



Bye-bye Bottlenecks Breaking the Backlog Cycle

Tim Romley, Senior Solution Engineer

Today's Discussion

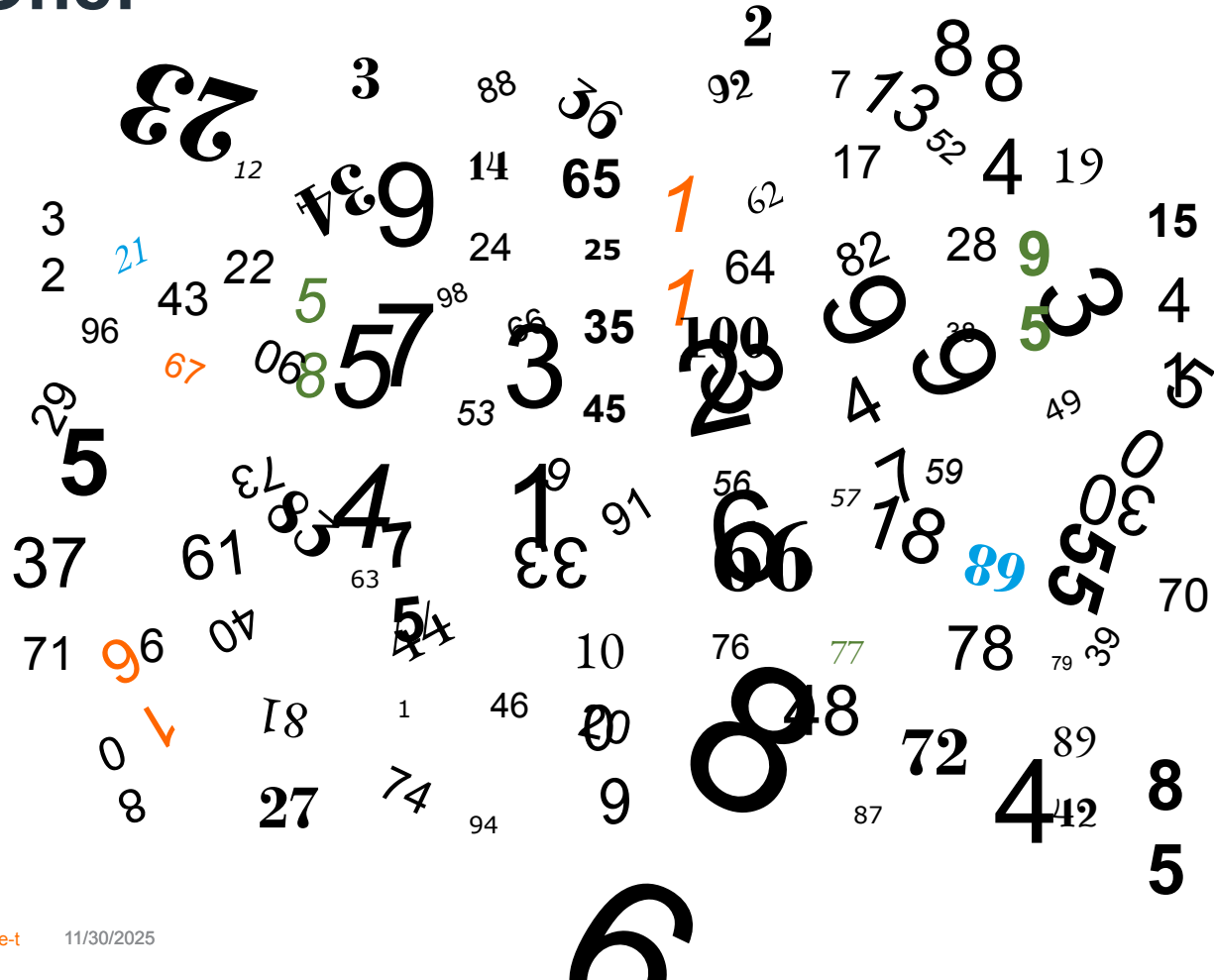
Learn how to burn backlogs and free data from manual systems.

Proven methods to shift from reactive to proactive operations.

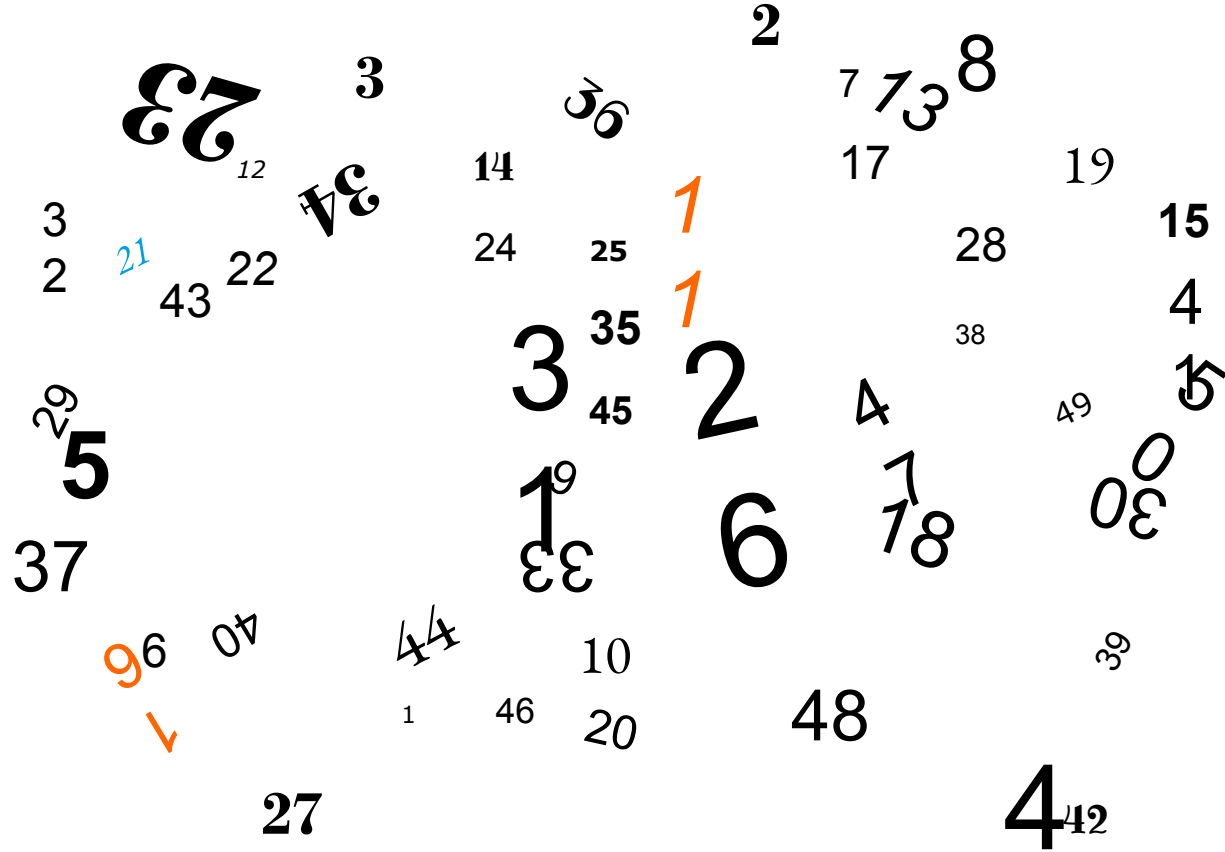
Experience an interactive exercise converting wasted time into throughput.

See how paper-based systems continue to be your silent killer.

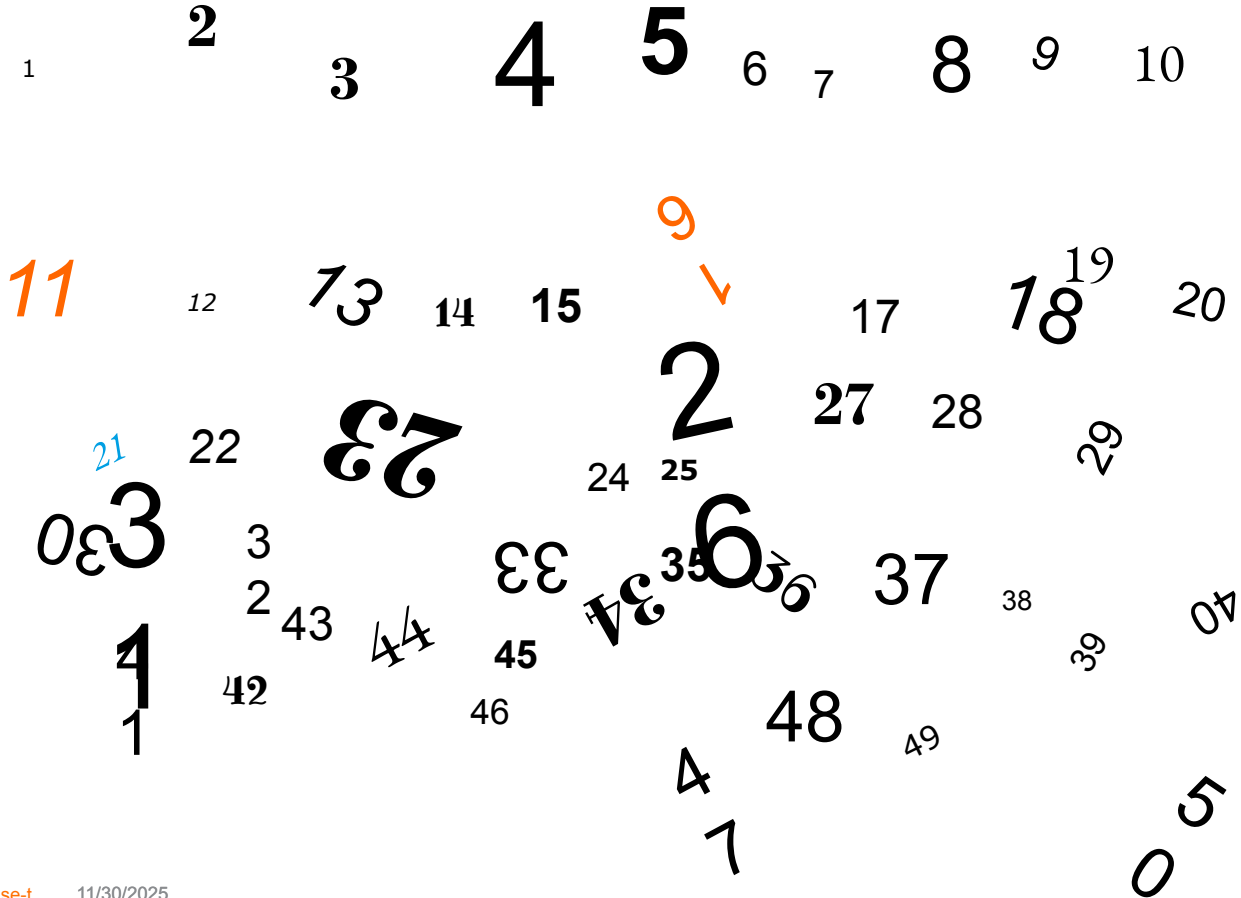
Round One:



Round Two: Sort



Round Three: Set In Order



Round Four: Shine / Standardize

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

Find the Errors: Sustain

1		3	4	5	6	7	8	6	10
12	11	13	14	15	16	17	18	19	20
21	22	23	34	25	26	27	28	29	30
31	32	33	24	35	36	37	38		40
41	42	43	44	45	$\frac{46}{6}$	47	48	49	50

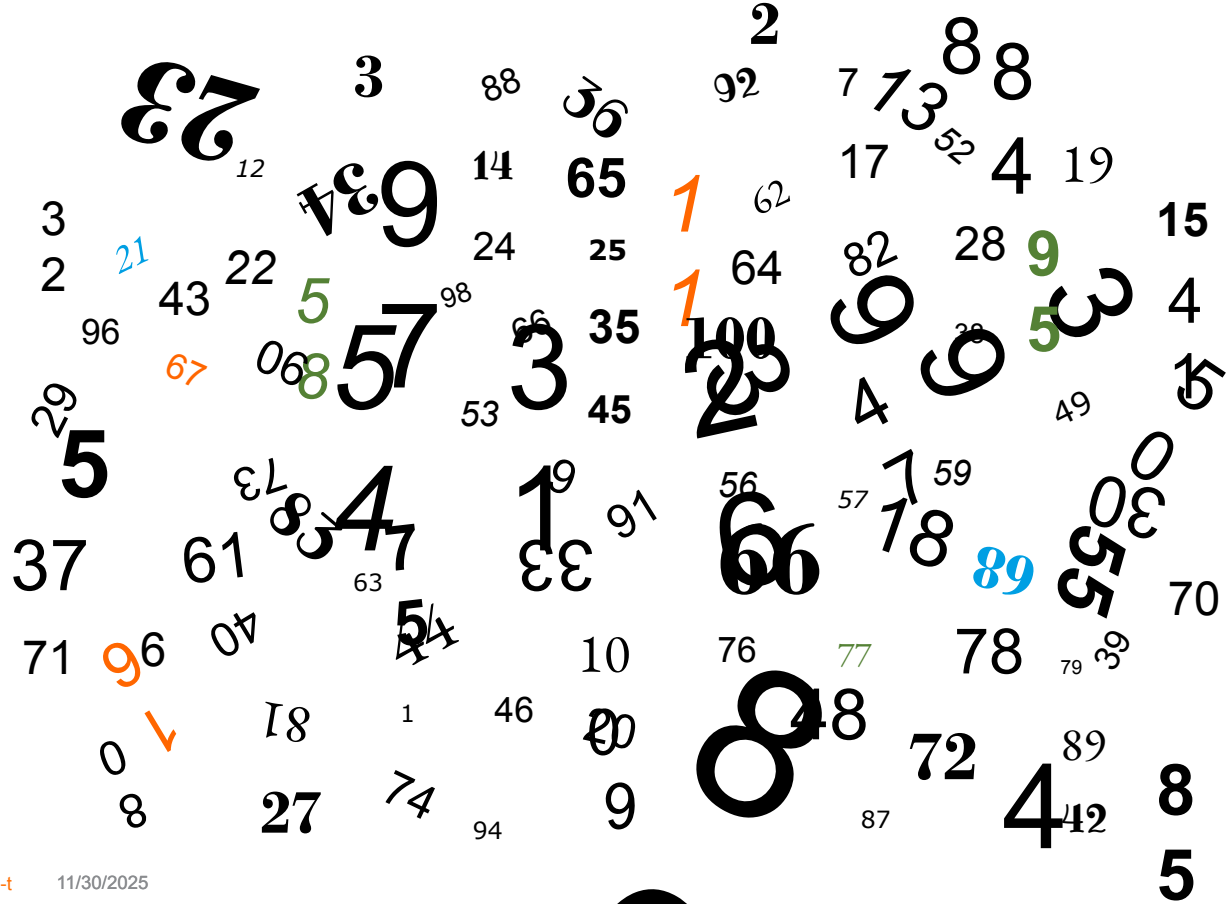
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Do you prefer this structure?

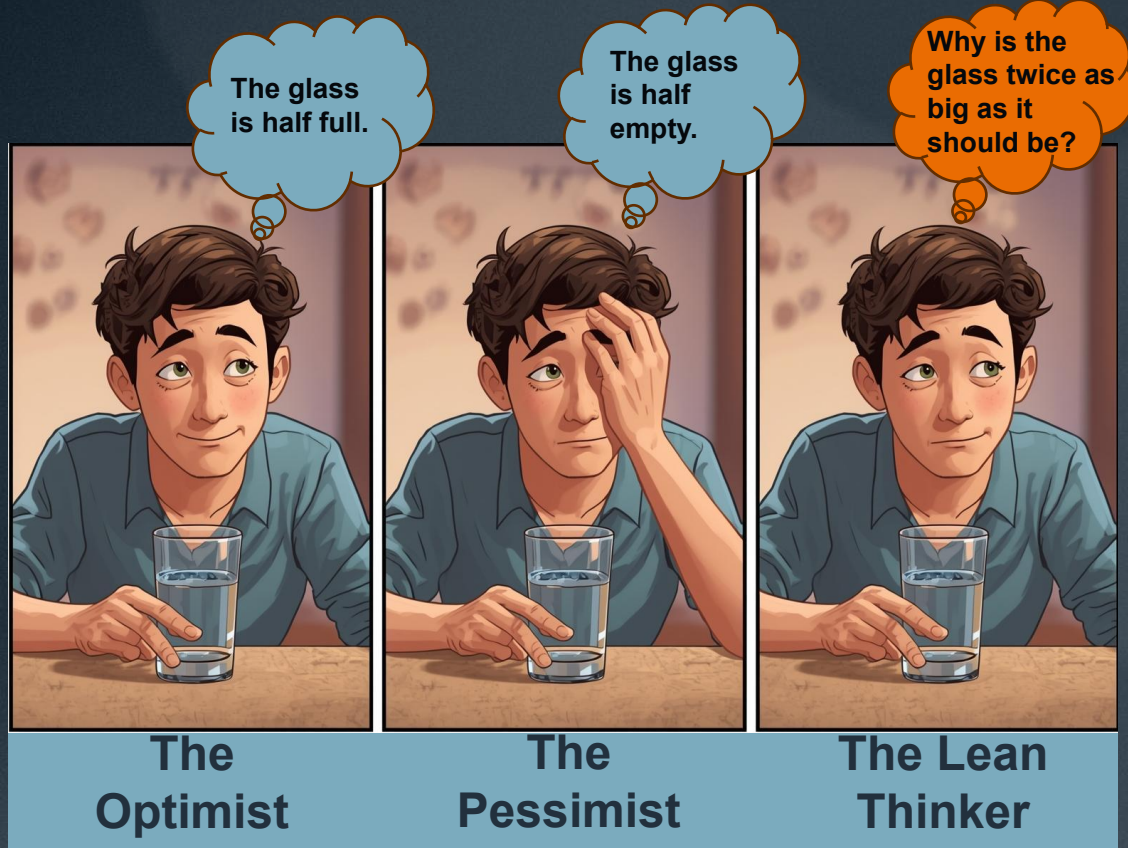
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Or this Chaos?



Value vs. Waste

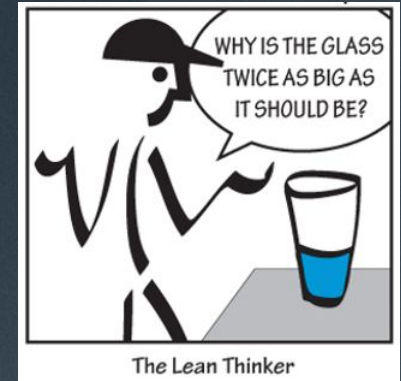
- **Value-Adding Work** (3 elements):
 - Customer is willing to pay
 - Changes form, fit, or function
 - Done right the first time
- **Waste** is anything more than the minimum time, money, material, space, energy, etc. needed to satisfy the customer requirement



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Value vs. Waste

Traditional focus: Work harder, longer, faster. Add more equipment, people

Value-Add (5%)

Lean focus: Improve value stream to eliminate waste

Non-Value Added (95%)

Lead Time



Where does the work wait?



Find your Herbie.

Where does the work wait?



Find your Herbie

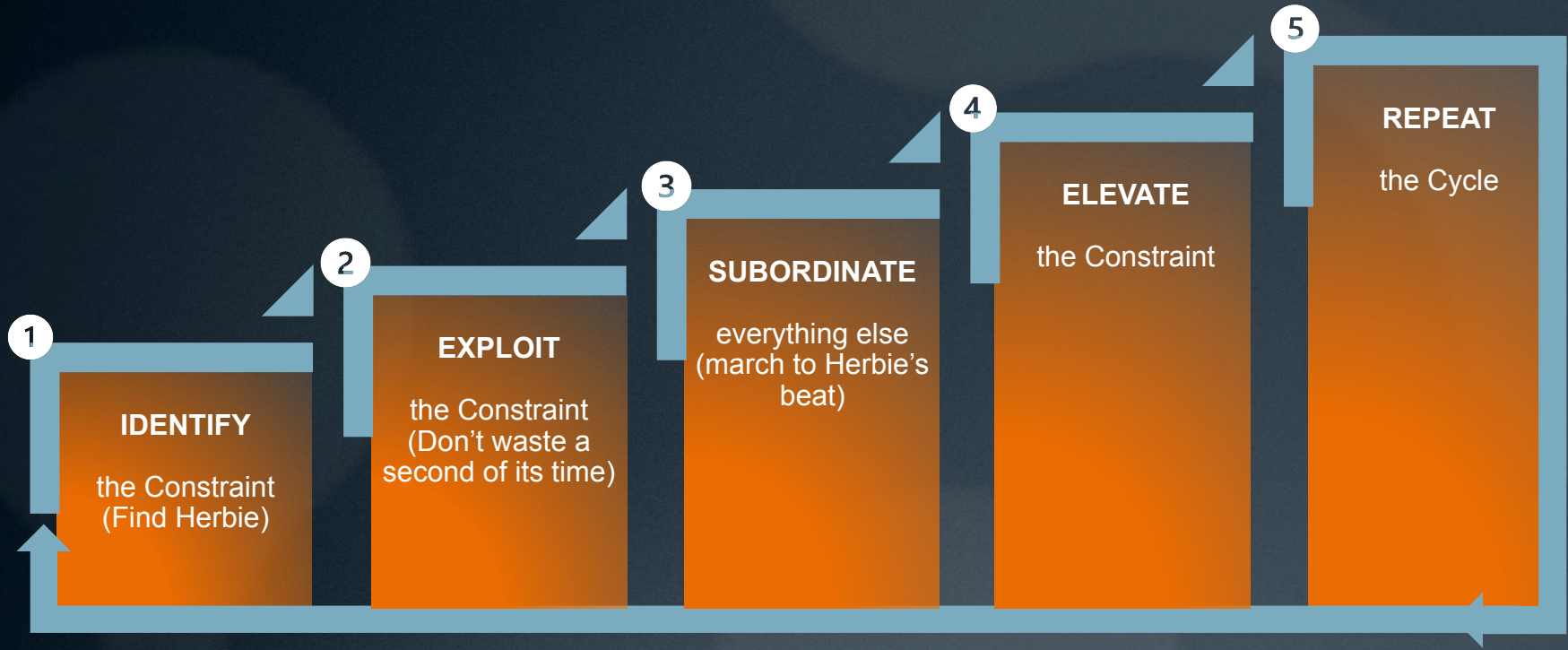


"An hour lost
at a bottleneck
is an hour lost for the
ENTIRE system."



"An hour saved anywhere else is a mirage."

The 5 Focusing Steps



Theory of Constraints

The Playbook: 5 Focusing Steps

A systematic approach to process improvement.

01



Identify

Find the system's single constraint

02

Exploit

Get the absolute most out of the constraint with zero new investment



03



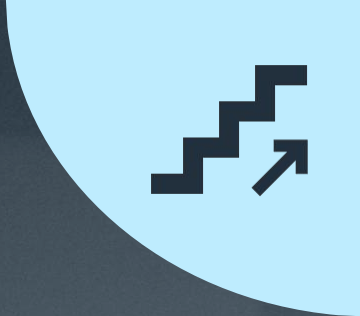
Subordinate

Make everything else support the constraint's performance

04

Elevate

If needed, intelligently invest to improve the constraint.



05



Repeat

The constraint will move. Find the new one and begin again. This is the engine of continuous improvement.

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Step 02 in Action: Declaring War on Wasted Time

At the bottleneck, times is wasted in three ways. You must attack all three!

Making Scrap

A CNC machine makes a physically perfect part, but the linked digital pedigree from Supplier B's material is incorrect.

In A&D, this is a **Quality Escape**.

Best case: costly rework.
Worst case: it gets on a plane and triggers an FAA audit

Doing Unnecessary Work

An expert machinist spends 15% of their time on simple deburring.

When you offload that task, you've now created capacity for free.

The bottleneck must *only* do work that *only* it can do.

Being Idle

Stagger breaks so the machine never stops.

Stage materials and tools perfectly before a job.

Eliminate every second of preventable downtime.

Protect the Pace, then Elevate with Intelligence

03 Subordinate | The Plant's Drummer

The bottleneck sets the rhythm.
Every upstream process must march to its beat.

04 Elevate | Be a Detective, Not Just a Manager

Only spend money AFTER you have fully exploited the constraint.
Ask WHY the bottleneck is slow.

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Stop firefighting.



Reactive

Start Conducting.



Proactive



How to make improvements stick

Real-Time Visibility



Make problems impossible to hide.

Daily Accountability



Solve problems in hours, not weeks.

Leader Standard Work



Transform firefighters into coaches

What's the problem we solve?

- Eliminate or minimize loosely coupled systems used today on shop floor
- Enable single-source of truth on shop floor for manufacturing and quality data
- Deliver complete As-Built record



Operation Detail

Tools required

Data Collection

Visual aids

Materials

Certifications

Detailed Instruction

Operation Sequence

Buyoffs

Inspection

Order No: W00000537 | Item No: LPC-001 | Oper No: 020 | Operation Status: PENDING | Step No: HEADER

Order Info: Low Pressure Compressor MOD Repair Plan

Operation: 020 - Step Number: 001 - No EG

Rich Text

3D Model

Part Removal & Installation

Buyoffs

Part Action	CAD View	Part No	Part Rev	Part Title
<input type="radio"/> REMOVE		LPC ROTOR ASSE...	A	LPC Rotor Assembly
<input type="radio"/> REMOVE		LPC ROTOR ASSE...	A	
<input type="radio"/> REMOVE		LPC ROTOR ASSE...	A	
<input type="radio"/> REMOVE		LPC VANE	A	
<input type="radio"/> REMOVE		LPC VANE	A	

Buyoff Type	Buyoff Title	Req'd Cert	% Complete/Complete C
TECH	Sign-off as Complete		
TECH2	Witness Completion		



Key Takeaways

Your First 30 Days

**Your backlog isn't a people problem.
It's a process and disconnected system problem.**

1. Find Your Herbie

- Walk the floor and identify your single biggest constraint. Start there.


2. Start a Daily Huddle

- Gather the team at the bottleneck for 15 mins every morning to solve problems.

3. Digitize One Metric

- Choose one critical metric (throughput) and make it visible to everyone, in real time.

iBase-t

 Let's keep the
conversation going!



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