

THE GOAL

a process of ongoing improvement

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free flow

Start a process of ongoing improvement... w/o launching a formal improvement project

FIND THE WEAKEST LINK:

1. Identify constraints
2. Exploit the constraints
3. Subordinate all else to the above decision
4. Elevate the system's constraints
5. If, previously, a constraint has been broken, go to step 1

BE A SCIENTIST

- ✓ Everything is based on "if... then"
- ✓ Determine how you are currently operating...
- ✓ ...then determine how you should operate

Not knowing what caused a situation... results in throwing punches in all directions

ASK and ANSWER

1. What to change?
2. What to change to?
3. How to cause the change?

CAUSE CHANGE SMOOTHLY

COMMON SENSE IS NOT SO COMMON

Challenge assumptions basic notions

THE STORY

Dude AI's got 3 months to 'turn around' the manufacturing plant

PRODUCTIVITY

- ✓ Actions bringing the company closer to the goal
- ✓ ... is meaningless unless you know what the goal is
- ✓ There's only one goal... no matter what the company

TO MAKE MONEY.

How to easily tell if you are making money?
If rewriting the textbooks... what are the minimum measurements to know if you're making money?
= Increase net profit, increase ROI, increase cash flow...
SIMULTANEOUSLY

OPERATIONAL RULES

- THROUGHPUT**
Money coming in
- INVENTORY**
Money tied up
- OPERATING EXPENSES**
Money to pay out to make THROUGHPUT happen

Have a measurement for each

THE GOAL

- ↓ Reduce operational expense
- ↓ Reduce inventory
- ↑ Increase throughput
- ◀ **SIMULTANEOUSLY** ▶

KNOW

- ✓ A plant where everyone is working is inefficient
- ✓ Excess manpower creates excess inventories
- ✓ Closer to a balanced plant, the closer to bankruptcy

MANAGE ACCORDING TO THE GOAL

PLANTS



- ✓ Most mfg plants don't have bottlenecks... resulting in enormous excess capacity
- ✓ The capacity of the plant = the capacity of its bottlenecks
- ✓ Pushing more material than the system can convert into throughput... results in excess inventory
- ✓ A system of local optimums is an inefficient system



BOTTLENECKS

- ✓ Distinguish between bottlenecks and non-bottlenecks
- ✓ Bottleneck: Resource w capacity ≤ the demand placed on it
- ✓ Non-bottleneck: Resource w capacity > the demand placed on it
- ✓ Optimize the whole vs sub-optimize the parts

BALANCE FLOW, NOT CAPACITY



All we are doing is looking at the time line from the moment the customer gives us an order to when we collect the cash... and reducing that time.

- Limit space allowed for inventory to accumulate
- Abolish local efficiencies
- Not everyone has to be busy 100% of the time
- Focus on flow... to increase throughput
- To do the above... make work visible (via kanban)

creating excess inventory is against THE GOAL

- ✓ Bad assumption... for workers to produce 100% of the time
- ✓ Activating and utilizing a resource are not the same
- ✓ Activating a non-bottleneck to its maximum is an act of maximum stupidity

IF NOTHING ELSE MAKE MONEY

MANAGE THROUGHPUT INVENTORY OPERATING EXPENSES
BALANCE FLOW
OPTIMIZE THE WHOLE

IMPROVE

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