


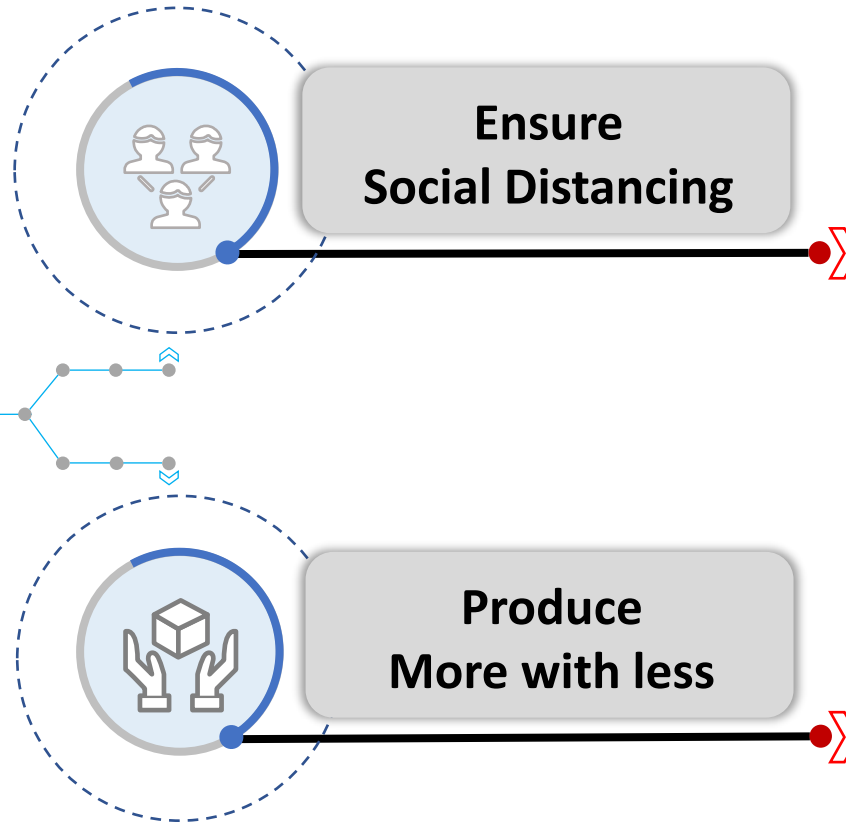
Sambuddha Management consulting (SbMC)

**Operations Realignment of Discrete manufacturing set up-
In Post lockdown scenario**

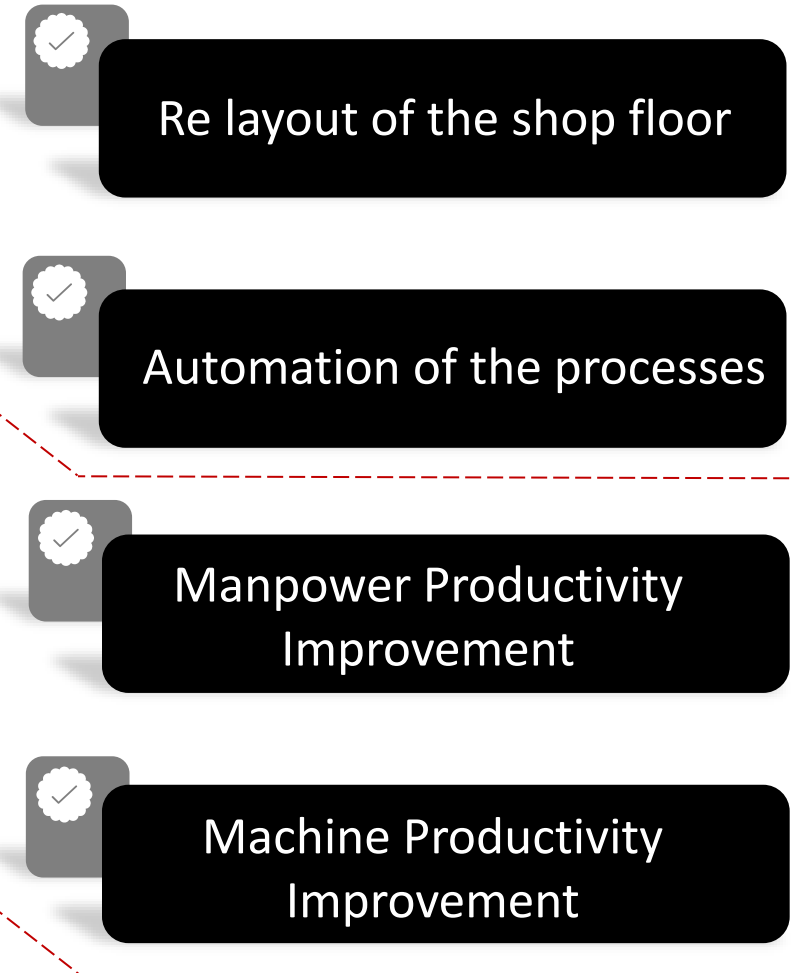


**Operations realignment-
Post Lockdown**

POST LOCKDOWN SCENARIO



POSSIBLE SOLUTIONS



Case Study- Shop floor re-layout

4 Step Approach adopted for Layout modification- saved travel distance by 38% without any cost impact

We deployed a 4 step methodology to measure the extent of desirability between two departments/workstations/cells

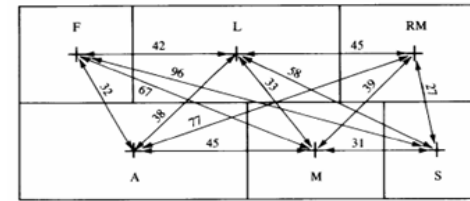
Map the From-To chart for workstations/cells

		To →					
		1	2	3	4	5	6
From ↑	1		A	E	A	I	U
	2			O	A	E	O
	3				X	I	A
	4					A	X
	5						U
	6						

Rank the desirability of closeness of 2 workstations by A, E, I, O, U & X

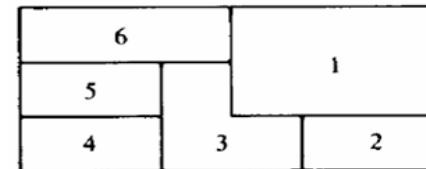
Importance of closeness	Typical reason for closeness	Rank
A – Absolutely essential	Use of same equipment & facilities	4
E – Essential	Share same personnel/records	3
I – Important	Sequence of work flow	2
O – Ordinary preferred	Ease of communication	1
U - Unimportant	Unsafe/pleasant condition	0
X - Undesirable	Similar work	-4

Map the total transportation distance for various options

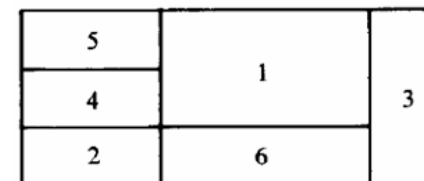


Select one based on lowest transportation cost

Option 1

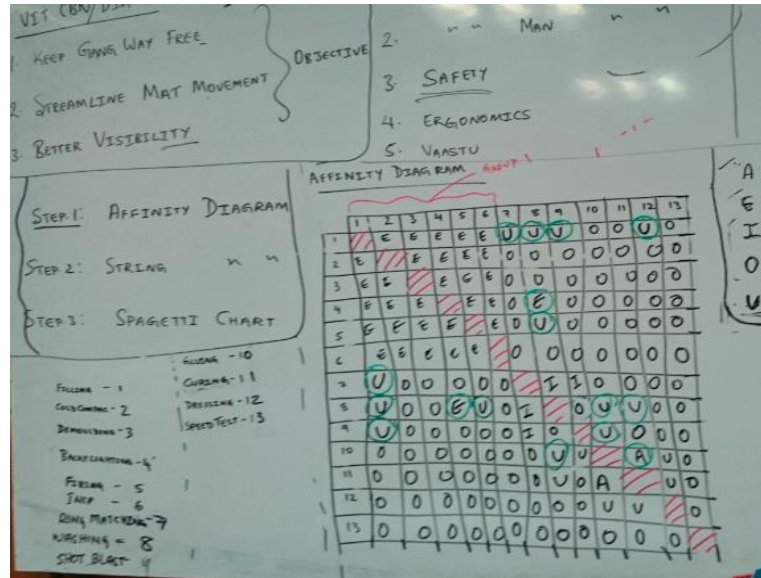


Option 2



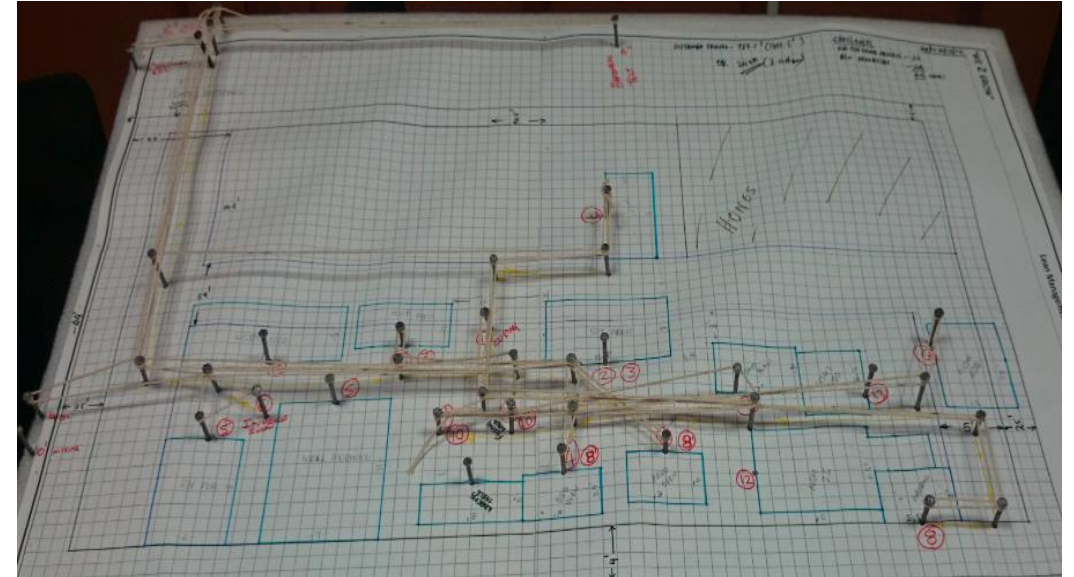
1

Affinity Diagram to map machines 'To be' & 'Not To be' together



2

Spaghetti Chart to understand 'As-Is' layout



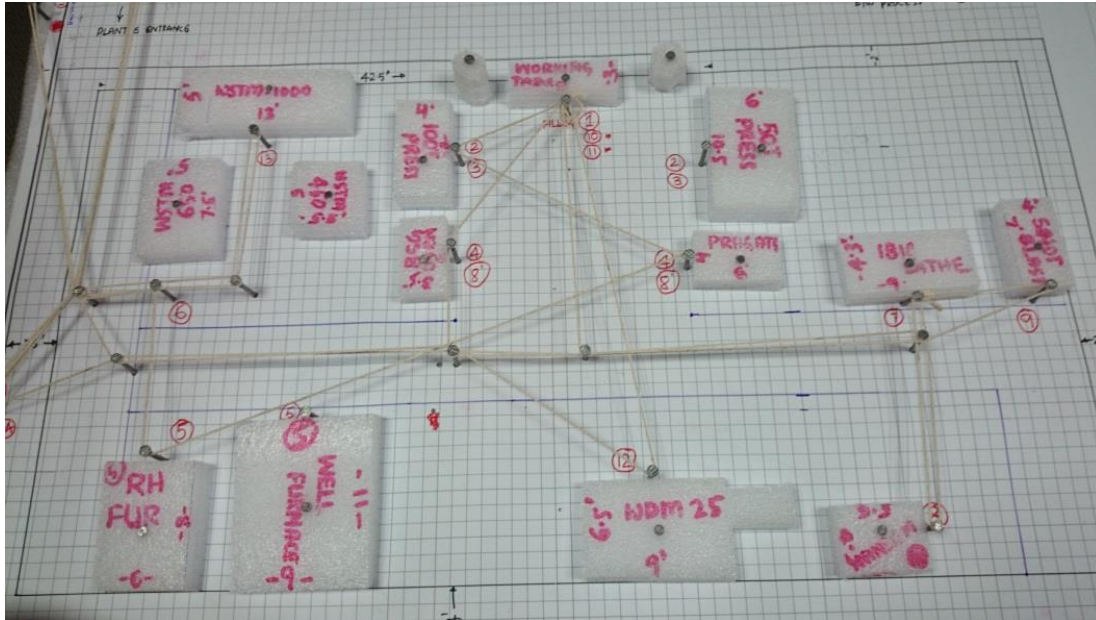
3

Cross overs and Total distance covered measured

As-Is layout:

- 46 cross overs
- Total product travel distance: 3.1 kms

New Layout complying the affinity diagram



New layout:

- 8 cross overs
- Total product travel distance: 1.9 kms
- 38% reduction without any extra cost

Results:

- Without any additional investment/expansion, the plant layout was reconstructed
- The new layout is 100% compliant to safety guidelines
- Guide ways and machine positions are clearly marked
- Cross overs reduced from 46 to 8. Travel distance reduced from 3.1 Kms to 1.9 Kms
- Ergonomically the layout is better and comfortable for operators to work

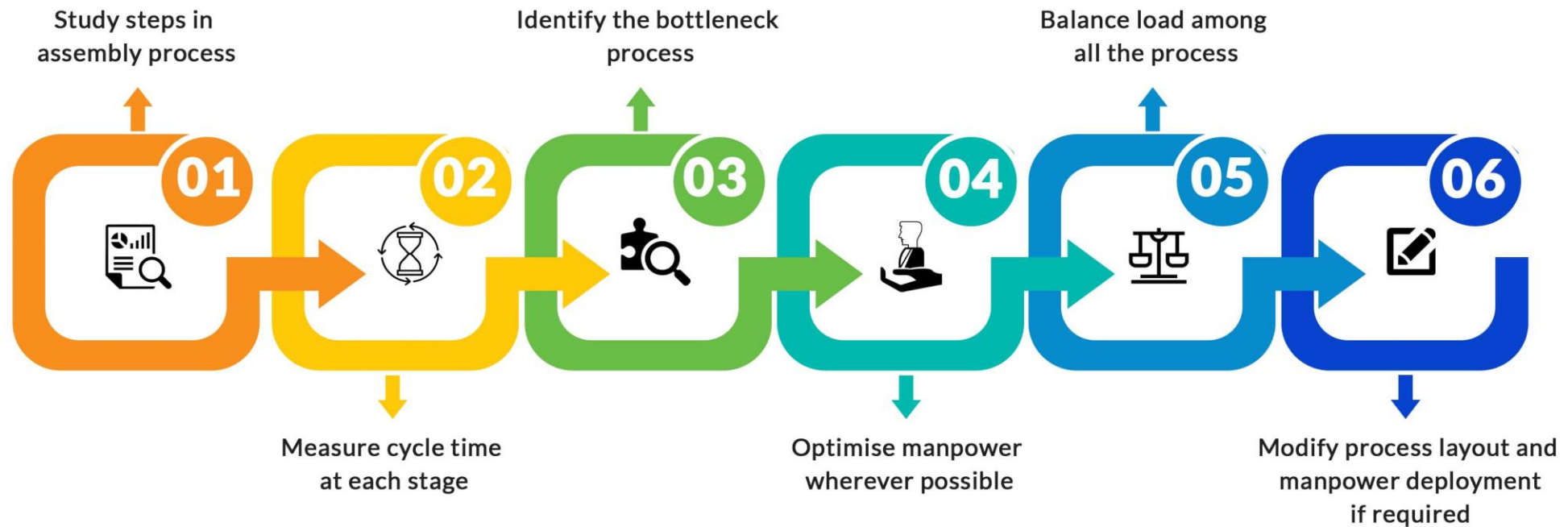
More space in the shop floor resulted in higher gap between operators... **Social distancing**

Case Study- Manpower Productivity Improvement

LOAD BALANCING & ELIMINATING NVA'S TO IMPROVE PRODUCTIVITY

$$\text{Productivity of a process} = \frac{\text{Number of pieces produced}}{\text{Manpower employed to complete the process}}$$

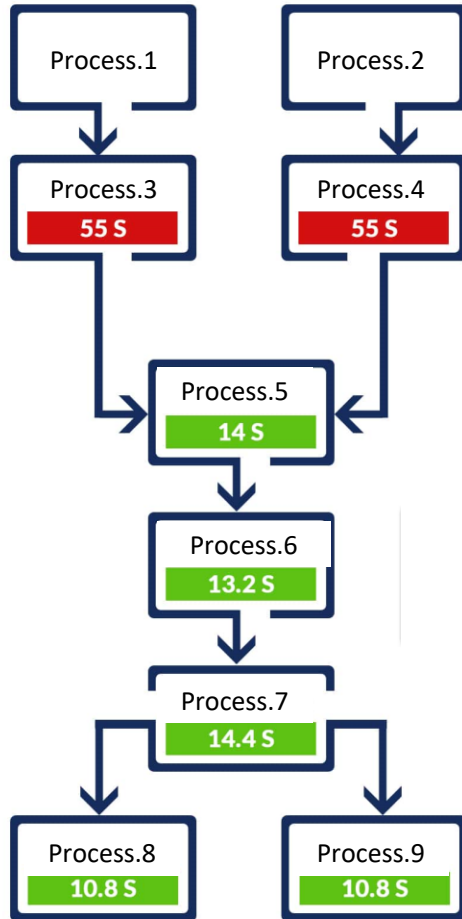
APPROACH ADOPTED:



21% IMPROVEMENT IN PRODUCTIVITY ACHIEVED THROUGH MANPOWER OPTIMIZATION



EARLIER PROCESS



IMPROVED PROCESS



BOTTLENECK

Case Study- Machine Productivity Improvement

PRODUCTIVITY IMPROVEMENT LEADING TO PROFITABLE TURNAROUND



LEAN & EFFICIENT PRODUCTION LINE THROUGH PROCESS IMPROVEMENT INITIATIVE



#	Focus Area	Product	Baseline value	Improved value	Improvements realized	Business Benefit established
1	Capacity improvement in Injection moulding process	Product-A	72 %	75%	19 extra pcs over base line daily output	<ul style="list-style-type: none"> • Addition revenue due to higher productivity from same capacity • 3% reduction in fixed cost/piece
2		Product-B	46%	78%	128 extra pcs over baseline daily output	<ul style="list-style-type: none"> • Addition revenue due to higher productivity from same capacity • 25% reduction in fixed cost/piece
3		Product-C	61%	65%	22 extra pcs over baseline daily output	<ul style="list-style-type: none"> • 4% reduction in fixed cost/piece
4	Improve Productivity	Manpower Optimization			Better output with same manpower	

Adarsh.R



adarsh003@outlook.com



<https://in.linkedin.com/in/adarsh-r-aa752b1b>



+91 99000-52829



www.sambuddha.co.in

*Thank
you!*