

Driving Step-Changes in Performance & Culture for Established Sites

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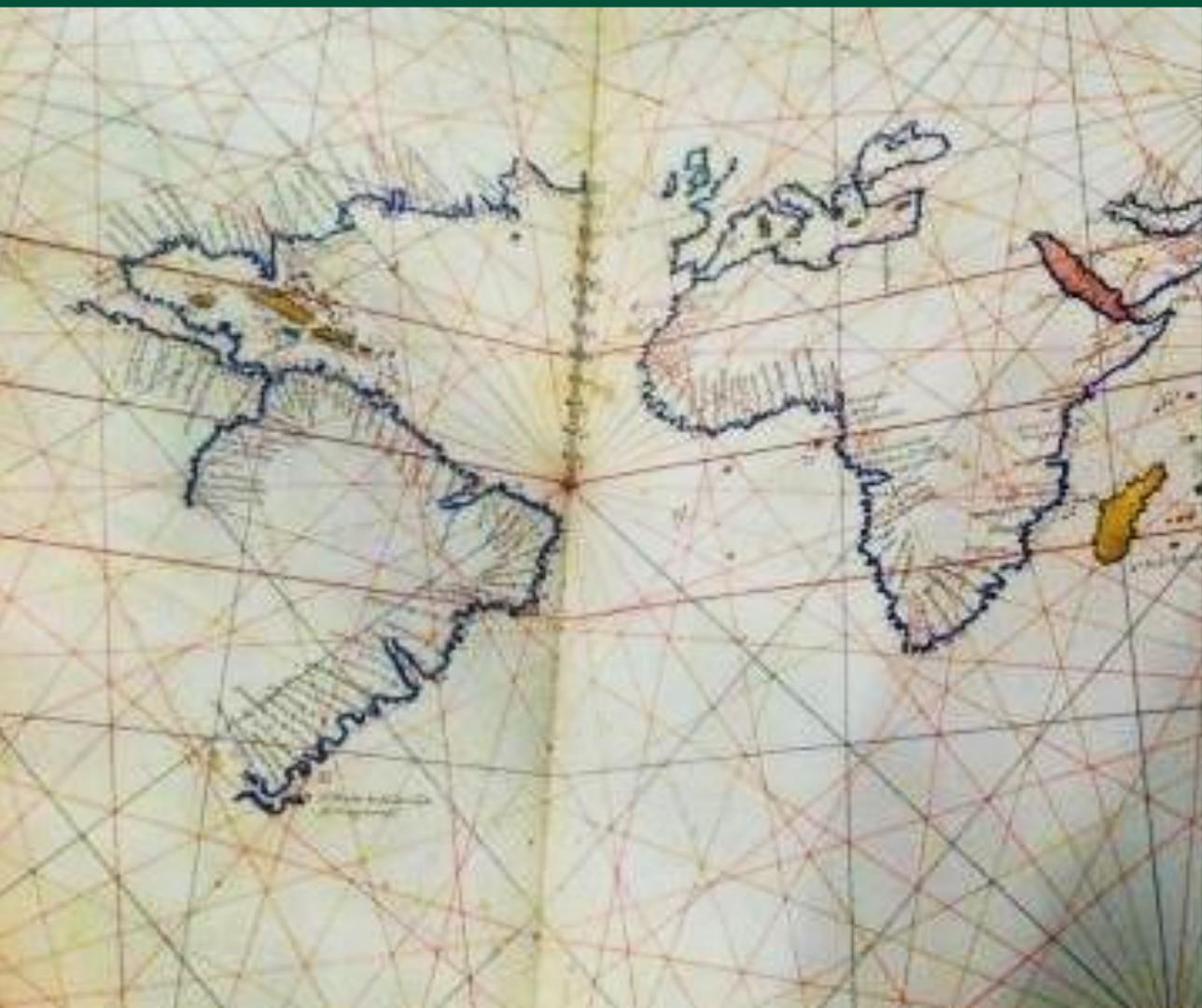
Why Don't Most Production Lines Improve?

1. They don't believe they *can* improve
2. They're not *asking the right questions*
3. They're not *set up to improve*



World Map #1, c. 1540:

- Simple
- Incomplete
- Honest

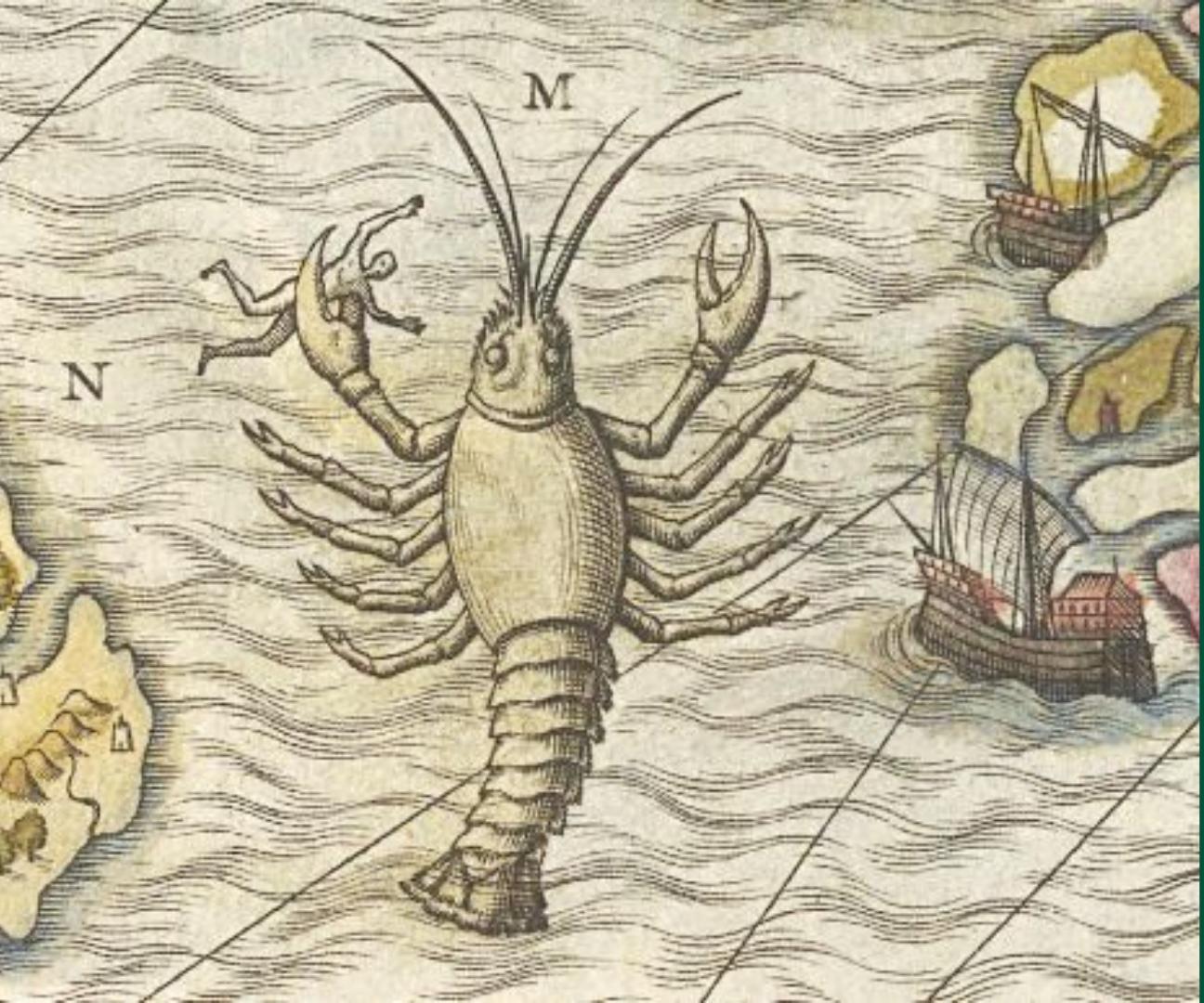


World Map #2, c. 1560:

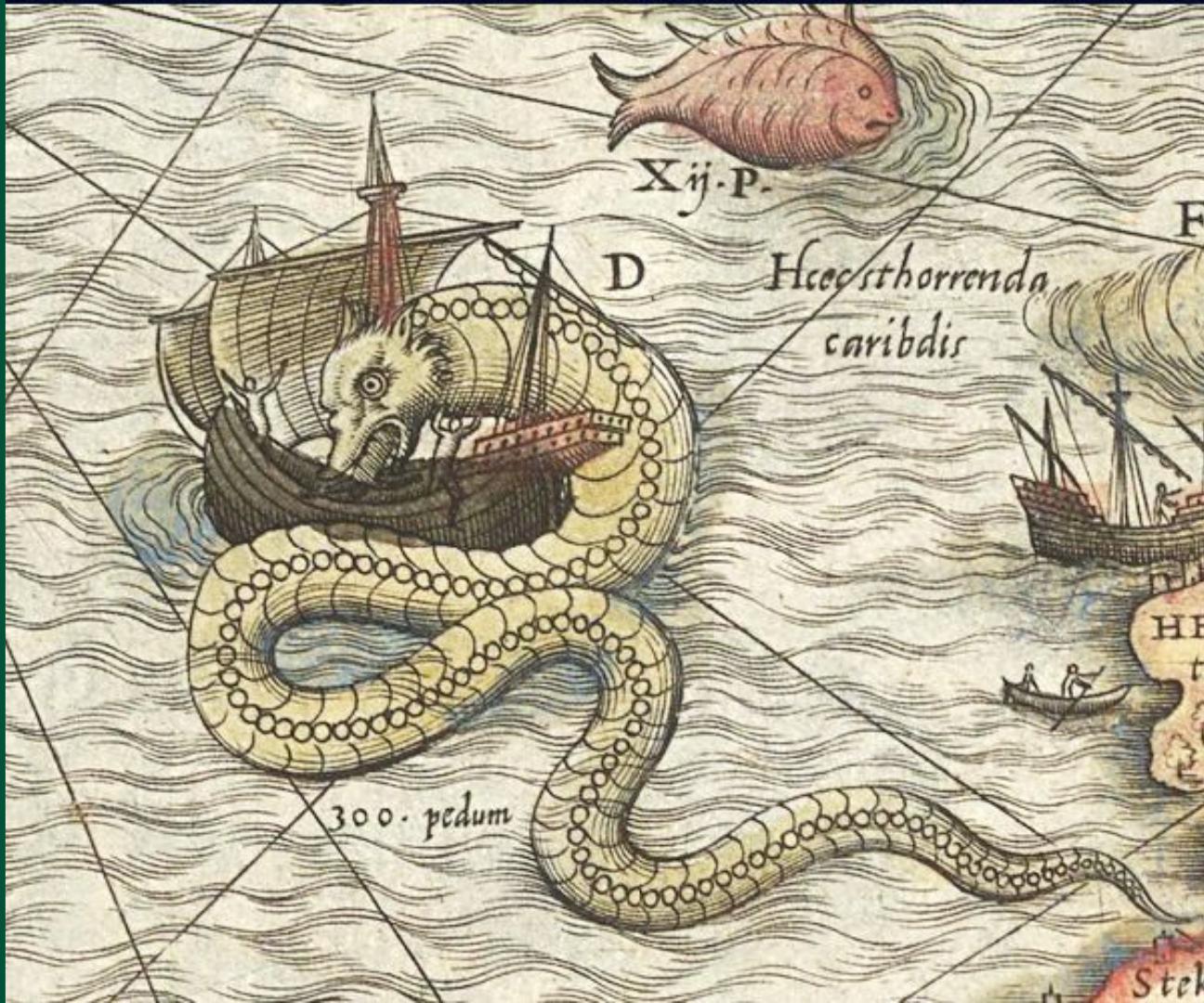
- Detailed
- Inaccurate
- Full of sea-monsters

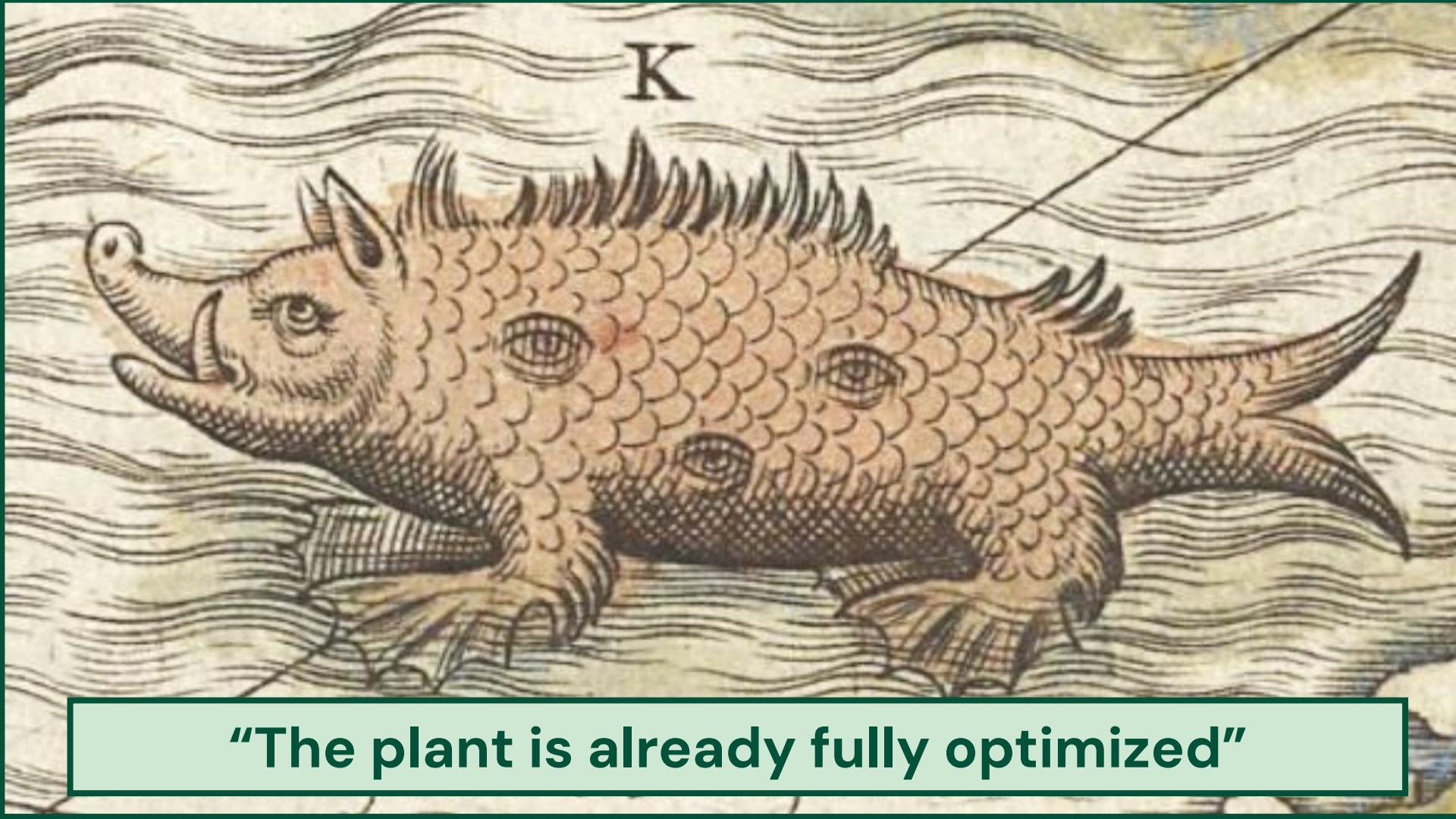


**“Running
faster will just
increase
downtime”**



**"We'll need a
lot of capital
to go any
further"**





K

“The plant is already fully optimized”

How to get to the truth?

Use a *Zero-Loss* Approach

A Zero-Loss Approach compares current performance to a

Perfect World

In Zero-Loss world:

- **No downtime (planned or unplanned)**
- **Plant always runs at maximum rate**
- **No quality issues**



A Story: Intro to Site X

- **Highly profitable company**, producing high-margin batch chemicals for pharmaceutical industry at their flagship site – **Site X**
- **Sudden, huge spike in demand** for **Product A**, driven by pandemic
- Sales commitments greatly **outstripped current manufacturing capacity**
- **Urgent need to ramp capacity** in 12 weeks to avoid shorting customers (and, ultimately, patients)

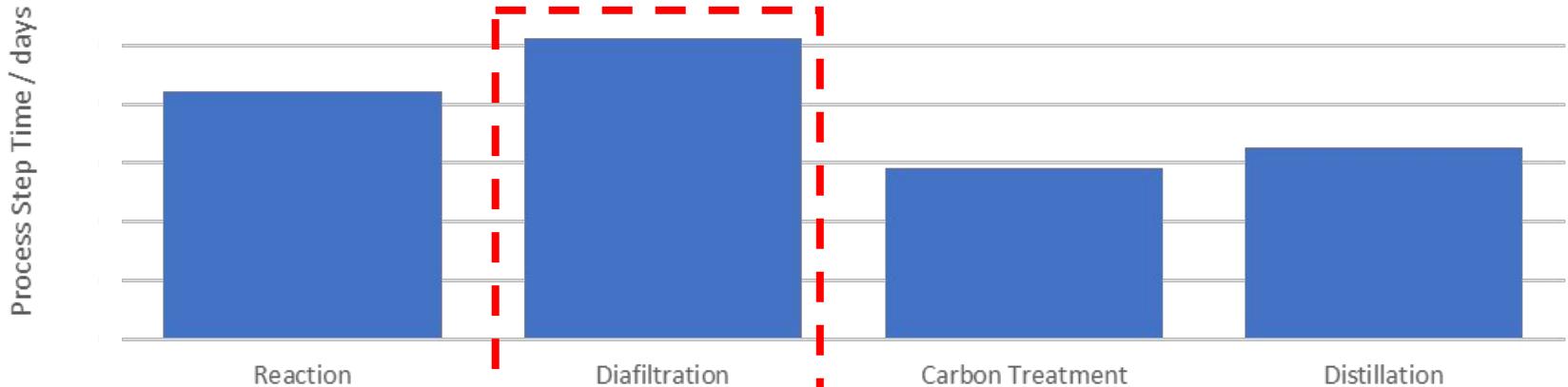


Site X: Applying Zero Loss

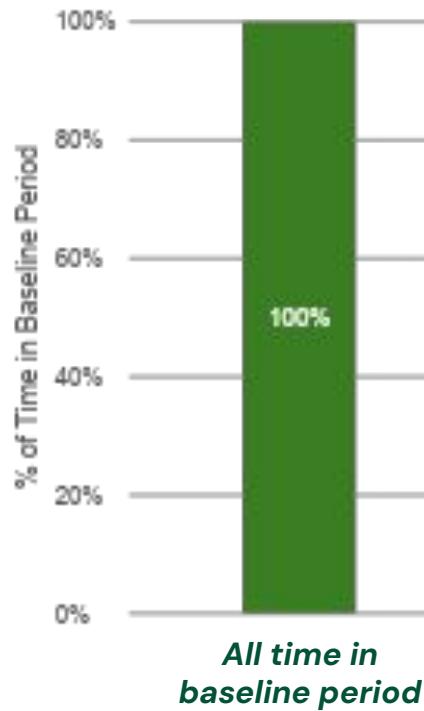
For increasing output, we are interested in losses at *The Bottleneck*:



Cycle Time Profile - Simplified



Site X: Peeling back layers to find opportunity

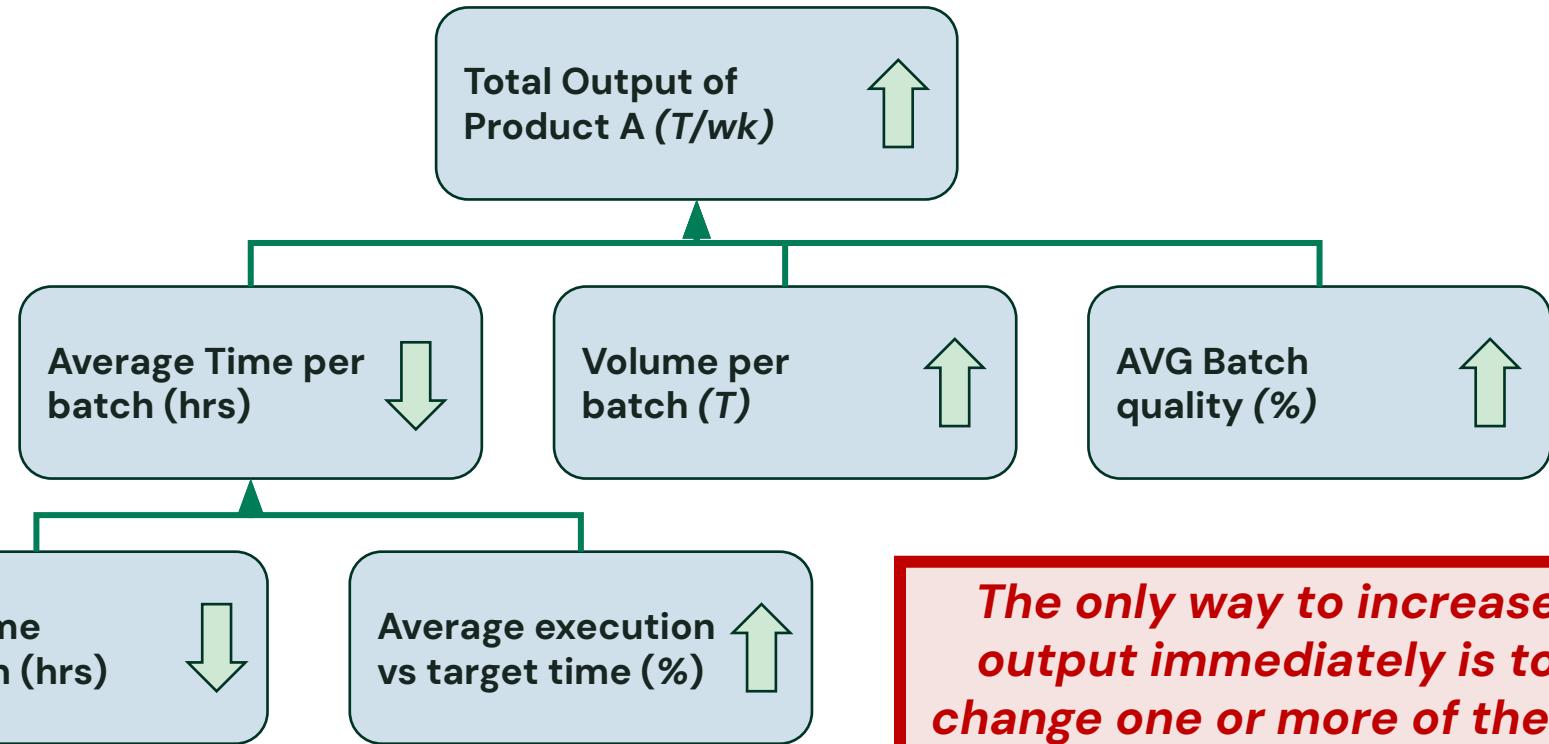


Why Don't Most Production Lines Improve?

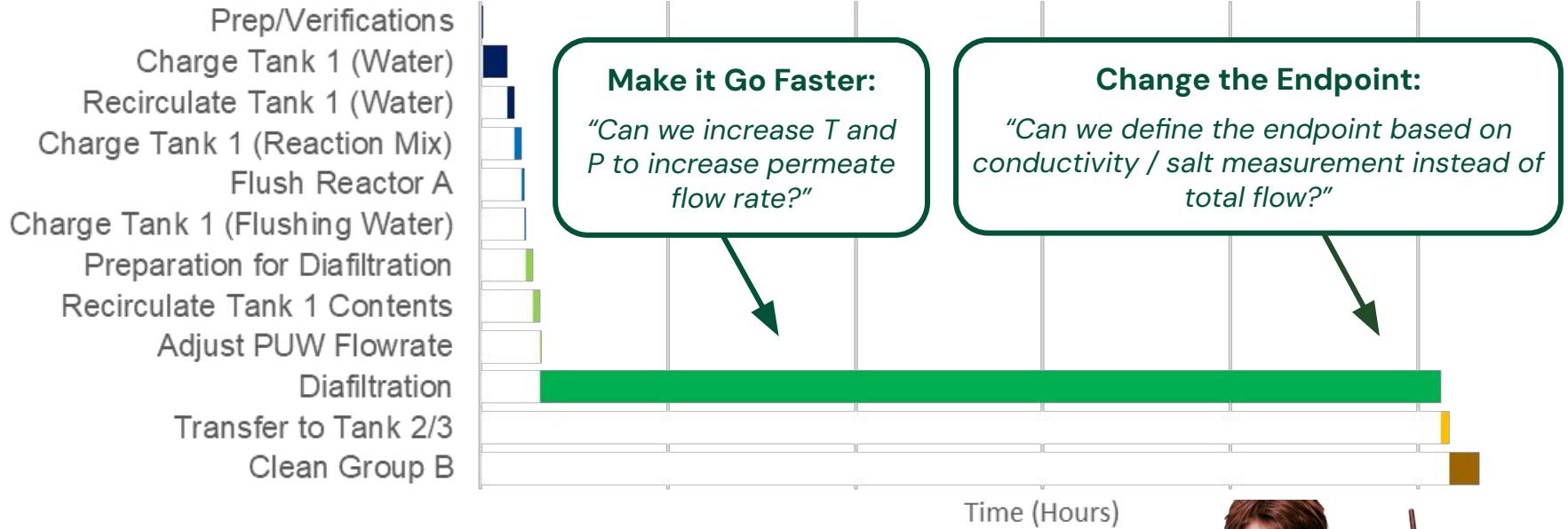
1. They don't believe they *can* improve
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Back to basics: *How to make more product?*



Site X – Target time: *How to make bottleneck process faster?*

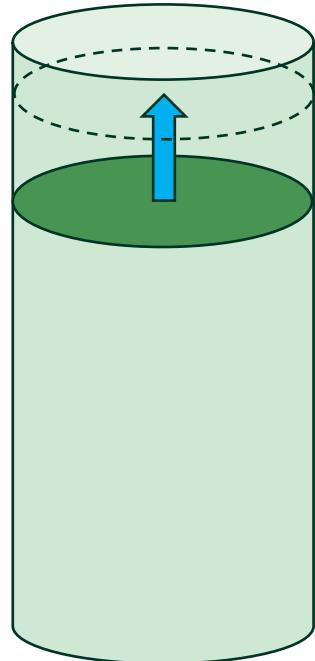


The magic words: "What would need to be true for us to...?"



Site X – Batch size: *How to increase batch size?*

Can we increase batch size?



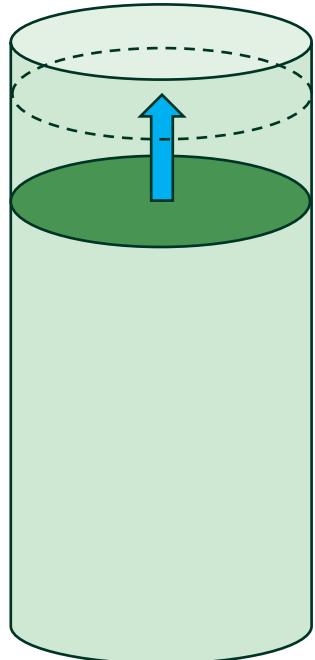
“Batch size is fixed by the carbon columns.

When we commissioned the process we filled the carbon columns up to the 80% mark to avoid risk of overspilling”



Site X – Batch size: How to increase batch size?

Can we increase batch size?



*“What would
need to be
true to
increase
batch size?”*



*“Well, we would first need to prove it in the
lab.*

*And we would need to segregate the first
production material until test results
come through.*

If we could do that, it might be possible”



Why Don't Most Production Lines Improve?

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Getting Things Done:

Motive:

Do they want to make improvements?

Means:

Do they have all the necessary skills?

Opportunity:

Are there big barriers to change?

The Means – *do my team have the skills needed to drive improvement?*

Most team members have the skills or at least the potential

High standards and strong performance are contagious

BUT: Underperformance and poor discipline can be too

Jim Rohn:

You are the average of the 5 people you spend the most time with



The Motivation – Persuasion: do my team want to improve? Do they want to do it this way?

Tell people why this is important and how they fit in. Explain how this all works.

Get feedback, and tell them again.



Build relationships and buy-in. Communicate 10-100x more than seems necessary.



The Motivation – *What if Persuasion isn't enough?*

PICNIC Approach for Accountability:

P – Positive

I – Immediate

C – Certain

N – Negative

I – Immediate

C – Certain

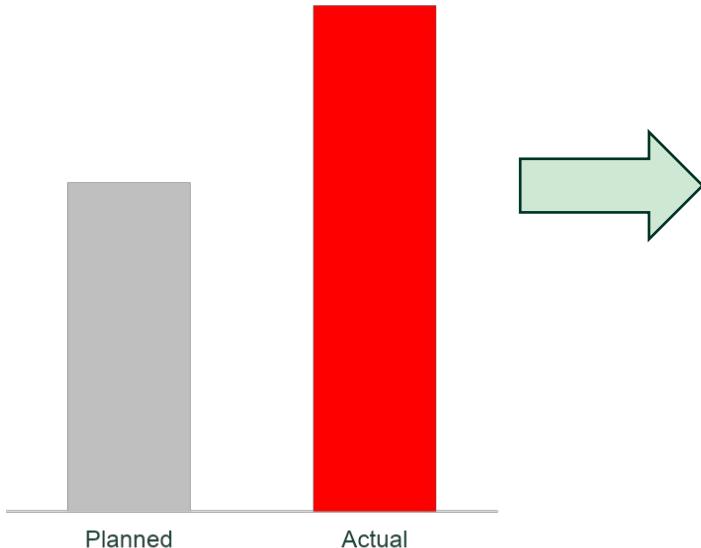
Three keys for driving behavior change:

1. **Specificity** – am I clear on **exactly what the expectations are, and why?**
2. **Accountability** – If I do it or do not do it, **will there be consequences?**
 1. Use the **PICNIC** Method
3. **Consistency** – Am I confident that the above **won't change?**



Site X – Accountability for execution vs target time

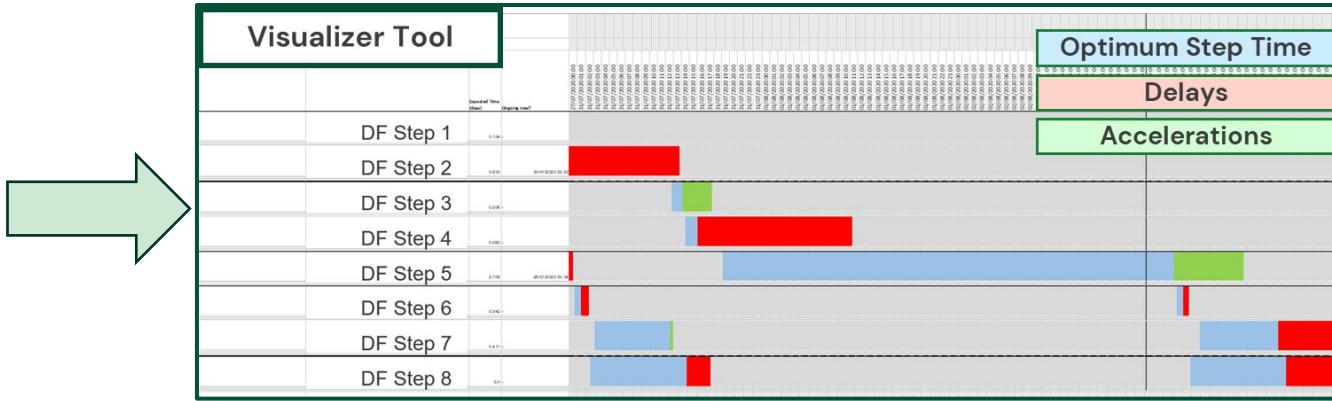
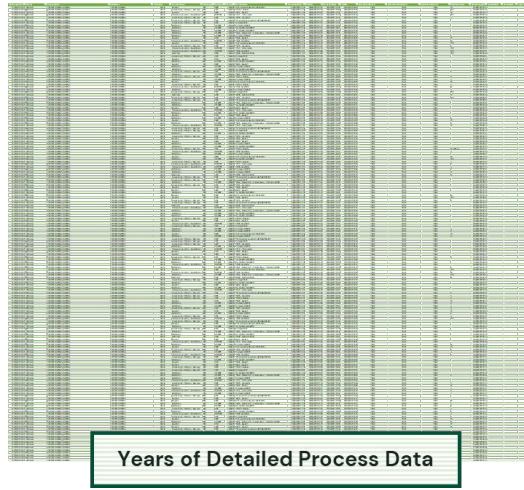
Planned vs Actual Batch Cycle Time at Bottleneck



Years of Detailed Process Data



Site X - Accountability for execution vs target time



Generate instant accountability by making your problems the
BIGGEST, REDDEST thing on the board the team look at every day



The Opportunity – *do my team have what they need to improve performance?*

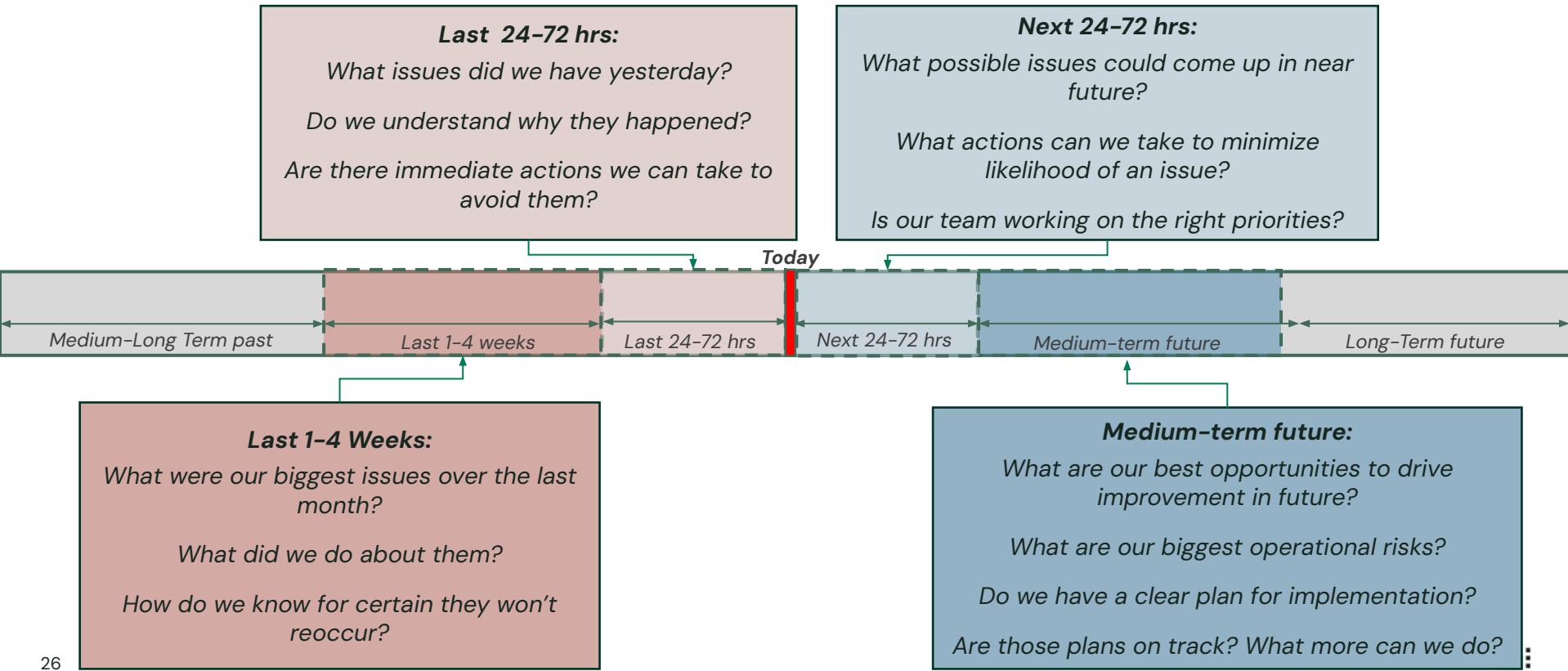
Common Failure Modes:

1. **Time** – No time set aside for improvement work
2. **Autonomy** – Not able to drive changes through themselves
3. **Access to Resources** – No access to SMEs or capital

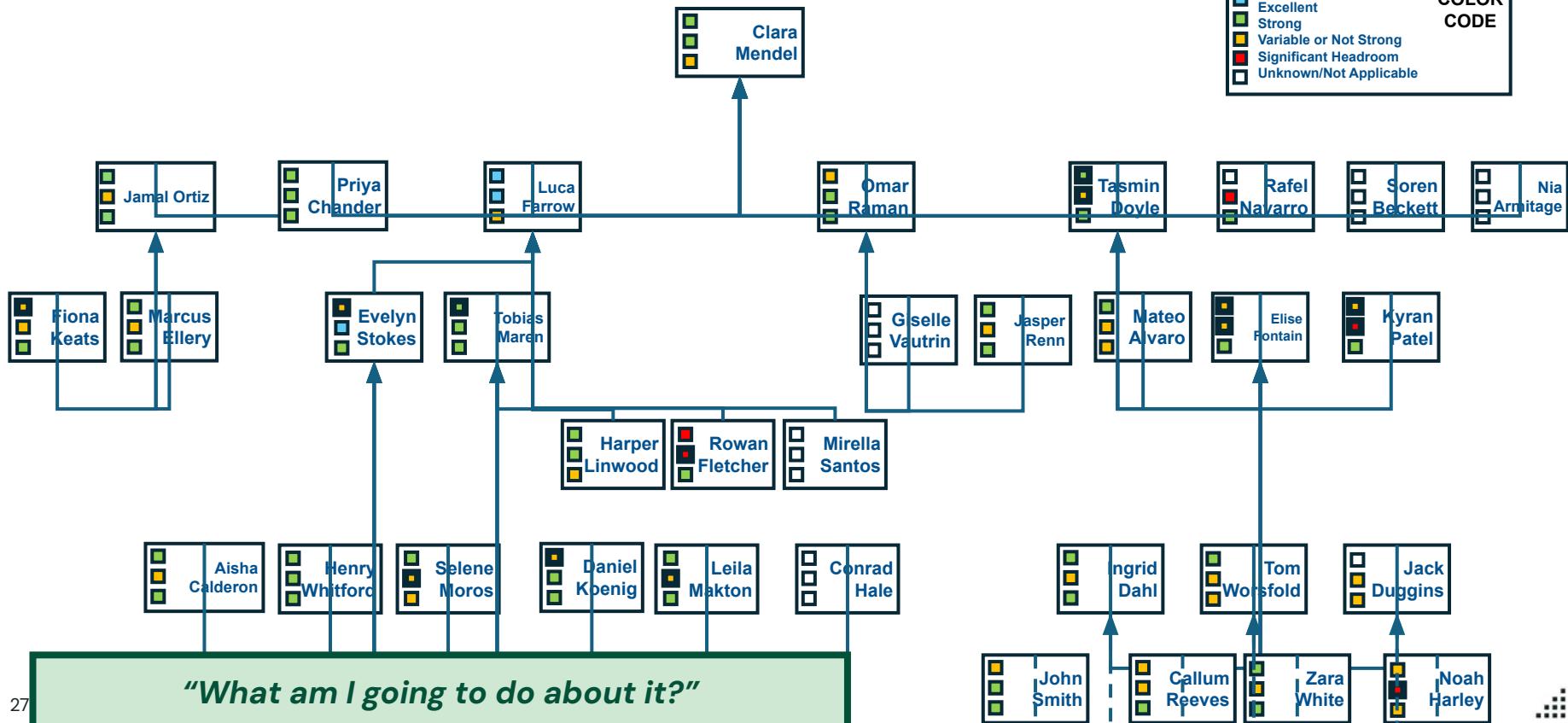


Day in the Life of a
Production Engineer

The Opportunity – *Setting aside time for improvement*

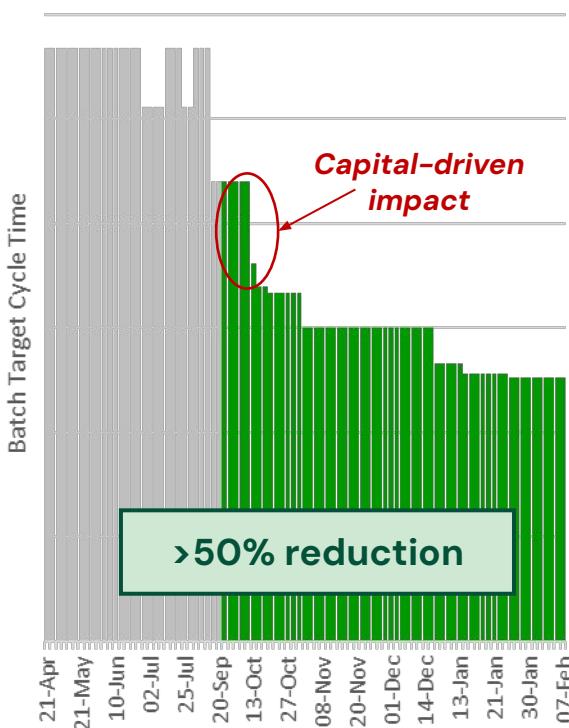


Setting up for success – Review Process

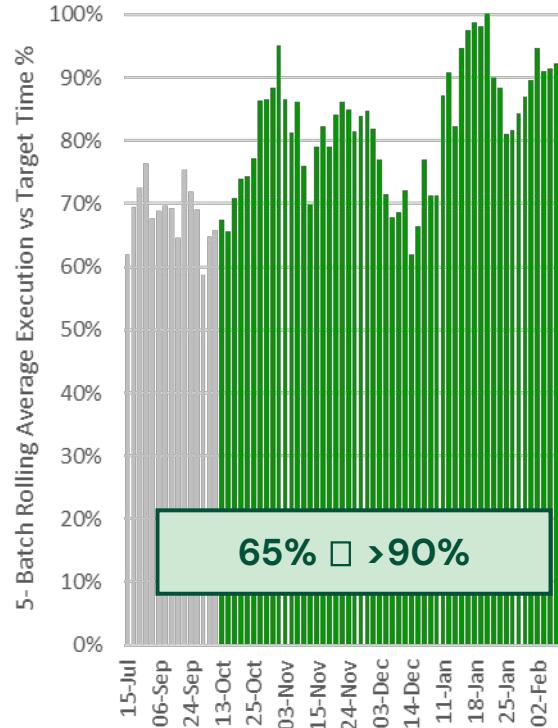


Finally: What Happened at Site X?

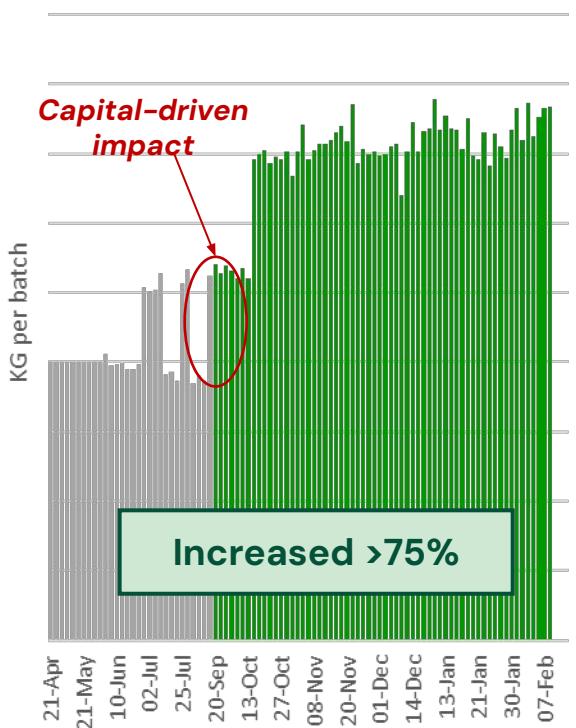
Target Cycle Time Tracker



Execution Performance Uplift



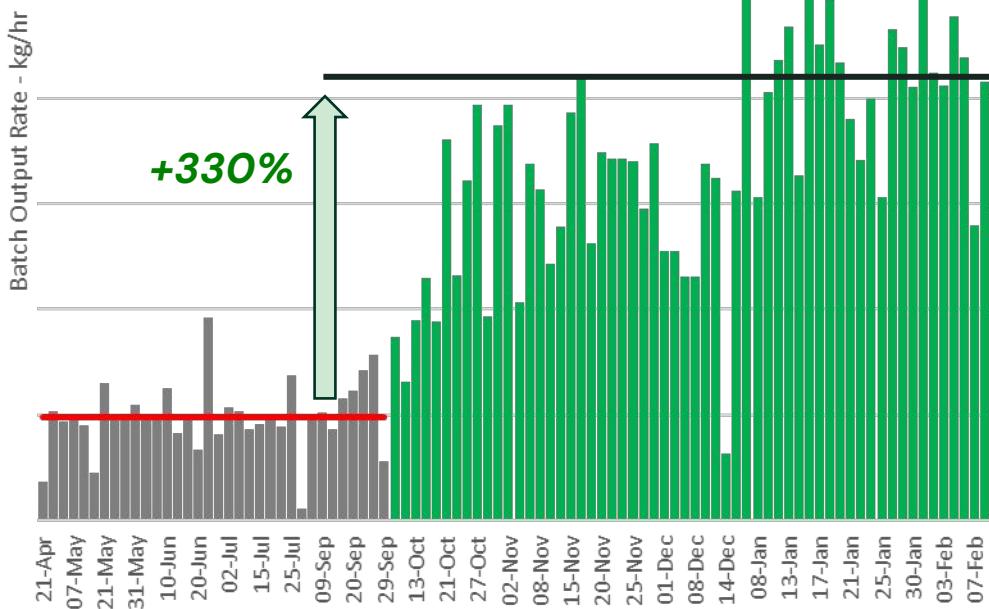
Batch Size Tracker



What Happened at Site X?

- Total weekly production increased 200% within 12 weeks, 330% within 16 weeks
- All customer commitments met with 100% OTIF
- Program expanded to rest of facility, where KG/hr productivity for 10 production lines has been growing >10% YoY for 3+ years
- Site OpEx trained to continue finding and driving performance:
 - **Focus on fundamentals**
 - **Lots more magic words**
 - **No more sea monsters**

Total Line Productivity – KG/hr



Summary:

If you want to improve performance immediately, you need to consider the three factors:

1. **Belief: Do my team know the true, Zero Loss potential?**
2. **Questions:**
 - I. **Are they focused on fundamental value drivers?**
 - II. **Are they asking What Would need to be True to close the gaps?**
3. **Set-Up: Does the team have the Motive, the Means and the Opportunity?**



Questions



Get in touch:

We appreciate you taking an interest in Chartwell,
please contact us if you have any questions.

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