Case Study

Australian Longwall Mine Unlocks 33% More Capacity by Mastering Flow – The Stratflow Way

The Challenge

For years, production at this longwall coal mine flatlined at 2.4 million tonnes per year.

The operation faced:

- Tough geological conditions - pockets of high gas concentration and difficult roof conditions.
- Persistent commercial pressures
- Siloed departments
- Chronic firefighting with management often on the back foot

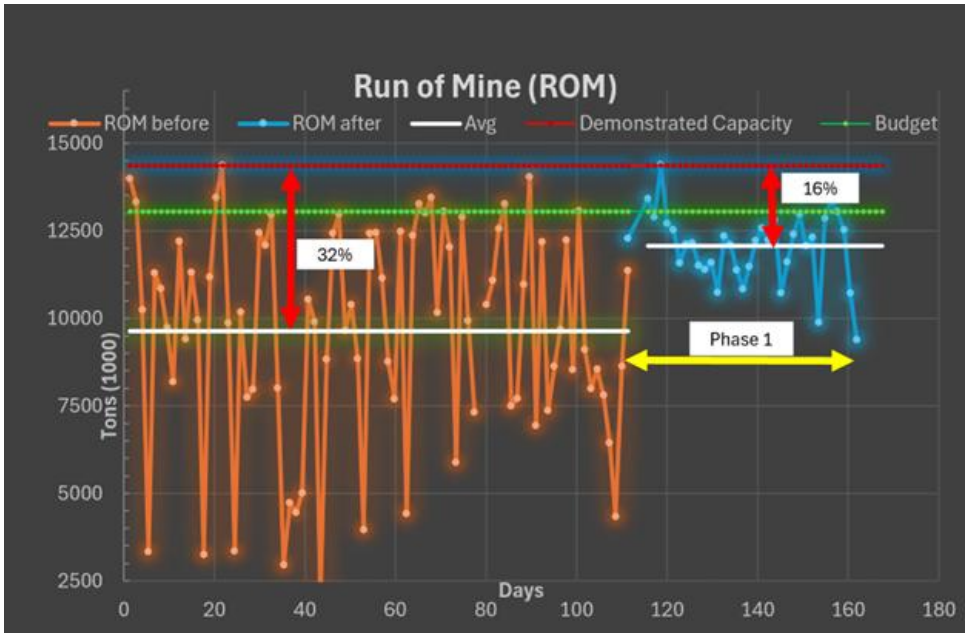

Figure 1: Increased ROM production with substantial reduction in variability

1. See the Whole System

With the help of the operations team we analysed the mine as a single interconnected flow system, rather than isolated departments.

2. Find the Real Constraint

The CHPP (Coal Handling and Preparation Plant), not the Longwall, was the true bottleneck—it needed to be managed as the "drumbeat" of production.

3. Switch to Pull

Instead of pushing coal from the Longwall, a pull system was introduced—coal flow was paced by what the CHPP could handle.

4. Manage Variability with Buffers

The ROM stockpile was turned into a strategic buffer with clear trigger levels, decoupling the Longwall and CHPP and smoothing daily disruptions.

5. Activate the Flow Room

We implemented a daily, cross-functional Flow Room—a visual, shared space for coordination, foresight, and fast decision-making.

The Results: 33% Output Growth Without Capex

- During 2024 the annual output surged from 2.4 m to 3.2 m tons — a 33% increase.
- Predictability replaced nasty surprise. In spite of setbacks such as forced slowdowns caused by higher-than-expected gas concentration in sections and poor LW roof conditions, the Flow Room provided early warning and focus so that downtime could be prevented.
- Safety improved.
- Management felt the difference. The Head of Operations described the experience as "the calm in my work environment after the implementation was dramatic."
- Visitors to the plant commented that the systems put in place were top in class.
- Workers asked, "why did we not run this way years ago."
- The union complimented management: "for the first time it feels like we are working together"

Key Takeaway: Shift the Focus to Flow

By identifying the true constraint, managing variability with buffers, and aligning people daily in the Flow Room, the mine unlocked hidden capacity and transformed its culture.

This wasn't about working harder. It was about working smarter—as one synchronized system.

👉 Could Your Mine Be Sitting on Untapped Potential?

Tangible Results:

- **Output Surge:** 33% increase in annual output by unlocking hidden capacity.
- **Proactive Problem Solving:** When poor LW roof conditions required breaking the usual rhythm, the Flow Room's projected buffer levels gave *days* of advance warning. Teams calmly planned for the necessary dozer support, preventing panic and ensuring the plant *didn't stop*.
- **Safety & Culture Boost:** Calm, controlled execution replaced reactive decisions, reducing safety risks. Workers reported it as the "best system they've seen," feeling more relaxed and collaborative. "Thank you to management... we're working together."
- **Reduced Management Load:** Less firefighting freed up senior leaders. The Head of Operations experienced unprecedented "calm," realizing this was how effective management *should* feel.

Key Takeaway: By identifying the true constraint, managing variability with buffers, and aligning the entire team through visual management and dialogue (Flow Room), this mine tapped into significant latent potential. The focus shifted from local efficiencies to overall system flow, transforming performance and culture.

Could your mine achieve similar results by focusing on flow?
