

GOEDEHOOP DELIVER GAME-CHANGING RESULTS



TOC 100-Day Challenge Teams at GoedeHoop made remarkable strides in addressing major bottlenecks in the production process. The bottlenecks were identified using a Theory of Constraints-based process and have, to a large extent, been removed.

Teams working across disciplines and levels set 'unreasonable but believable goals' and then participate in a structured journey that enables them to collaborate, experiment, innovate and implement actions to achieve unprecedented results.

And after just 100 days, the results *are* impressive. They're also measurable, add real value to the mine's bottom line and, in several instances, improve safety.

"During this period, all of our teams delivered breakthrough solutions and re-imagined conventional ways of improving performance. They took full ownership of current shaft issues and, in doing so, resolved several safety and production challenges,"
Shaft Manager



Results in a 100-Days



Reduced continuous miner (CM) roof support waiting times from 21.1 to 2 hours a week. A massive 93% reduction.



Reduced tonnes lost through support-related delays by almost a factor of ten.



Reduced Conveyor downtime from an average of 50 minutes to 18 minutes a shift.

A 100-Day Challenge is not a command to implement a solution or solve a problem. Instead, it is a challenge to create a glimpse of a better future quickly.

This leaves room for the team to decide what problems to focus on, what solutions to experiment with, and what actions to take.

GOEDEHOOP DELIVER GAME-CHANGING RESULTS continued

1

Roof support waiting times

Members of the 'Super Supporters' team set themselves a target to reduce continuous miner (CM) roof support waiting times at three sections by a massive 93% and came within a hair's breadth of reaching their goal.

Over 100 days they:

- Reassessed, trialled and implemented new drill bits for hard roof conditions,
- Introduced several engineering modifications,
- Focused on the availability and competence of labour during the prep shift, and
- Revised cutting distances in challenging areas.

By doing so, they could slash waiting times from 21.1 to 2 hours a week, reducing tonnes lost through support-related delays by almost a factor of 10.



2

Conveyor downtime and belt extensions

Members of the Ndlovu team worked on two projects that achieved vast reductions in conveyor downtime and the time it takes to complete belt extensions. They implemented a long list of action items that have combined to deliver some astounding results without incurring any costs outside of the operational budget.

Looking at eight of the operation's most troublesome trunk belts, the team slashed downtime from an average of 50 minutes to 18 minutes a shift. They have also safely completed 120 belt extensions in an industry-leading three hours.

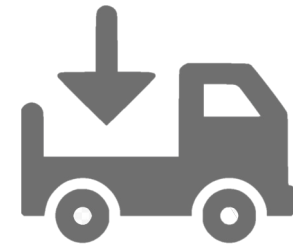
Interventions to reduce conveyor downtime focused on:

- Improving transfer areas to prevent coal spillages,
 - Enhancing pull-key reliability,
 - Preventing bearing failures, and
 - Adjusting coal chutes to improve coal flow.
- They also upgraded power packs, replaced worn liners and numbered pull keys to reduce the time it takes belt walkers to locate faults.

3

Transportation of people and materials

The Siyaphambili team worked on reducing downtime related to the transportation of people and materials to ensure adequate stocks of critical supplies were always on hand.



Over 100 days, they:

- Made major improvements to large portions of the underground road network,
- Licensed employees are responsible for transporting goods on at least three items of equipment. For example, buses, forklifts and tractors,
- Streamlined the authorisation process for critical purchases,
- Appointed a dedicated resource coordinator to monitor critical stock levels and consumption rates, and
- Put several measures in place to ensure employees arrive underground on time.