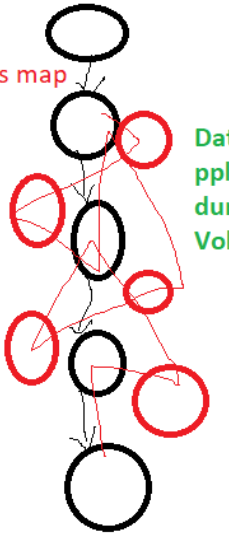
What you think it is

What it is actually

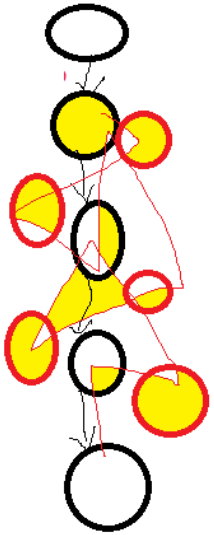
As- Is Process map
CVSM
SD

45 minutes



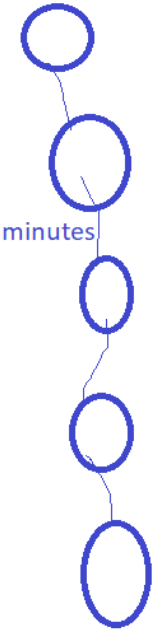
Data
ppl
duration
Volume

Identify waste or NVA



Proposed Map
Ideal VSM

15 minutes



To- Be map
Should Be map
FVSM

20 minutes

- **Overall Equipment Effectiveness (OEE) =** A* P* Q, where A is Machine Availability, P is Performance efficiency & Q is Quality rate

A = Operating time/Planned production time

P = (Total pieces / operating time) / Ideal run rate

Q = Good pieces produced / total pieces produced

A, P & Q factor for down time loss, speed loss & Quality loss respectively. The **OEE value** is a **Lean / TPM metric,** which can also be used to prioritise a process for improvement projects. **World class OEE value** is taken as **85%** & individual values for A, P & Q are 90%, 95% & 99.9% respectively.

OEE Factor	Shift 1	Shift 2
Availability	90.0%	95.0%
Performance	95.0%	95.0%
Quality	99.5%	96.0%
OEE	85.1%	86.6%

OEE - Overall Equipment Efficieny
OEE = A*P*Q

Availibility =
Performance =
Quality=

WC = 85%
Ind std = 50-60%

Data for OEE calculation

Particulars	Data/ value
Shift length	480 mins
Short breaks	2 @ 15 mins = 30 mins
Meal break	30 mins
Down time	47 mins
Ideal run rate (IRR)	60 pieces per min
Total pieces	19,722 pieces
Reject pieces	453 pieces
Planned prodn time	Shift length – total breaks
Operating time	Pl prodn time - down time
Good pieces	Total pieces – reject pieces
Availability	Op time / pl prodn time
Performance	(Tot pieces/op time) / IRR
Quality	Good pieces/total pieces

OEE calculation

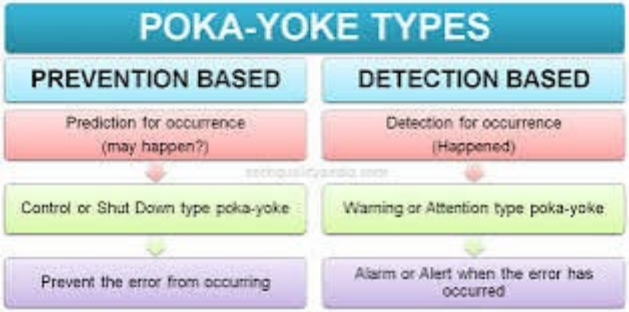
- Planned prodn time = 420 mins
- Operating time = 373 mins
- Good pieces = 19,269

- A = 373/420 = 0.8881
- P = (19722/373)/60 = 0.8812
- Q = 19269/19722 = 0.97703

So, A = 88.81%, P = 88.12% &
Q = 97.70%

OEE = 76.46%

We see that A (Machine Availability) & P (Performance) needs to be improved to improve OEE value further. And among A & P, P needs more improvement.



From Sarah to Everyone 05:09 PM

equipment "pinch point" warning label

From Nick to Everyone 05:09 PM

We use a 2" hose and a 3" hose to ensure the incorrect tank does not get attached

From Trey Case to Everyone 05:10 PM

Coastal uses an 8mm x 8mm notch that is wire cut into foam design

From Jake\ Koetsier to Everyone 05:10 PM

lot codes could be scanned in by a barcode rather than manually typing

D

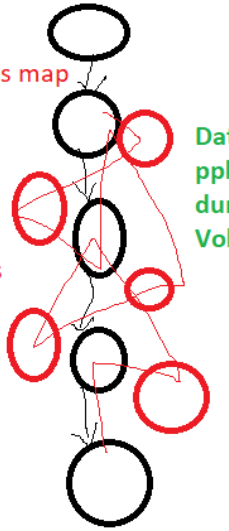
What you think it is

M

What it is actually

As- Is Process map
CVSM
SD

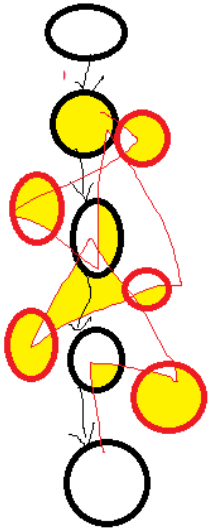
45 minutes



Data
ppl
duration
Volume

A

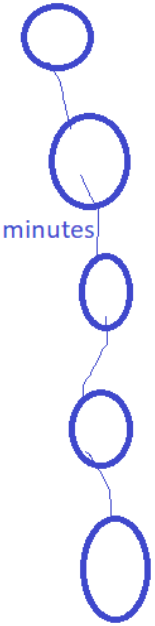
Identify waste or NVA



I

Proposed Map
Ideal VSM

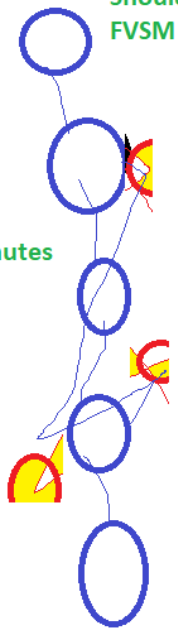
15 minutes



C

To- Be map
Should Be map
FVSM

20 minutes



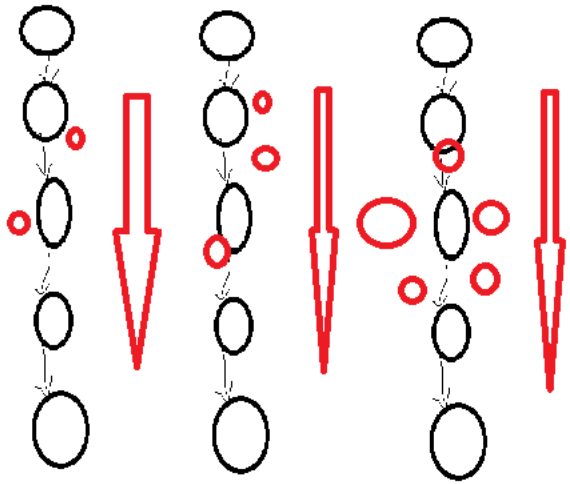
SMED

100 units per hour = 700 units per day
3 dies * 15 minutes = 45 minutes
3 dies * 10 minutes = 30 minutes
3 dies * 5 minutes = ~~15 minutes~~
3 dies * 3 minutes = 9 minutes

30 minutes
3 minutes
30 seconds
10 seconds

Seconds
Nano-Seconds

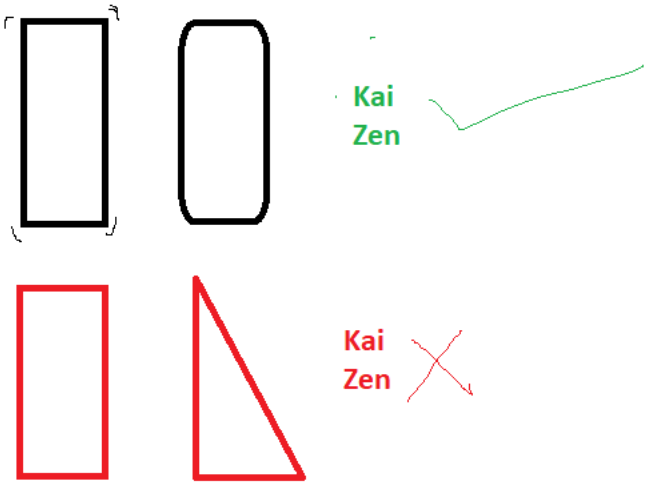
Single minute (digit)
SMED - SIngle minute Exchange of Dies



F1 car race- Pit stop
Racer- Productive
Change of tyres= UnProductive

1 to 2 hours
45 mins
30 mins
15 mins
10 mins
5 mins
3 mins
2 seconds

Kaizen
Kai- change/modify
Zen - good / better



Toyota
TPS - Toyota Production System
TPS - Thinking People's Solution

Empower their people at their levels.

TT, C-team, Janitors, HK
MMT, SMT , Associates

Lean Tool

No Cost
Low Cost
Less Time
Less Resources
Low Risk

Kaizen

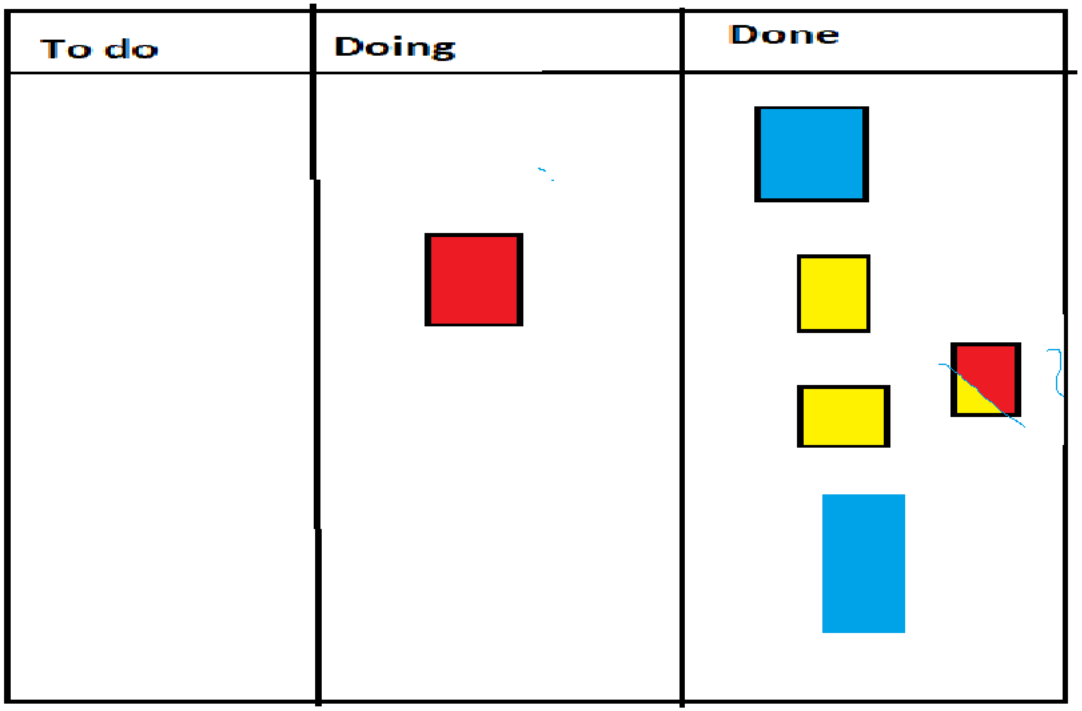
lots of smaller change

Kaikaku

big change

Kakushin

something new!!!


To do
Doing
Done