites that include:

IMPACT

- ***\$45m in benefits delivered over two years through six significant projects on PPC***
- ***\$1.2m pa uplift in processing performance through VPC activity***
- ***2,600t pa capacity increase through plant shut optimisation (\$750k pa)***
- ***\$200k Capex avoidance through site stores improvements***

CASE STUDY

REDUCING PLAN SHUTDOWN DURATION THROUGH BALL MILL LINER QUICK CHANGEOVER

OBSERVATION

A mid-tier copper and gold producer, Phu Bia Mining, recognised a need to reduce plant shutdown durations to increase annual production outputs across two sites in Laos.

On investigation, the team recognised that grinding mill relining was the critical path activity for all significant shutdown activities; therefore, any improvement in the time taken to reline the ball mill would be transferable in full to the total outage duration.

ORIENTATION

ORBIZ were engaged in observing the end to end shutdown process of planning, execution and post-shutdown review to identify and then facilitate the implementation of the most valuable opportunities to improve.

The project team completed a deep-dive analysis of the current relining process to identify opportunities for eliminating waste using the Quick Changeover methodology. This activity included mapping all resource and tool movements to understand the inefficiencies.

OPTIMISATION

The project team utilised a change management plan to implement all the agreed process improvements and train each team member in the new ways of working. These new working practices were embedded by introducing a standardised work process.

A short interval control process was introduced to monitor standardised work compliance. This included material and labour utilisation and provided escalation protocols for any deviation from the plan to enable rapid problem resolution and continuous improvement.

IMPACT

- **41% reduction in overall shutdown duration from (63 to 37 hours)**
- **\$360k EBIT cost benefit per shutdown event**
- **\$1.44m per annum EBIT increase across two sites completing bi-annual shutdowns**

CASE STUDY

INCREASED MILL PRODUCTION THROUGH WEEKLY CRUSHER SHUT OPTIMISATION

OBSERVATION

Our client's Australian executive team had embarked on a strategy to broaden business improvement activity across the organisation. The program included a key initiative to stabilise the end-to-end mine to mill process.

ORIENTATION

Through a series of workshops to assess the current departmental plans and site objectives, the project team ascertained which improvement activities were critical to ensuring the site could meet the current fiscal year budgets.

The processing department identified that a mill throughput increase was a crucial requirement. Through further discussions and observations, the project team determined that an opportunity existed to increase the overall feed to the mill by reducing the duration of the weekly crusher shutdown.

An investigation into the shutdown duration discovered that the process was seen as untouchable, as it was required to enable the engineering department to perform regular inspections related to the cause of previous major mechanical failures. The project team utilised a cross-functional engagement session to gain agreement to challenge the timeframe taken to complete the inspection program without reducing the examination content or frequency.

OPTIMISATION

The project team analysed the inspection process using the Quick Changeover (QCO) methodology with the support of the production crews. This activity identified several opportunities for improvement. These improvements were implemented and formalised into standard procedures resulting in a consistent inspection process that all crews could perform in a significantly reduced duration.

IMPACT

- *54% improvement in weekly shutdown duration utilising all existing assets (13 to 6 hours)*
- *\$29m pa increase in revenue through 292kt pa production throughput increase at the mill*
- *Several safety concerns eliminated through the standardisation of safer working practices*

CASE STUDY

IMPROVING DRILL RIG PERFORMANCE THROUGH A PREVENTATIVE MAINTENANCE STRATEGY

OBSERVATION

This mid-tier copper and gold producer operating across two locations in Laos had recognised a need to improve drill rig performance across an ageing fleet of DM45 and ROC L7 drill rigs.

The vision for improvement included a robust maintenance management process that would reduce operating and maintenance costs whilst minimising capital expenditure requirements.

ORIENTATION

ORBIZ was engaged in implementing an 'Operate for Reliability' strategy to increase drill rig asset availability through improved Mean Time Between Failure (MTBF) across the entire drill fleet.

The project began by engaging a team from operations and maintenance in a

comprehensive study of current maintenance practices and asset failure modes. This analysis enabled the team to identify weaknesses in the maintenance system and the most common asset failure modes. The data sourced through the study was then used to develop a comprehensive strategy to increase overall asset performance.

OPTIMISATION

The improvement strategy was communicated to all drill rig operators, maintenance team members and the management team to ensure clear understanding and buy-in to the changes that would be made to operating practices.

The change program included a series of projects, and responsibility was defined across the stakeholder group to create clear accountability for delivering each initiative.

The strategy included:

- Training drill rig operators in basic maintenance skills to enable ownership of essential maintenance activities.
- Establishing regular structured communication forums between maintenance and operations teams to promote collaboration and a "one team" culture.
- Enhancing routine maintenance activities across several control points, including operator pre-start inspections, OEM daily inspections and pre-release.

With the new operating system established, an audit process was introduced to ensure sustainability and ongoing improvement of the new methods.

IMPACT

- **5% increase in Roc L7 and DM45 drill rig availability (86% to 91%)**
- **188% increase in Roc L7 drill rig MTBF (18 hours to 52 hours)**
- **60% increase in DM45 drill rig MTBF (49 hours to 78 hours)**

CASE STUDY

MINING PRODUCTIVITY & COST IMPROVEMENT THROUGH LEAN MOS IMPLEMENTATION

OBSERVATION

This experienced mining contractor providing mining services to tier 1 and 2 mine operators across Australia recognised the need to improve their Management Operating System (MOS) to support business continuity and future growth.

ORBIZ supported the development of a program with the following objectives:

- Improving productivity and reducing cost
- Increasing market share by improving competitiveness
- Developing internal continuous improvement and innovation capability

The strategy would involve developing and implementing fundamental elements of a Lean MOS to create transparency through visual management principles and enable effective day-to-day management of mining operations performance.

ORIENTATION

Our team engaged the client's senior management team to develop and document the strategy, including a detailed deployment plan to communicate with all employees at head office and across the maintenance and mining operational areas at each site.

The project team utilised the Prosci ADKAR® change management model to ensure company-wide change could be made and sustained through effective communication and engagement throughout the program.

The robust change management process allowed each stakeholder to be clear on their role and accountable for successfully delivering individual projects.

OPTIMISATION

The first phase of the deployment program involved training the workforce in Lean principles and the tools and methods that the MOS would implement.

Phase two of the program focused on designing a tiered system of Visual Performance Centres (VPCs) to be implemented at the Brisbane head office and mine site operations.

The site-based VPCs enable operational teams to track performance through a set of critical metrics which highlight when day to day issues impact the delivery of customer objectives. The head office VPCs enable the senior leadership team to manage the overall commercial performance of the organisation effectively.

Each VPC operates as a daily problem-solving forum to drive continuous improvement and

innovation whilst permanently resolving historically reoccurring issues. Our team led an extensive program of problem-solving process training and coaching to embed the behaviour of a performance culture and enable the resolution of complex problems

IMPACT

- ***\$415k pa revenue increase through First/Last Load optimisation***
- ***180 hours pa increase in excavator utilisation***
- ***\$700k pa improvement in absenteeism penalty costs***

SIMPLIFYING OPERATIONS.
AMPLIFYING OUTCOMES.



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