



Realigning the business for improvement: a Case Study

21 MARCH 2025

Presented by:

Hendrik Lourens

hendrik@stratflow.com.au

What makes the job so hard?



Outline for today

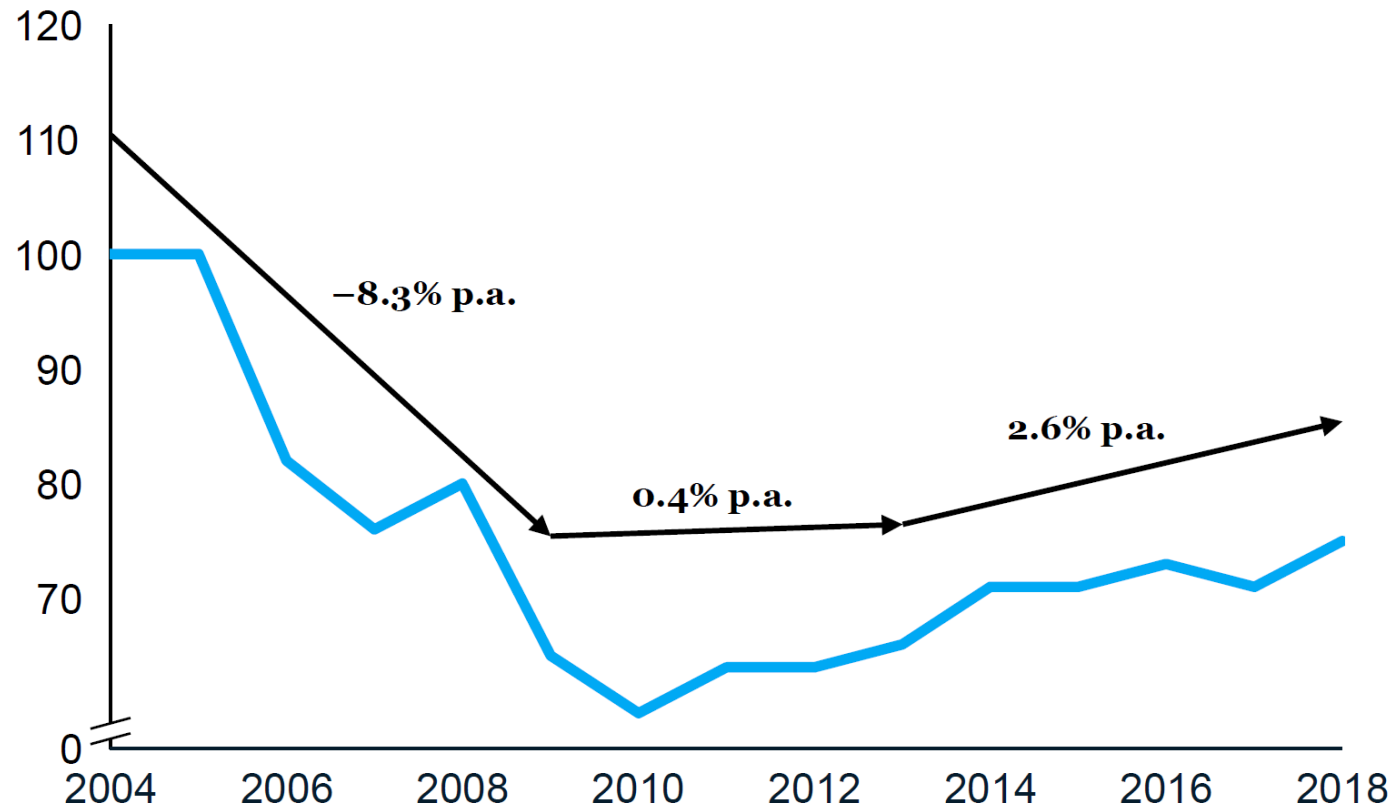
- 1) Too many problems
- 2) Case study results
- 3) Root cause
- 4) What should we change and to what?
- 5) How to cause the change
- 6) Case study-Questions and Answers

**1) Mine Managers are facing multiple,
wicked and seemingly unrelated problems.**

Global mining productivity has declined

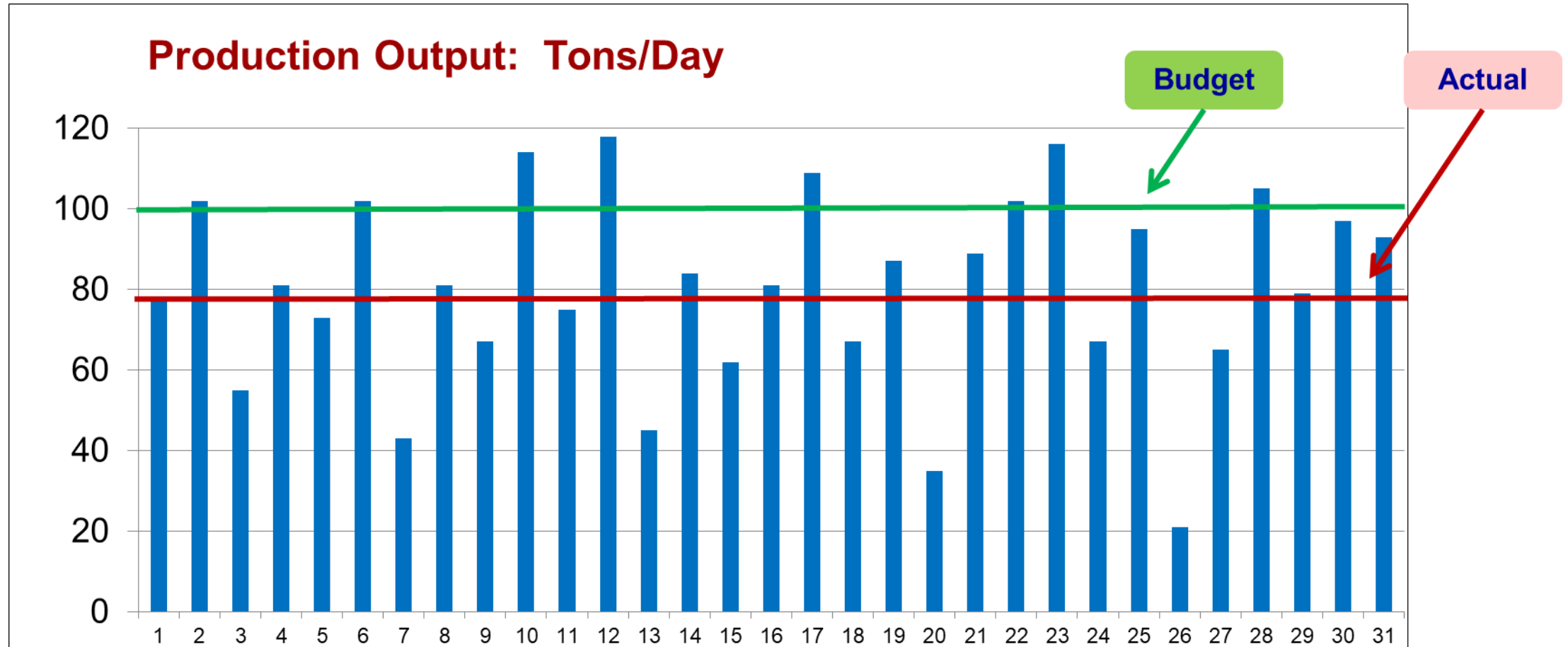
Mining Productivity¹ Index

2004 = 100



McKinsey and Company - Has global productivity reversed 2020

Reliably meeting target is a struggle



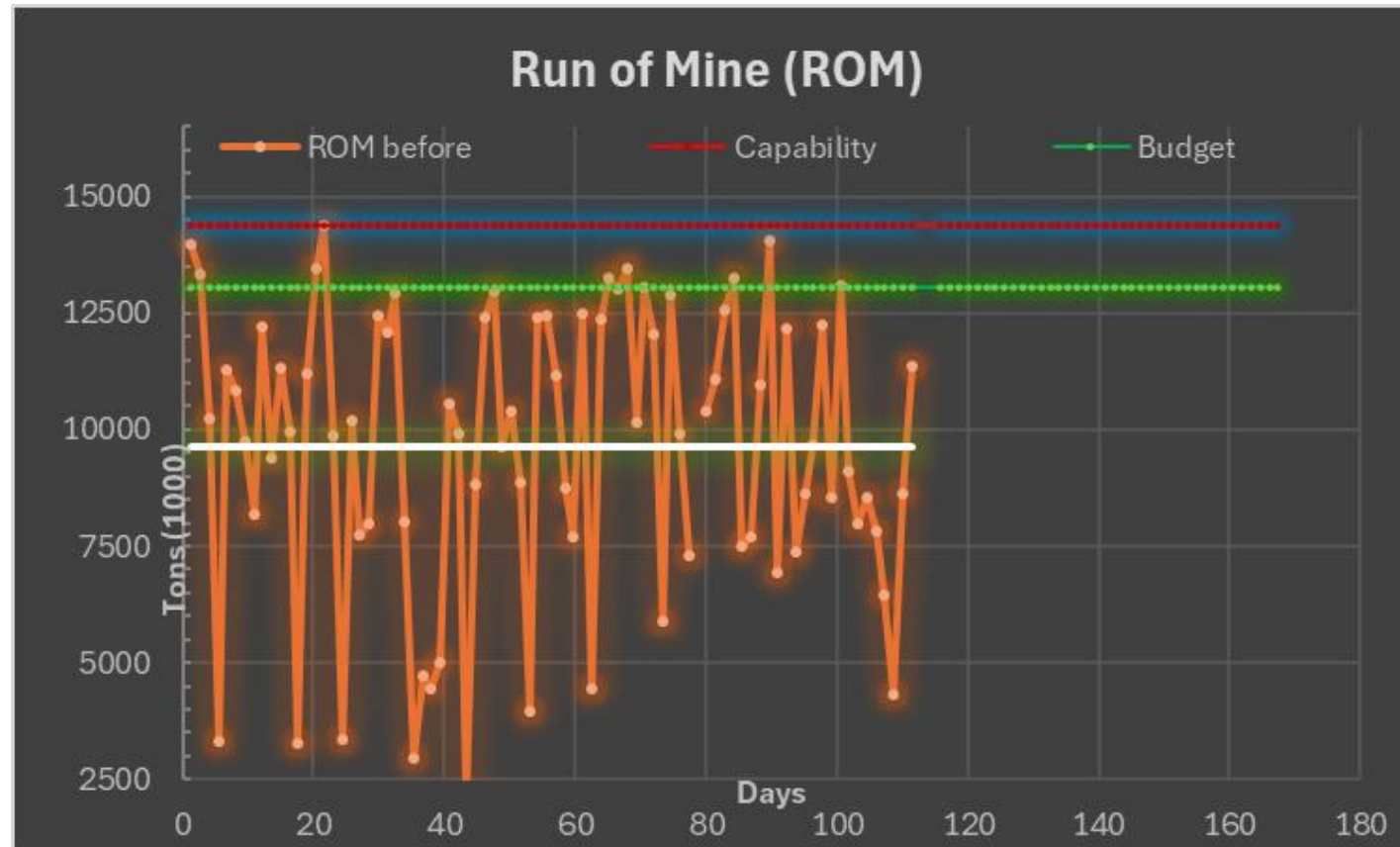
Mine plans have too short a shelf life

Is the mine plan too optimistic?

Frequent missing of planned targets cause:

- Production to lose faith in achievability of plan
- Planning tempted to introduce stretch targets into plan
- Breakdown in trust

Should we reduce the budget or ask for capital?



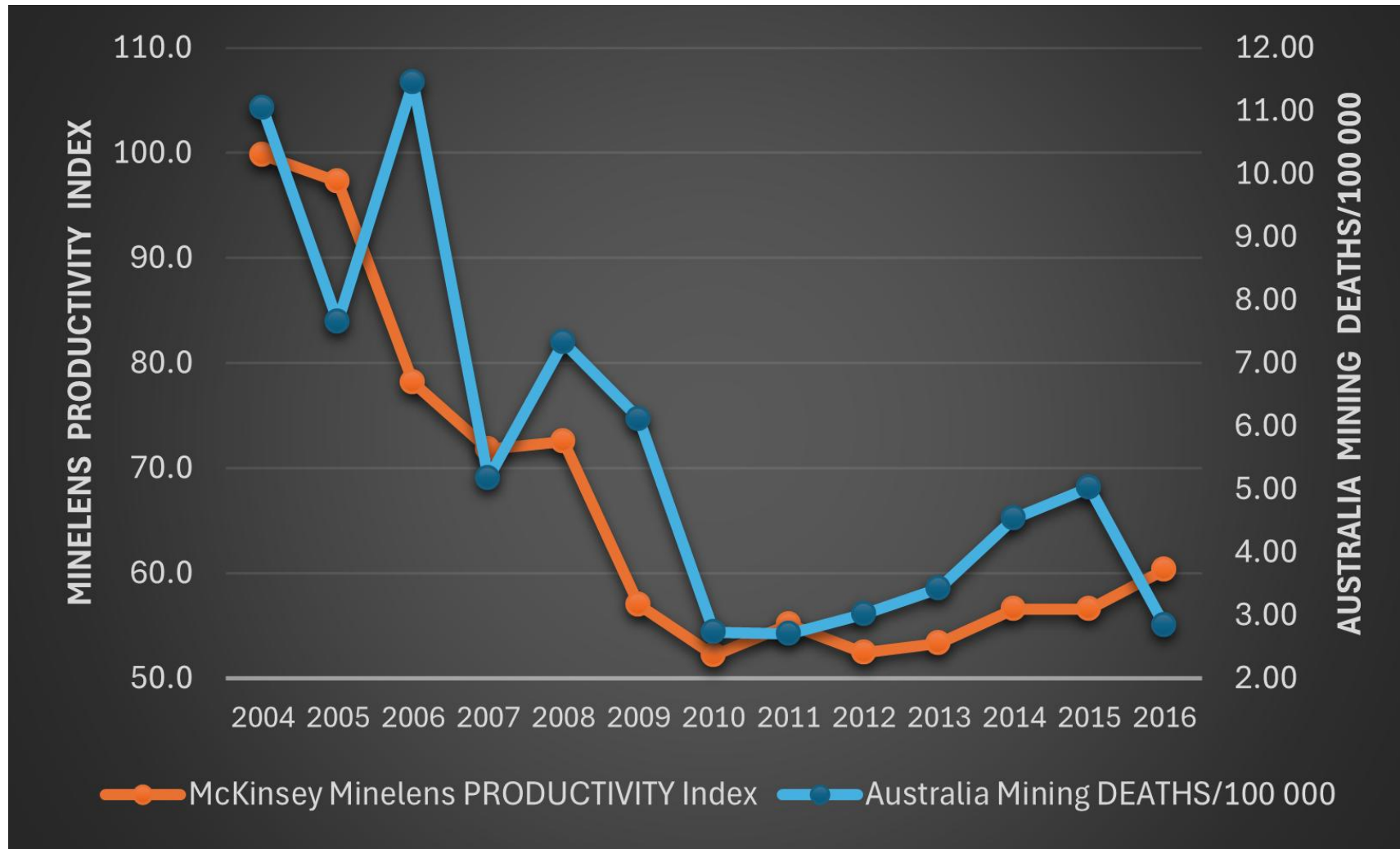
Unsatisfactory Employee Engagement

Gallup State of the Global Workplace

Australia/NZ

- 2021 – Engaged 20%
- 2023 – Engaged 23%

Stuck safety and lower productivity



2) Case study

What if the way our mine delivers value is different from the way we think it does?

NSW Longwall case study



Longwall case study- NSW 2024

Production + **33%** within three months—without Capex



- "The highest ever rolling 12 months CHPP feed was achieved."
- "We unlocked 33% hidden capacity simply by aligning the parts of the business."
- "In 40 years of operation, it is now operating as efficiently as ever."
- "Recent visitors to the mine commented that the standards observed are some of the best they have seen."

More client feedback

"It enables our employees to see clearly how their area of responsibility fits into the overall performance and to hold each other accountable."

"We see problems developing in advance and deal with it in a spirit of calmness."

"The union says that for the first time they feel management and workers are working together."

"The Operations Manager says that since September he can focus on discharging his mandated responsibilities - there is no more firefighting. "

"The management team agrees that the excellent safety performance is directly attributable to the new way of working."

How did they do this?

Focus: Concentrate on the most critical constraint to system throughput;

Alignment: Synchronizing departments through clear, visual performance metrics and KPIs;

Psychological Safety: Creating a culture where everyone feels empowered to speak up, take initiative and innovate.

3) The root cause of our pain

The TOC view on the mining struggle

"If YOU want to make money, ...
MOST of your resources
MUST be IDLE from time to time"

"The closer you are to a balanced capacity chain, the closer you are to bankruptcy"

THE CORE PROBLEMS

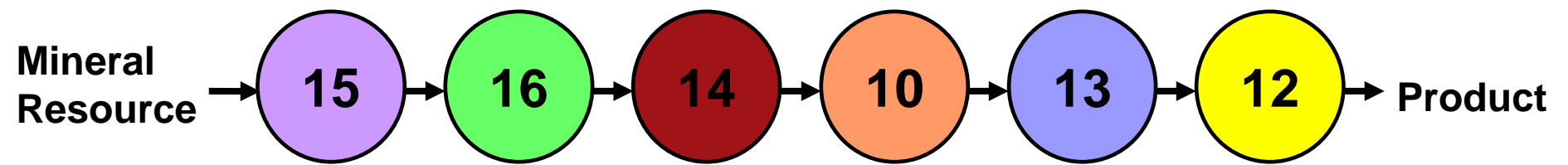
Trying to optimise everything through cost & efficiency

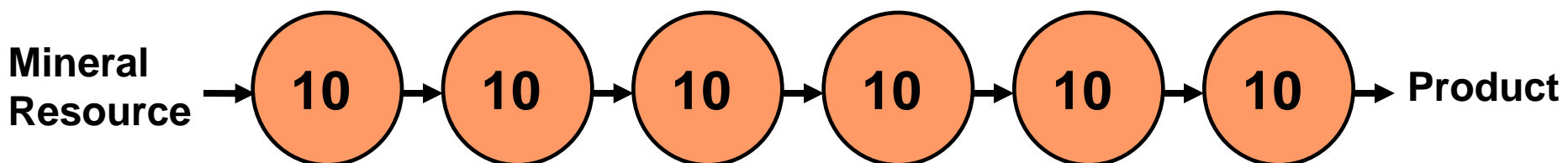
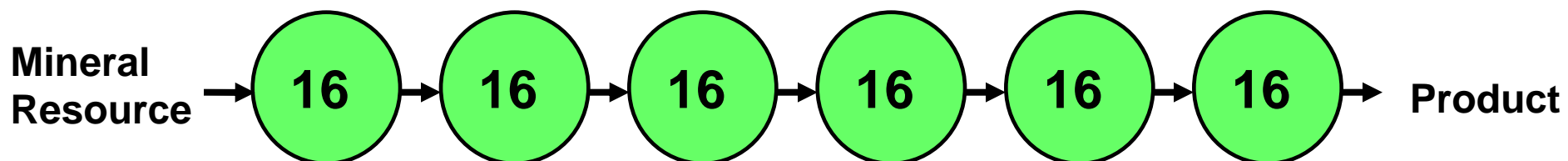
"In any serial production chain, you can optimise ONLY ONE link"

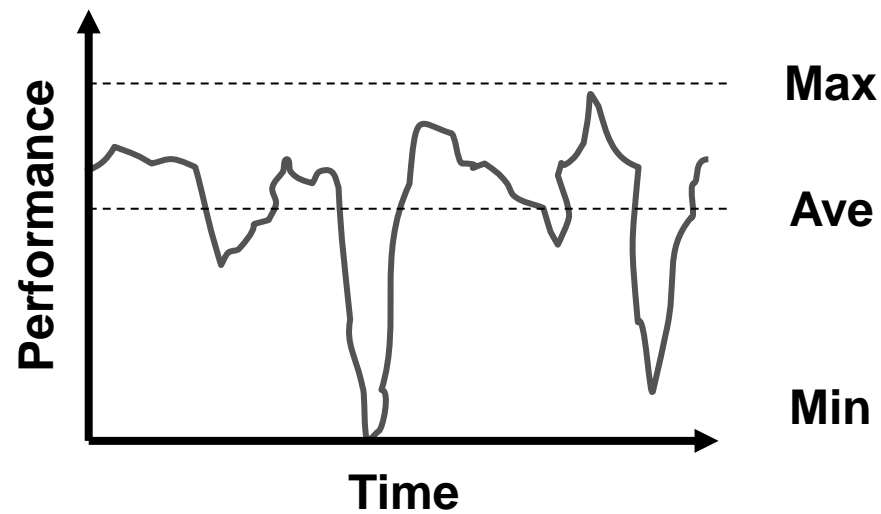
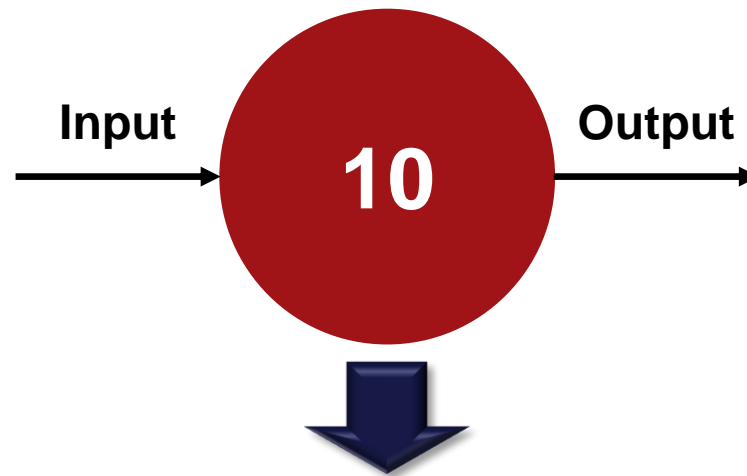
"Do you want to make money, or do you want to show off efficiencies?"

"If a company tells me they experience moving bottlenecks, my response is:
You have NO bottlenecks and most of your resources have at least 30% spare capacity"

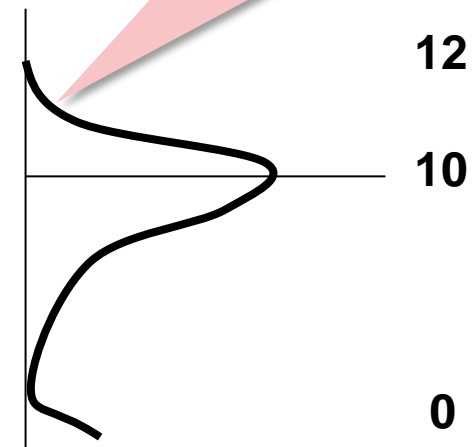
- Dr Eli Goldratt -

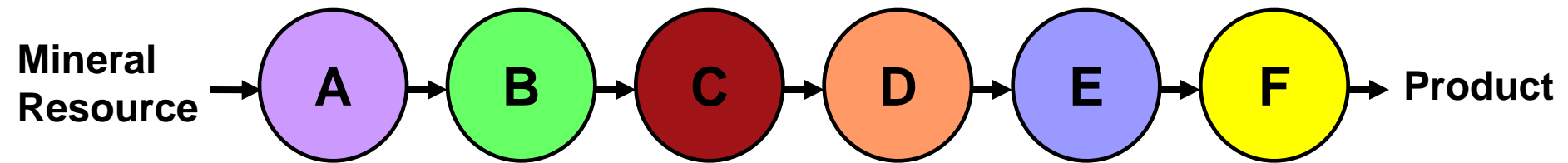


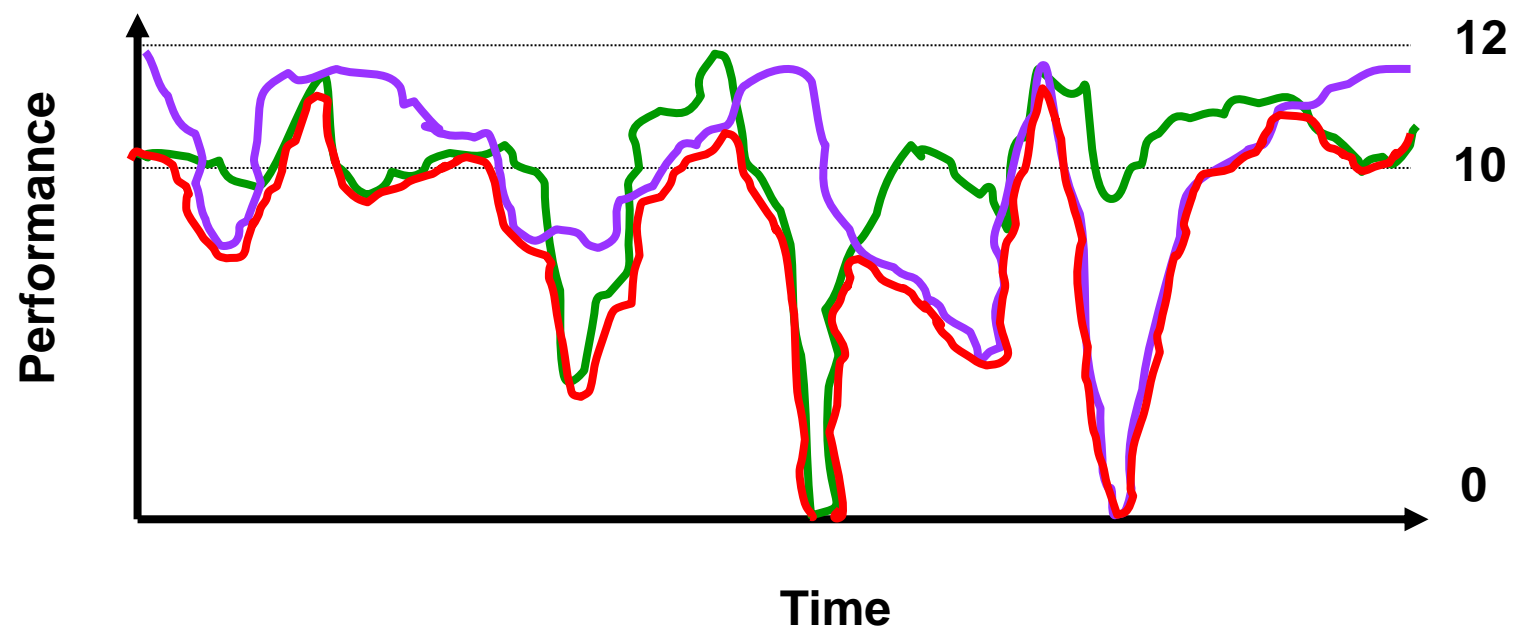
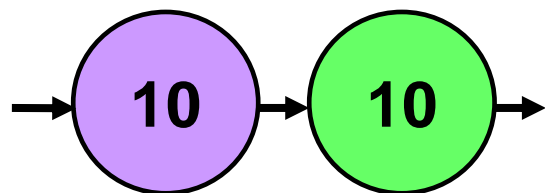


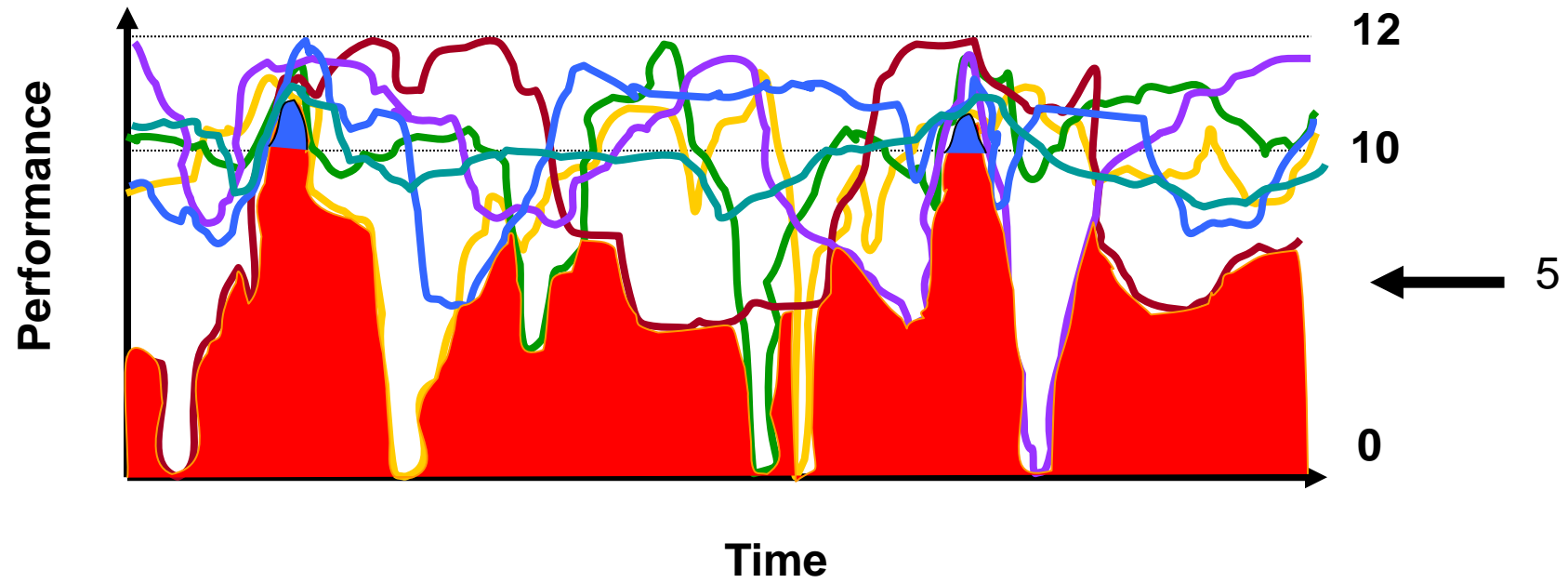
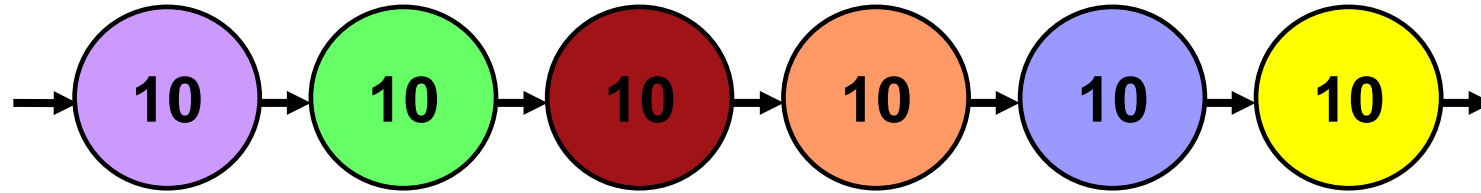


Industrial Processes:
NEVER a **NORMAL**
distribution







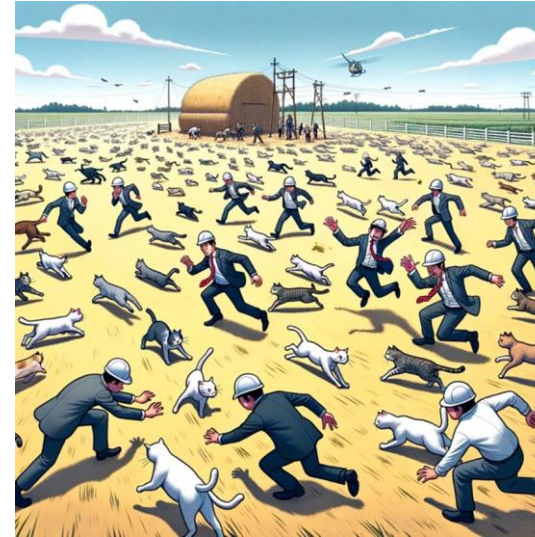


ERP + MOS

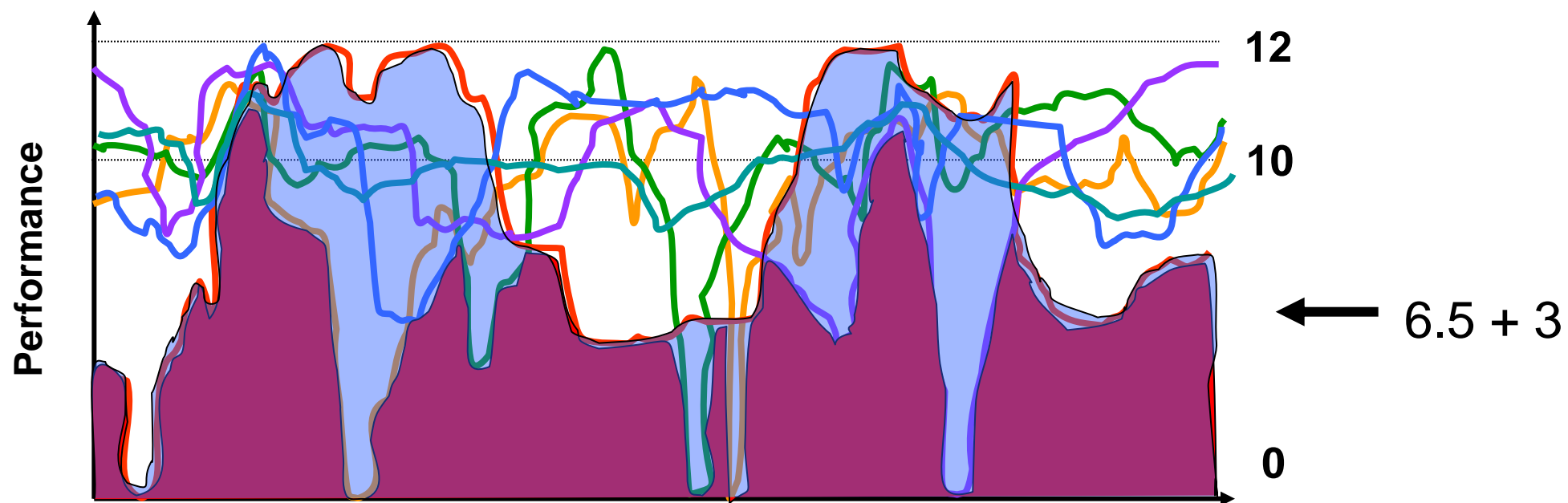
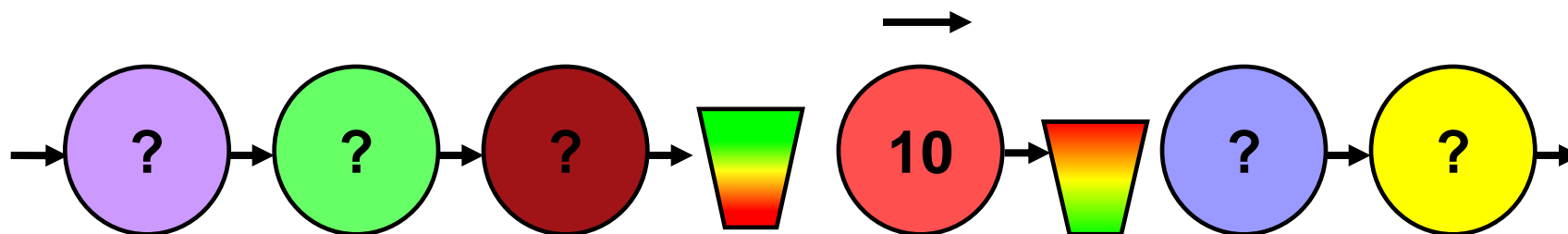
- Balanced capacity thinking hard coded into ERP and MOS.
- Stable but not agile



What happens next



4) What should we change and to what?



The TOC view on the mining struggle

"If YOU want to make money, ...
MOST of your resources
MUST be IDLE from time to time"

"The closer you are to a balanced capacity chain, the closer you are to bankruptcy"

THE CORE PROBLEMS

Trying to optimise everything through cost & efficiency

"In any serial production chain, you can optimise **ONLY ONE** link"

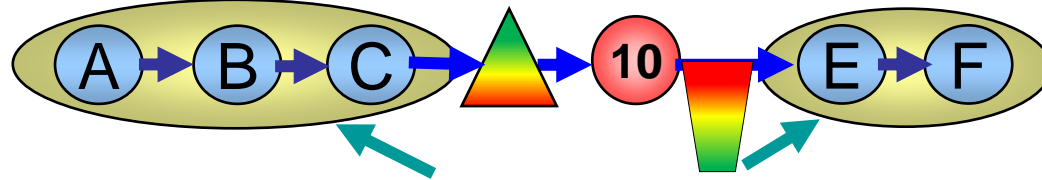
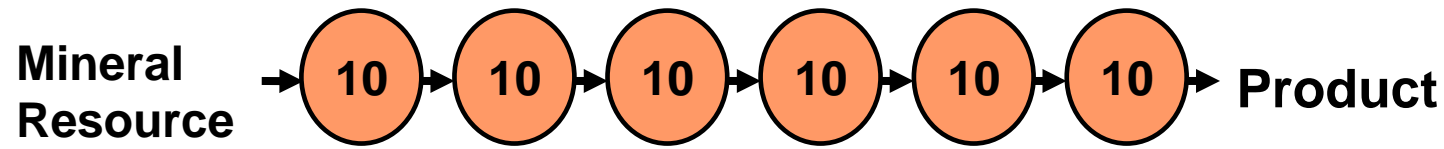
"Do you want to make money, or do you want to show off efficiencies?"

"If a company tells me they experience moving bottlenecks, my response is:
You have **NO** bottlenecks and most of your resources have at least 30% spare capacity"

- Dr Eli Goldratt -

5) How to cause the change

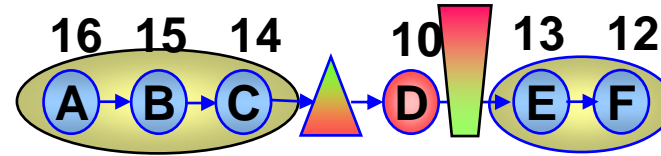
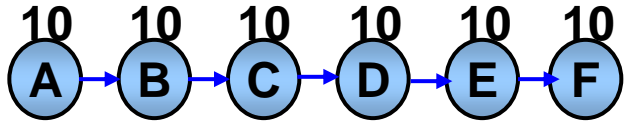
Facilitating the change to the new paradigm



Protective Capacity

- How will we facilitate this change?
- Through an experience of a new reality

Two Opposing Views



Balanced Capacity	Optimised FLOW
<ul style="list-style-type: none">• The way to reduce unit cost is to limit expenditure• Productivity is managed by restriction of resources• People have to be controlled in order to perform	<ul style="list-style-type: none">• The way to reduce unit costs is to maximise the output of the system• Productivity is the outcome of the system's performance• People can and want to perform

Purpose of the Flow Room

THE WHAT:

- Thirty minute daily cross functional meeting
- Objective of the Flow Room is to enable the change from Balanced Capacity to Optimised Flow
- Aligning all the functions on the operation –activities for next 48 hours

THE HOW:

- Maximise Flow through bottleneck
- Create Experiences of Success
- **Dialogue, teamwork, visibility, positive reinforcement**
- Only critical information discussed

Productivity Platform - Flow Room

Adds agility to MOS stability

- A place where the critical data is immediately visible, all get the same picture of reality



- Where heads of departments and their direct reports are present

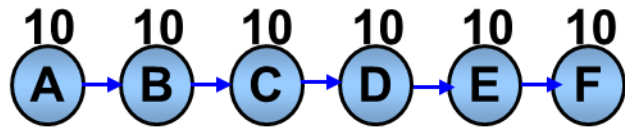
- Where decisions are made looking forward and holistically, using dialogue



Peer pressure - enables accountability and alignment

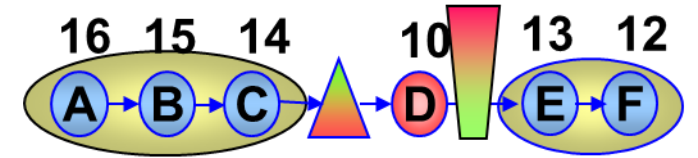
- Rule 1: Improve Understanding of What Coworkers Do
- Rule 2: Reinforce the People Who Are Integrators
- Rule 3: Expand the Amount of Power Available
- Rule 4: Increase the Need for Reciprocity
- Rule 5: Put the Blame on the Uncooperative

Summary: Start working the way the mine actually generates value



Seemingly unrelated, wicked problems.

Flow Room



Address Root cause of problems:

- Mine plan stable
- Productivity at max for system
- Easy to meet monthly target
- Highly engaged employees

Superflow in a spirit of calmness

- Work becomes fun again, for managers and workers
- Easily delegate responsibility to the correct level
- Free up your time and attention
- Meet your targets easily



About Stratflow

- Miners have difficulty in reliably achieving mandated operational results.
- Over 20 years on 5 continents Stratflow has delivered more than 90 projects
- We create a platform from where managers and workers can break the paradigm that shackles them and keeps them from delivering great results.
- Working from the new paradigm delivers results that would otherwise not be achievable.

HENDRIK LOURENS

STRATFLOW
Australia



About Hendrik Lourens-1

Hendrik Lourens began his career in Physics (MSc Polymer Science Cum Laude) and had a strong start in the petrochemical industry turning around a large petrochemical plant. Transitioning into leadership roles, he became a Director at a medium-sized manufacturing firm, where he honed his expertise in organisational strategy, operations and turnarounds.

After earning an MBA from Edinburgh Business School (Distinction), Hendrik became the first to qualify in all areas of the Theory of Constraints (TOC) within a single year. He contributed a chapter to Goldratt Schools' Leading People Through Change Journal in 2011. In 2013, he published Drawing a New Map, a book on management strategy and Organisational transformation.

Apart from TOC, Hendrik is also qualified as a Lean Six Sigma Black Belt, Certified Lean Specialist and Prosci Certified Change Practitioner.

From 2013 to 2022, Hendrik collaborated with the late Arrie van Niekerk, the world leader in TOC for mining, to apply TOC principles to mining operations across multiple continents, delivering exceptional results in productivity, safety and employee engagement.

About Hendrik Lourens-2

Hendrik's approach combines **TOC with principles of organisational behaviour**, enabling mining operations to achieve transformational improvements. The Productivity Platform, specifically the Flow Room (dual management operating system), enables miners to add the missing agility to their MOS.

He also collaborates with Art of Work to implement Safety Differently initiatives, which redefine safety outcomes in industrial and mining contexts.

Based in Brisbane, Hendrik continues to lead change, applying innovative frameworks to solve complex challenges in mining and beyond.

LINDSAY MAW

STRATFLOW
Australia



About Lindsay Maw - 1

Lindsay Maw is an experienced Associate at Stratflow with over 20 years of expertise in the mining industry. Holding a Master's degree in Geology and an Executive MBA from the University of Oxford, Lindsay has built a distinguished career across various leadership roles, including as a General Manager. He has a proven track record in technical services, mine operations, and operational excellence, with significant experience in driving sustainable value.

Lindsay has worked extensively in Africa, Latin America, Asia/Pacific, and the USA, providing a broad, international perspective on the mining sector. Prior to joining Stratflow, he was a consultant with Partners in Performance, where he consistently delivered impactful results by leveraging his deep understanding of mining operations to improve cash flow and operational efficiency. He has spearheaded numerous mine-to-mill and drill-to-dig initiatives that have significantly increased output and optimized operations.

About Lindsay Maw - 2

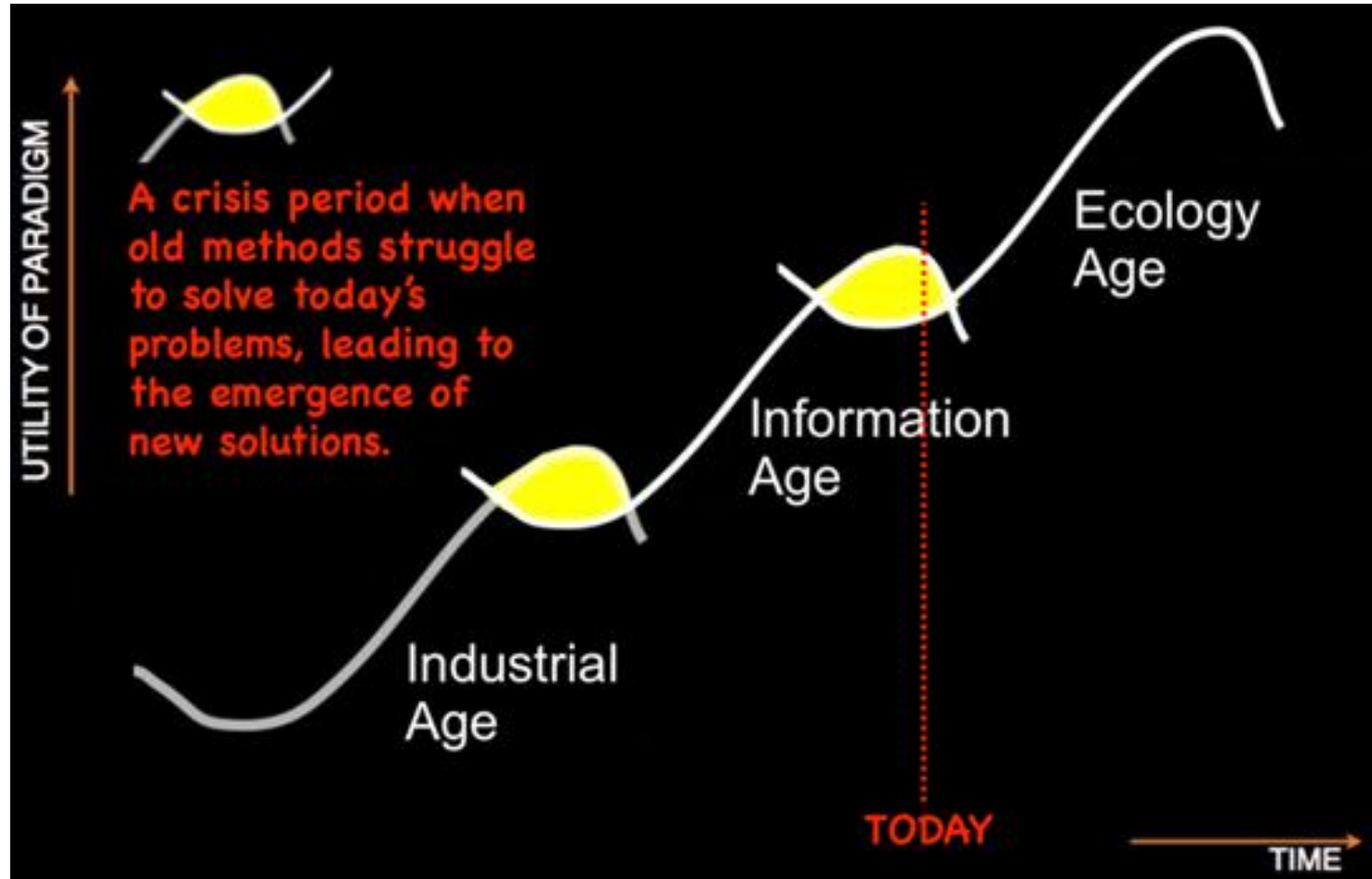
A strong advocate for employee engagement, Lindsay thrives at building connections across business hierarchies and departments. His leadership style focuses on collaboration to drive results in safety and production. At Stratflow, Lindsay applies his extensive global experience and leadership expertise to help clients enhance operational performance, to produce more safe

Clients



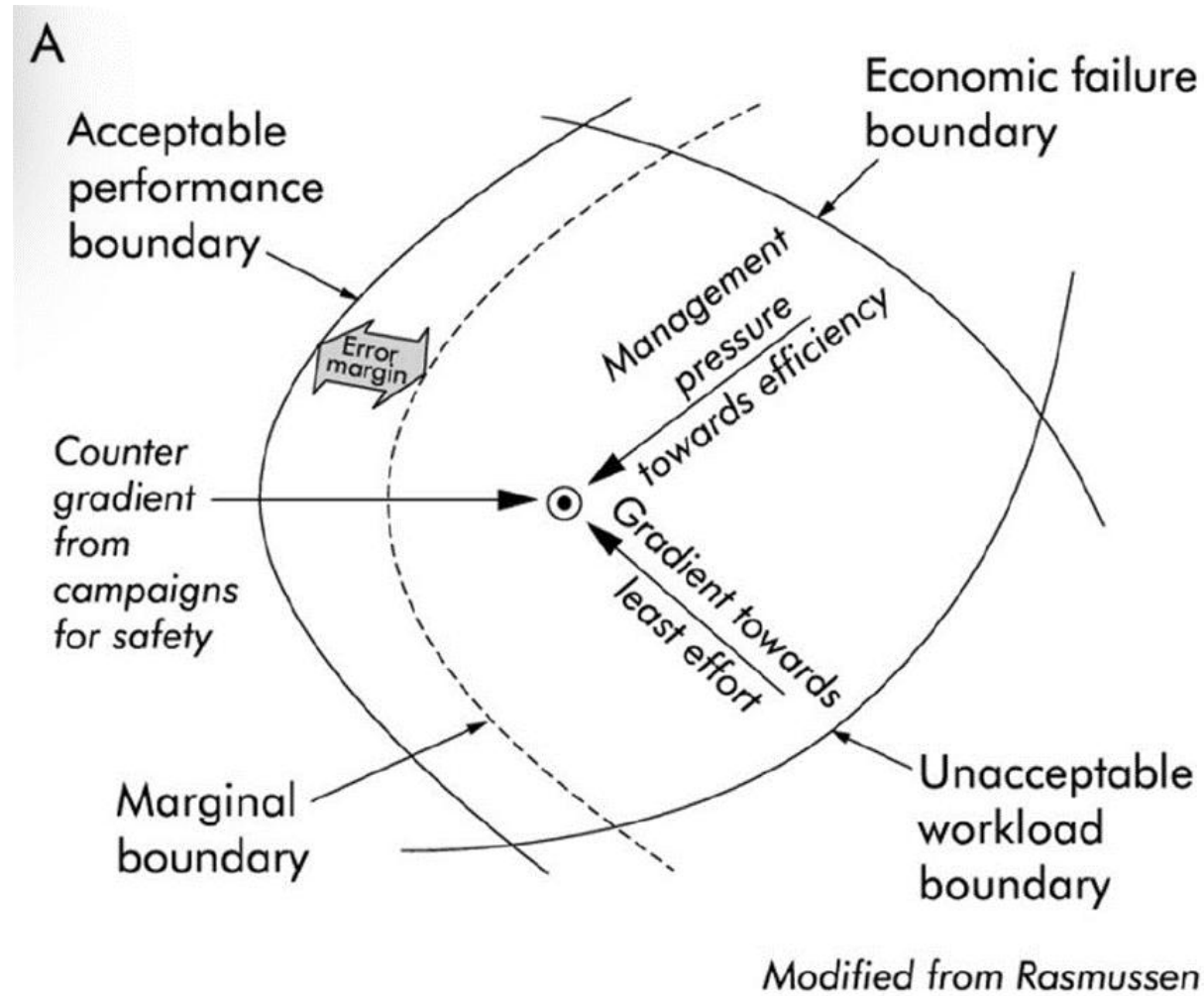
Appendix - Safety Impact and Q&A

Mining in a crises period

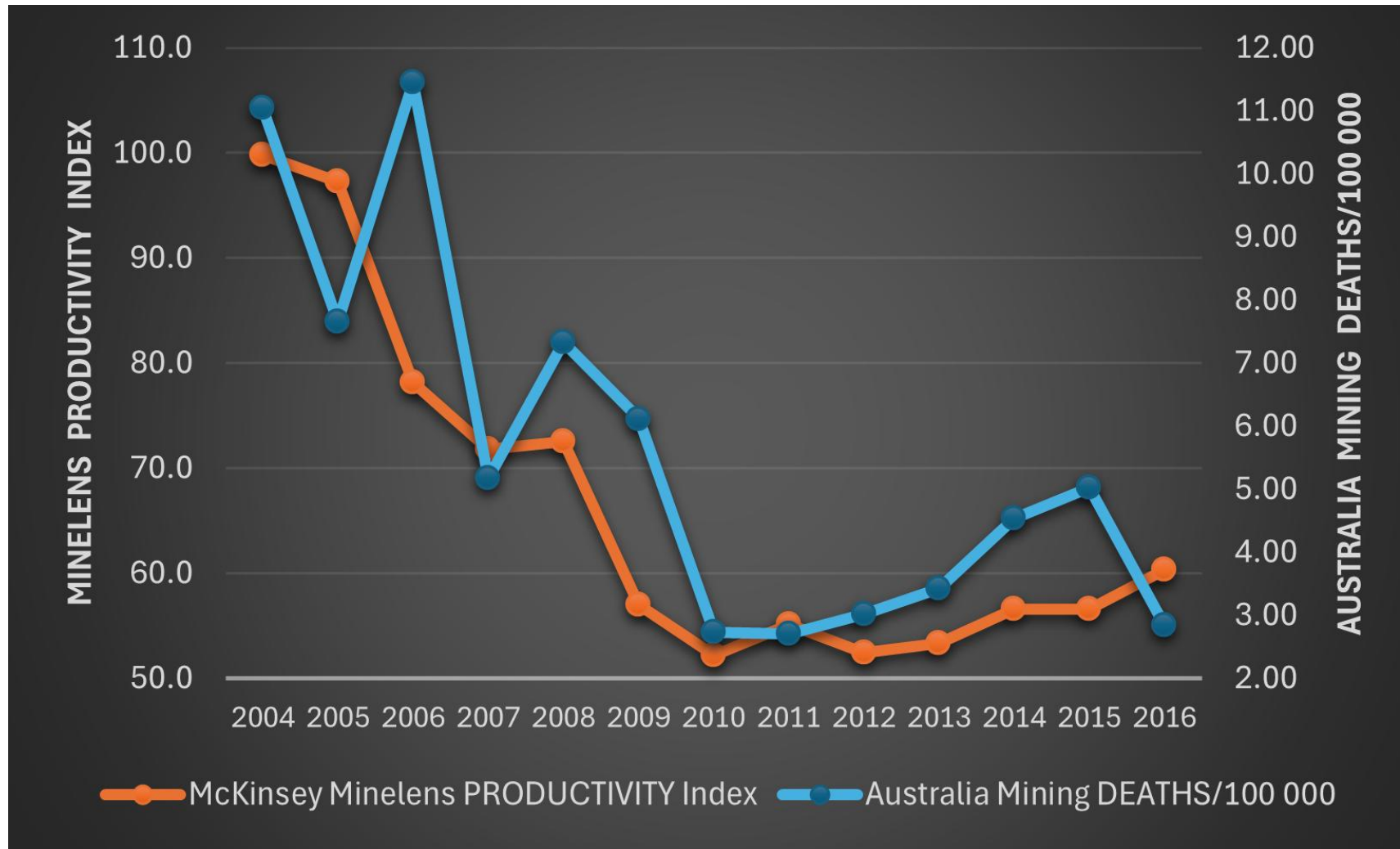


Gary Wong & Associates

The safe production edge



Stuck safety and lower productivity



Shifting the safe production edge outward

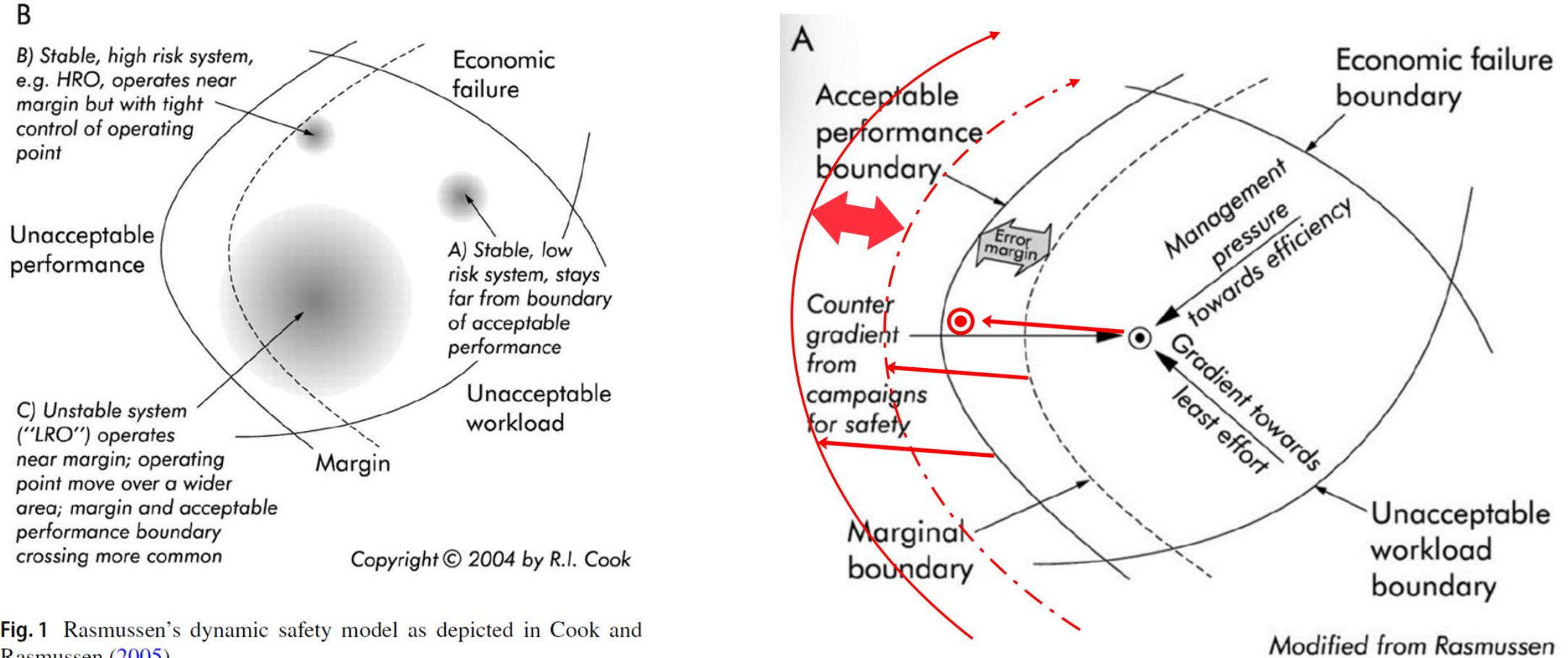


Fig. 1 Rasmussen's dynamic safety model as depicted in Cook and Rasmussen (2005)

6) Client Feedback on Case Study

Implementation Q&A

Question:

"For other mine managers who might be skeptical about trying something new due to the perceived risks involved, what would you say to convince them that the Flow Room is worth it, based on your experience?"

Answer:

"The results speak for themselves, there isn't a single person I speak to that hasn't asked why we didn't do this sooner, so just do it.....or you continue to do what you've always done and see the same result next year!"

Implementation Q&A

Question:

"Some managers hesitate because they fear a new system will overwhelm their teams. What was the level of effort required to set up the Flow Room intervention, and how did you manage it alongside daily operations?"

Answer:

"There was definitely some level of angst over trying something so different, but once we assured the critics that we could turn it off and go back to the way we were overnight, we just needed a roll out strategy.

The implementation was targeted for a new LW, with 6 months prior being the introductions, training, flow room development and shadowing with live data to see what questions and conversations would pop up.

An overall strategy via flow diagrams were developed to outline the Flow Rooms intended operation and how the Daily meetings would run. Then we just ripped off the Band-Aid."

Implementation Q&A

Question:

"Implementing a new approach like the TOC Flow Room intervention can face pushback, especially from middle management. How did you secure buy-in from your team and other managers to make this a success?"

Answer:

"I won't lie, it wasn't easy. We needed a catalyst and acceptance at the Senior level that the current operating philosophy wasn't going to improve the mines outlook.

- Having one or two champions who were passionate and understood the basic principles whet the appetite of the Senior team.*
- Then by engaging Stratflow, this enabled us to fill in the missing key ingredients like the "Flow Room". With each win we then built ownership and momentum."*

Implementation Q&A

Question:

"The union highlighted feeling like management and workers are finally working together.. How has the Flow Room fostered that collaboration, and why do you think it's been so well-received?"

Answer:

"You're right. We had workers saying it's the best system they've seen in the mine's history, and that it's made work a lot more enjoyable. There were comments like, 'Thank you to management, it's great coming to work, everyone's more relaxed, and we're working together.' And the bonuses were better too!

The Flow Room helps create that by giving everyone a single, clear focus, cutting down on multitasking, and easing the everyday pressure."