

About QCI

QCI was established as the National Accreditation body on recommendations of Expert Missions of EU after consultation in Inter-ministerial task force, Committee of Secretaries and Group of Ministers in 1996. The council came into existence in 1997 through a cabinet decision. It was created as an autonomous non-profit organization through seed funding initially by Government of India and the Indian Industry represented by three premier industry associations, Associated Chambers of Commerce and Industry of India (ASSOCHAM), Confederation of India Industry (CII) and Federation of Indian Chambers of Commerce and Industry (FICCI). The Department of Industrial Policy & Promotion, Ministry of Commerce & Industry is the nodal point for all matters connected with Quality & QCI. The Chairman of QCI is appointed by the Hon'ble Prime Minister.

The Council was established to create a mechanism for third party assessment of products, services & processes. In tune with the international best envisaged that the Council with its constituent Boards will play the role of the National Accreditation Body (NAB) as per existing eco-system of quality around the world & will ensure that the quality of life of citizens around the world is improved. It was therefore befitting that the council was organized as an independent organization & functions as an Independent Professional body with its own rules, powers & functions strictly as per the MoA of the society.

Apart from providing the quality infrastructure in the form of Accreditation Boards, QCI has been keen in improving quality amongst all the stakeholders. QCI has now been increasingly involved in advising various stakeholders with solutions to improve their quality initiatives by designing of voluntary certification schemes, designing & delivery of customized capacity building programmes, making strategies for implementation & sensitizing a cross- section of stakeholders on the new developments on quality.

About NABET

National Accreditation Board for Education and Training (NABET) was established as an accreditation body for Personnel & Training organizations. With the growing needs of competent personnel & credible vocational training courses in various industry sectors, NABET has been rapidly expanding its scope of services to cater to the needs of the industry. It has established a mechanism for the accreditation personnel certification, accreditation of vocational training organizations & skill assessment bodies. It also works in the domain areas of Education & Training.

Currently NABET is working in the following domains:

- MSME Intervention: NABET works with the Ministry to develop & strengthen the LEAN practices in the MSME. As an NMIU, NABET has developed more than 200 clusters & is also involved in their steady growth.
- Environment Impact Assessment: Organizations providing services to the industry for their Environment Impact Assessment in various areas are validated for their processes and professional abilities.
- Formal Education Excellence Division: The NABET accreditation of schools helps to put processes in a structured manner and also is a good method to map the outcome of the teaching-learning process.
- Skill Certification: For the purpose of creating strong backbone of certified professionals at the base level, NABET has established as an Accreditation Board in the domain of education and training.
- Skills Training: The training institutes across any sector needs to be mapped as per standards that set them up as centres of professional services. The validation of the services provided in the training centres is an important activity that NABET undertakes to build a strong and well qualified workforce.

Lean Manufacturing Competitiveness Scheme (LMCS)

- The Micro, Small and Medium Enterprises (MSMEs) are a vital part of the Indian economy contributing to over 45% of Industrial production and around 40% of the total exports. MSMEs are the largest contributor in terms of employment generation in the manufacturing sector. MSMEs are present as part of the value chain in almost all distinguished industry sectors like automotive industry, garments and textile industry, leather industry etc.
- As global competitiveness become intensive, MSMEs are transitioning to a new business environment with emergence of global supply chains. MSMEs form an integral part of almost every value chain and there is a symbiotic relationship between the large corporations and relatively small sized suppliers.
- Recognizing the importance of overall economic growth of a country and the need for enhancing its productivity, competitiveness and employment generation, many countries have initiated institutional mechanism for a national approach on manufacturing.
- The Development Commissioner, Ministry of Micro, Small and Medium Enterprises (DC-MSME), Govt. of India is implementing the Lean Manufacturing Scheme for the benefit of Micro, Small and Medium Enterprises.
- The objective of the scheme is to enhance the manufacturing competitiveness of MSMEs through the application of various Lean Manufacturing (LM) Techniques. The general approach involves engagement of Lean Manufacturing Consultant (LMC) to work with selected MSMEs in the chosen clusters with financial support by the Government.
- Under the scheme, clusters are being formed comprising of 6 -10 units, wherein Lean consultants implements various Lean Tools and Techniques depending on the need and requirement of Industry for a period of 18 months. Fees of lean Consultant is being subsidized in the scheme. 80% fees of Lean Consultant is being borne by Government of India while 20% cost of lean consultants needs to be borne by Industry.

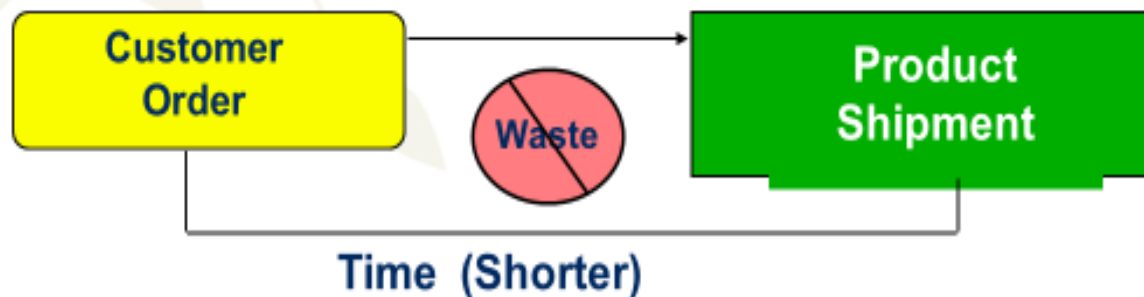
Lean Manufacturing

- ❖ is a manufacturing philosophy which shortens the time line between the customer order and the product shipment by eliminating waste.

Business as Usual



Lean Manufacturing



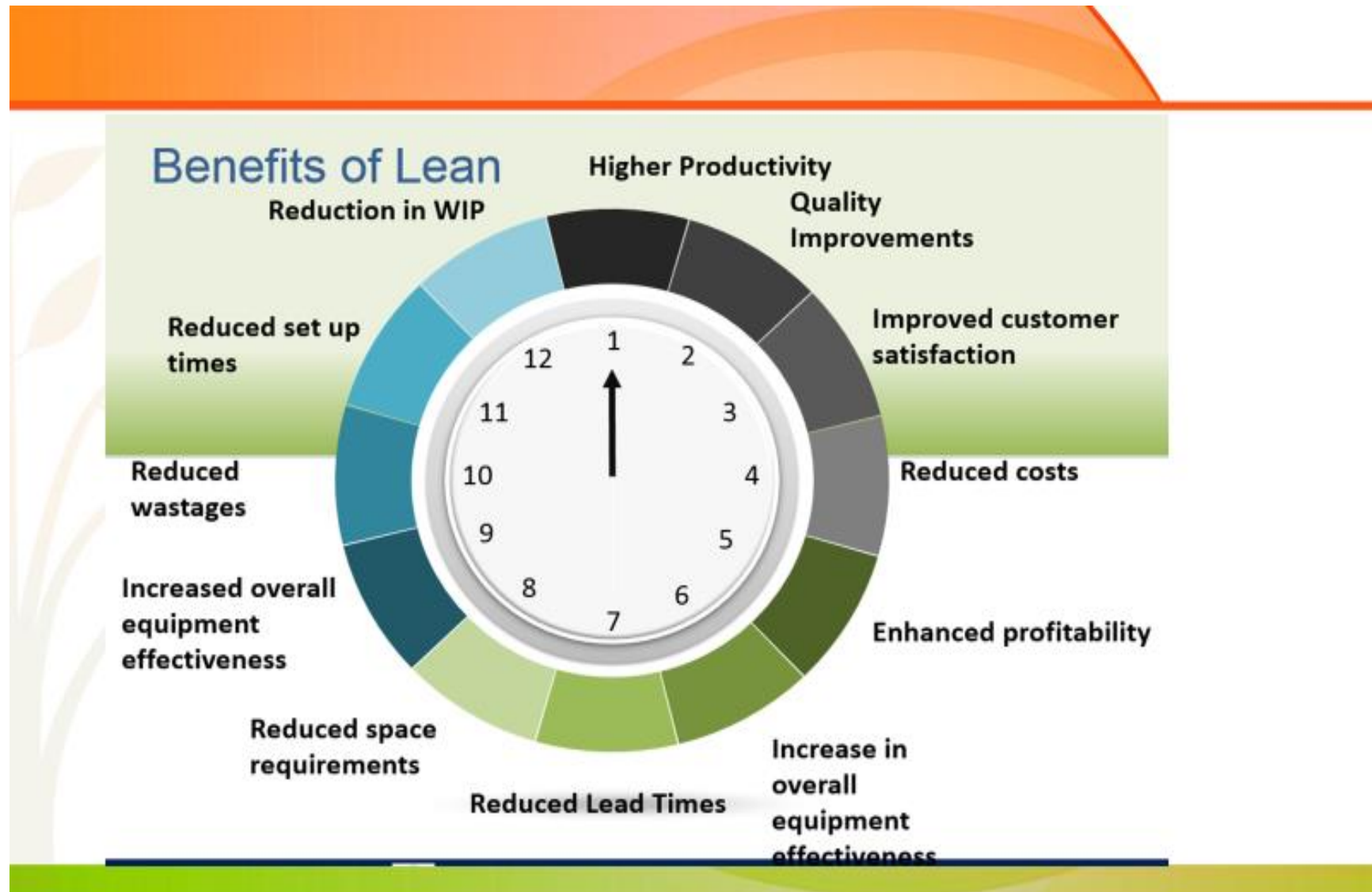
8 Forms of Waste

TRANSPORT	INVENTORY	MOTION	WAITING
			
<i>Unnecessarily moving things, equipment, parts, tools and materials from one location to another.</i>	<i>Making more than customer demand, building up unnecessary stocks.</i>	<i>Unnecessary movement; people walking to get things which should be located closer to the point-of-use.</i>	<i>Delays between operations because parts are missing. Stopped work: waiting for parts, machines, or people.</i>
OVER PRODUCTION	OVER PROCESSING	DEFECTS	SKILLS
			
<i>Making too much or too many. Completing a task before it is needed. Making products that the customer hasn't ordered.</i>	<i>Duplicate or redundant operations, performing wasteful steps that are not required. Often because "we always do it this way."</i>	<i>Failing to produce a quality part the first time generating rework or scrap. Not delivering the product or service "right the first time."</i>	<i>Failing to use skills and capabilities of the workforce. Not listening to people, using their knowledge or learning from past mistakes/issues.</i>

To Remember this we can use acronym - TIMWOODS








NOTE: ILO-SCORE model is a combination of these tools. Advance versions of these tools is available for advance level units only.



Acronym: WIP: Work in Progress

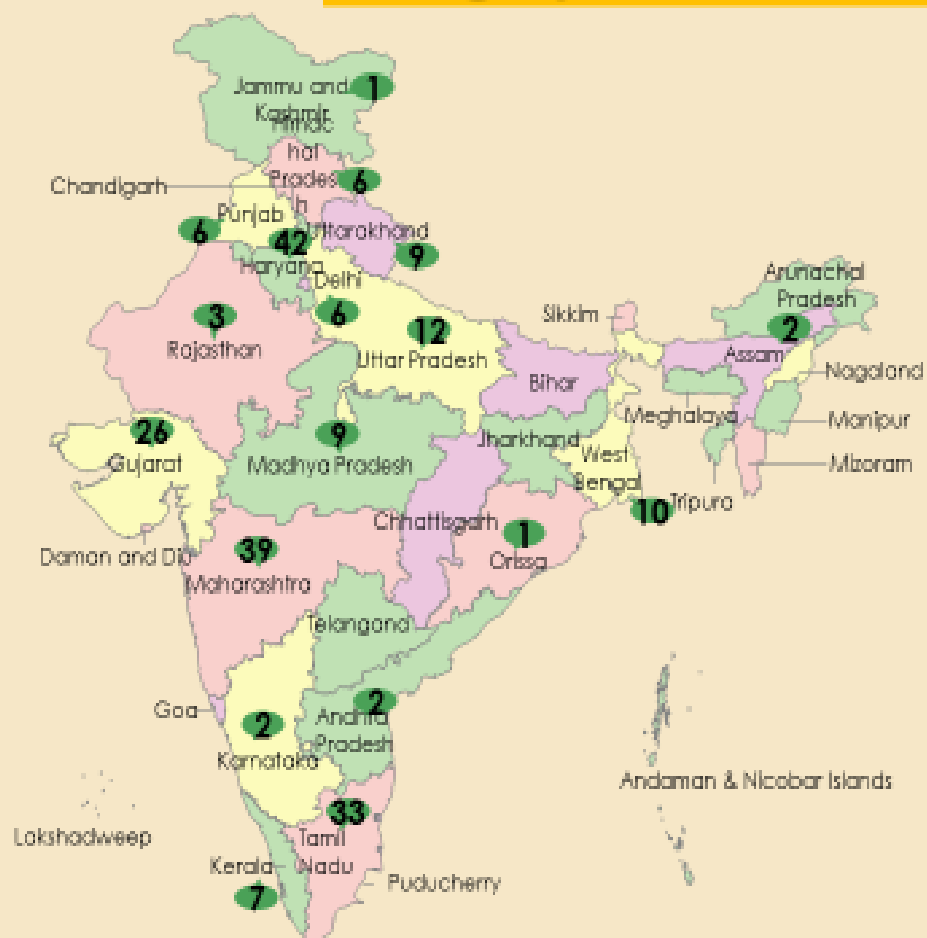


Scheme in Brief

	<p>Formation of Cluster Group of 6 -10 Units employing Similar Product/ Process. Units located in identifiable and as far as practicable contiguous area</p>	<ul style="list-style-type: none"> ❑ Documents – MOU, POA, SPV ❑ Approved by DC (MSME) in SSC Meeting
	<p>Consultant Selection Technical and Financial Bidding Process</p>	<ul style="list-style-type: none"> ❑ Consultant Empanelled by NMIU. Approved in SSC ❑ Conducted in presence of Nodal Officer, NMIU & MSME -DI
	<p>Tripartite Agreement Documentation between Consultant, Nodal Officer and NMIU</p>	<ul style="list-style-type: none"> ❑ Starting Point of Cluster (18 months Journey of Cluster Starts from here)
	<p>Implementation of Lean Tools & Techniques by Consultants</p>	<ul style="list-style-type: none"> ❑ Diagnostic Study Report, MBR 2, MBR3, MBR4, MBR 5 ❑ Milestone Based Periodic Reports to monitor Progress
	<p>Joint and Individual Audits to Monitor Performance</p>	<ul style="list-style-type: none"> ❑ DSR , MBR3 and MBR5 – Personally Monitored by MSME



Geographical Reach Clusters State Wise



State	Nos
Andhra Pradesh	2
Assam	2
Gujarat	26
Haryana	42
Himachal Pradesh	6
Jammu & Kashmir	1
Karnataka	2
Kerala	7
Madhya Pradesh	9
Maharashtra	39
New Delhi	6
Orissa	1
Punjab	6
Rajasthan	3
Tamil Nadu	33
Uttar Pradesh	12
Uttarakhand	9
West Bengal	10
Total	216

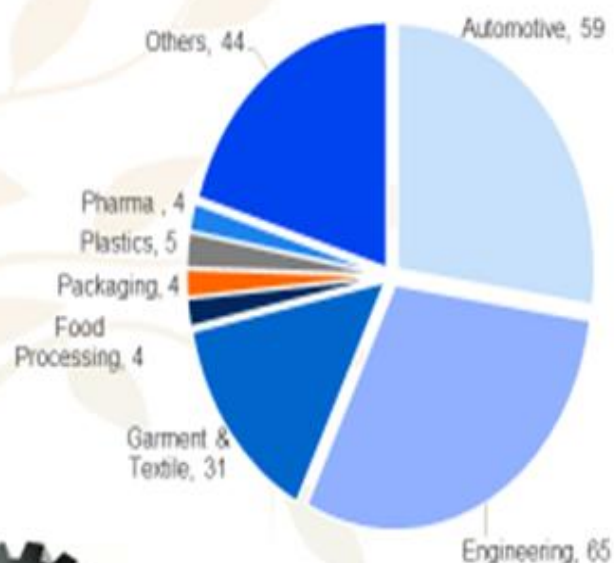
27 Clusters
under
Process

Cluster Category Spread – Sectors



Auto Sector

Category



ENGINEERING



Sr No	Category	No's
1	Automobile	59
2	Engineering	65
3	Garment & Textile	31
4	Food Processing	4
5	Packaging	4
6	Plastic Components	5
7	Domestic Products	3
8	Handicraft	3
9	Pharma	4
10	Print	3
11	Scientific Instruments	3
12	Steel	3
13	Agricultural Equipments	3
14	Brass Components	2
15	Fan	2
16	Footwear	2
17	Furniture	3

Sr No	Category	No's
18	Machine Tools	2
19	Sports	2
20	Cable & Wire	1
21	Cosmetics	1
22	Electrical	1
23	Jewellery	1
24	Leather Goods	1
25	Plating	1
26	Plywood	1
27	Pressed Components	1
28	Switchgear	1
29	Tea Processing	1
30	Utensils	1
31	Bath & Sanitary	1
32	Hardware	1
Total – 216 nos.		

27
Clusters in
approval
Stage

Textiles & Garments



Light Engineering Lean Manufacturing Cluster Indore

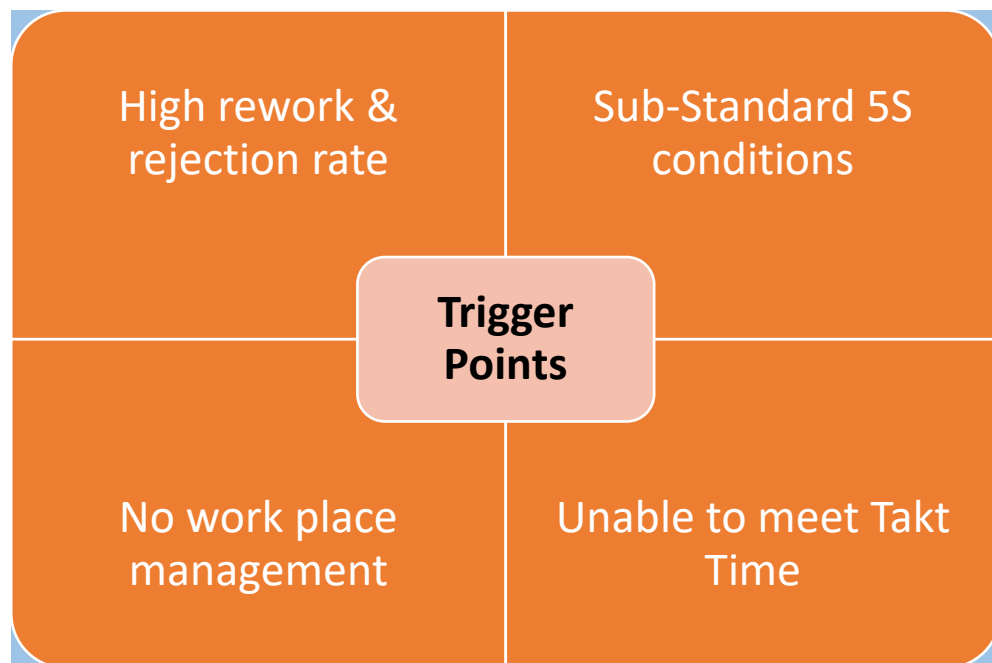
Cluster Scenario:

Number of Cluster Members: 8

Locations: 4 in Indore, 2 in Dewas, 2 in Pithampur

Consultant: CII-CFC

Nature of Business: Pumps Manufacturing, Sheet Metal Parts, Control Panels Manufacturing, Magnet wire & composite part manufacturing.



Details of Units Participating:

1. Darling Pumps Pvt Ltd
2. Mangla Engineering Ltd (Unit-1)
3. Mangla Engineering Ltd (Unit-2)
4. Tech Force Composites Pvt Ltd
5. Kach Motors Pvt Ltd
6. Mimani Wires Pvt Ltd
7. Hi Tech Metal Formings(I)
8. Vikas Protech Pvt Ltd

Glimpse of Lean Implementation:

M/s Kach Motor Pvt Ltd, Indore (M.P.)



BEFORE



AFTER

Initially inventory on shop floor was kept in haphazard manner. After applying 5S, it was properly sorted, segregated and proper location to sustain it was deployed.

M/s Mangla Engineering Unit - 2, Indore (M.P.)



BEFORE



AFTER

Initially raw material was stored in an asymmetrical manner on shop floor which was then turned into a well sorted-segregated manner using floor marking, resulting into freer floor area and reach to material improved.

M/s Mangla Engineering Unit - 2, Indore (M.P.)



BEFORE

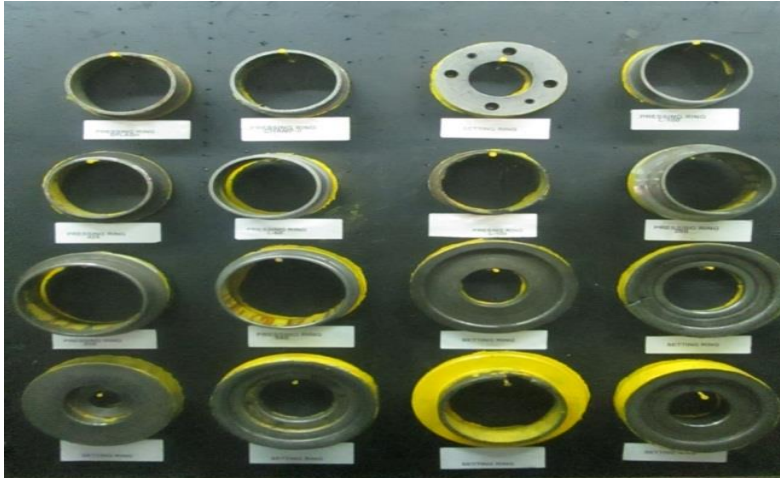


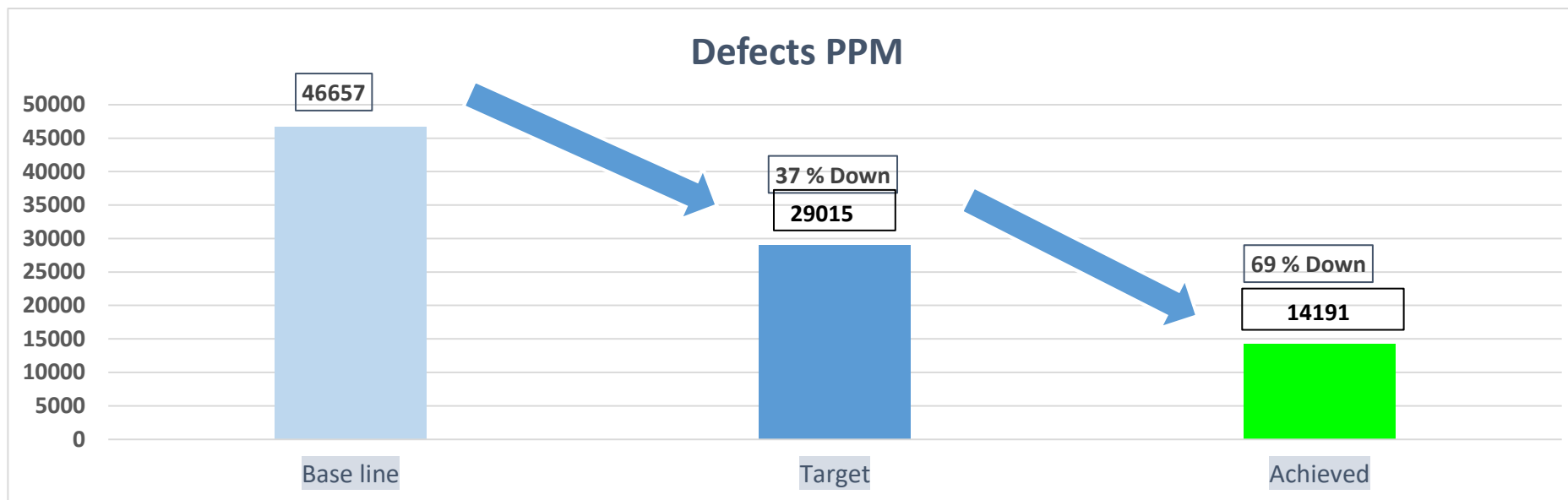
AFTER

Initially tools were kept in disorganised manner. Then kaizen was initiated by the shop floor persons and proper location was defined for all tools in the tool cupboard.

Visual Management:

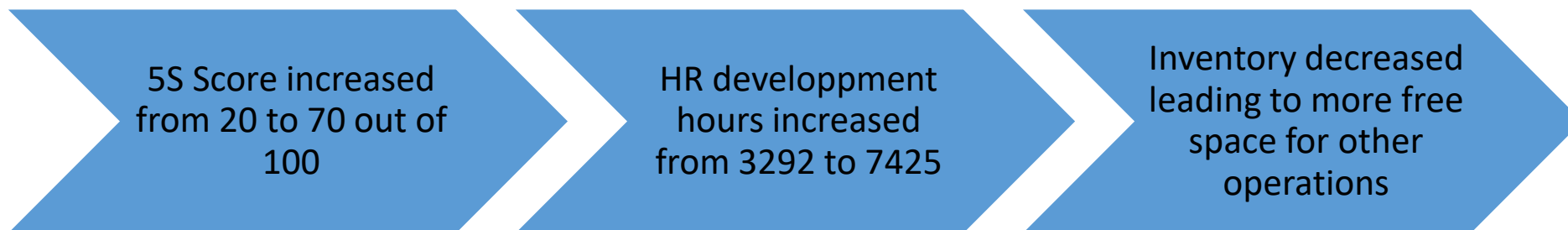
M/s Mimani Wires Pvt Ltd., Pithampur, (M.P.)





*PPM = Parts Per Million

Key Landmarks



Savings from Lean Intervention

Cluster Name:Light Engineering Lean Manufacturing Cluster Indore (MP)										
Sr No	Lean Project (Indicative List)	Cluster Units								Total
		Darling Pumps Pvt Ltd,Indore	Hi Tech Metal Forming Indore	Kach Motors Pvt Ltd Pithampur	Mangla Engg Ltd -1 ,Dewas	Mangla Engg Ltd -2 ,Dewas	Mimani Wires Pvt Ltd,Pithampur	Tech Force Composites Pvt Ltd,Indore	Vikas Protech Pvt Ltd,Indore	
1	5 S (Housekeeping)	₹ 40,00,137	₹ 132,80,000	₹ 1,00,000	₹ 8,79,000	₹ 1,33,112	₹ 25,36,505.00	₹ 19,07,310	₹ 40,000	₹ 228,76,064
2	Kaizen Blitz or Rapid Improvement Process	₹ 11,61,254	₹ 55,59,000	₹ 18,79,000	₹ 2,87,000	₹ 5,04,090	₹ 7,44,000.00	₹ 38,32,397	₹ 57,700	₹ 140,24,441
3	Quality Improvement	₹ 4,41,300		₹ 3,00,000	₹ 2,56,000	₹ 7,752		₹ 7,85,696		₹ 17,90,748
4	Change Over Time Reduction(SMED)	₹ 34,125	-	-	₹ 8,700	-	-	-	-	₹ 42,825
5	VSM	₹ 20,500	-	-	-	-	-	-	-	₹ 20,500
6	Inventory Reduction	₹ 10,81,629	₹ 4,78,246	₹ 90,000						₹ 16,49,875
Unit Wise Saving		₹ 67,38,945	₹ 193,17,246	₹ 23,69,000	₹ 14,30,700	₹ 6,44,954	₹ 32,80,505	₹ 65,25,403	₹ 97,700	₹ 404,04,453
Total Cluster Saving = 404,04,453/-										

Lumax Tier-1 LMCS Cluster -1

Cluster Scenario:

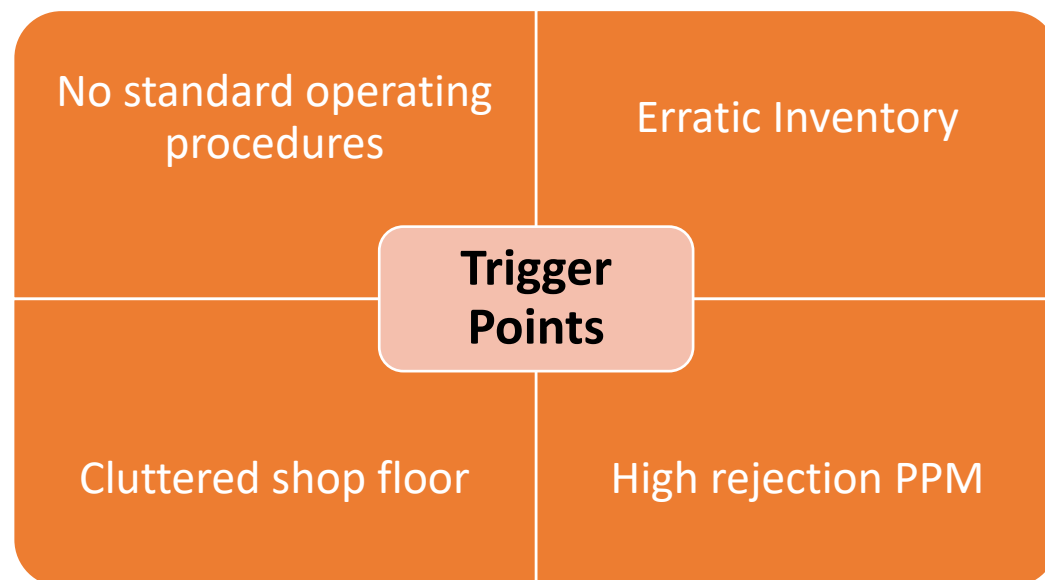
Number of Cluster Members: 7

Location: Delhi NCR

Consultant: Maruti Centre for Excellence

Nature of Business: Rubber Components, Springs, Fasteners, plastic and sheet metal

Problem faced during initiation of lean Journey



Details of Units Participating:

1. Yatharta Yantra Udyog
2. Agrim Components Pvt Ltd
3. Anand Industries
4. Bharat Enterprises
5. Bohra Rubbers Pvt Ltd
6. Pradeep Industries
7. Shree Shyam Global Fasteners

Glimpse of Lean Implementation:

M/s Anand Industries, Gurgaon (Haryana)



BEFORE



AFTER

Before lean intervention, mixed material was kept on shop floor, taking more space. After implementing 5S, material has been segregated and allocated in racks properly.

M/s Bharat Enterprises, Delhi



BEFORE



AFTER

At first, wires were kept mixed and scattered taking much space on shop floor, after kaizen implementation, wires were arranged in spools and placed machine-wise taking less space and reducing retrieval time.

M/s Pradeep Industries, Gurugram (Haryana)



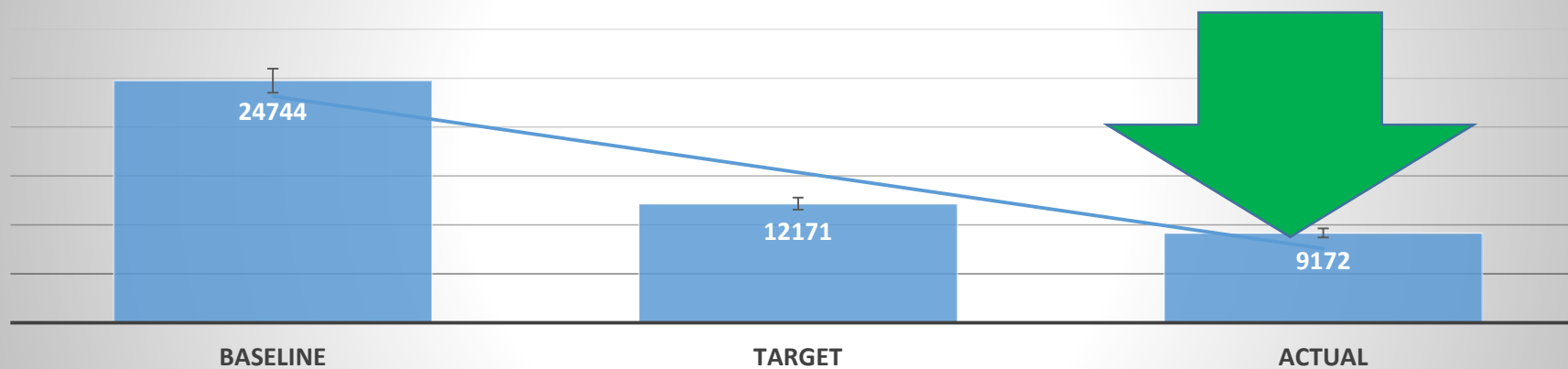
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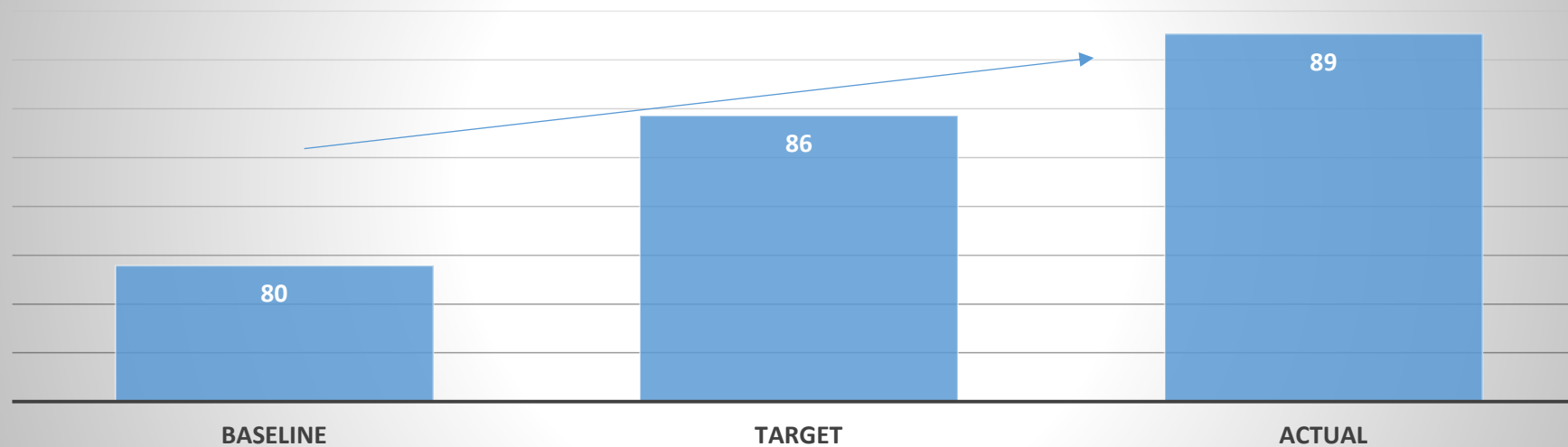
AFTER

Initially, Spanners and other tools were kept in cluttered condition, causing high retrieval time and loss of tools. After lean implementation, Shadow Board was implemented to properly track tools and make them quickly available.

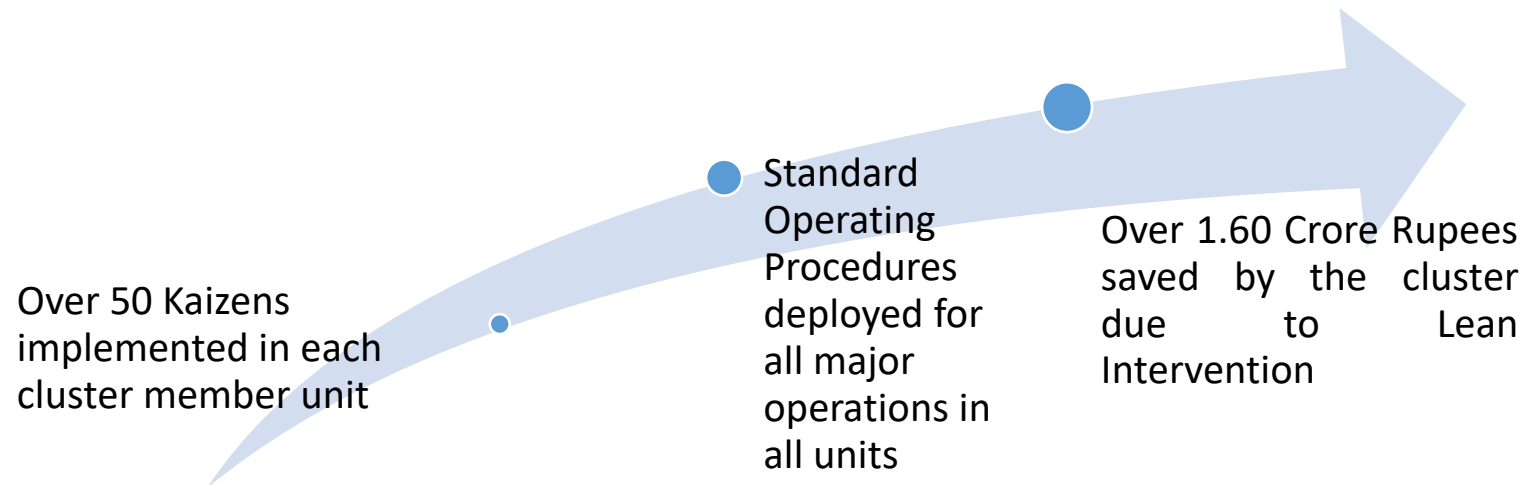
Internal Rejection PPM



Overall Equipment Efficiency %



Key Landmarks



Savings from Lean Intervention

Lumax Tier-1 LMCS Cluster-1									
Sr No	Lean Project (Indicative List)	Cluster Units							Total
		Bohra Rubber Pvt Ltd	Agrim Components	Shree Shyam Global	Anand Industries	Yathartha Yantra Udyog	Pradeep Industries	M/s Bharat Enterprise	
1	5 S (Housekeeping)	₹ 23,350	₹ 87,570	₹ 21,544	₹ 55,000	₹ 40,000	₹ 40,000	₹ 45,000	₹ 3,12,464
2	Standard Operating Procedures (SOP's)	-	-	-	₹ 12,000	₹ 40,000	₹ 40,000	₹ 30,000	₹ 1,22,000
3	Poka Yoke or Mistake Proofing	-	-	-	₹ 15,000	₹ 40,000	₹ 50,000	₹ 40,000	₹ 1,45,000
4	Kaizen Blitz or Rapid Improvement Process	₹ 4,19,700	₹ 42,135	₹ 50,000	₹ 35,00,000	₹ 16,16,000	₹ 3,50,000	₹ 3,58,600	₹ 63,36,435
5	Training	-	-	-	₹ 25,000	₹ 25,000	₹ 25,000	₹ 30,000	₹ 1,05,000
6	Visual Management	-	-	-	₹ 50,000	₹ 45,000	₹ 45,000	₹ 35,000	₹ 1,75,000
7	Quality Improvement	₹ 29,77,000	₹ 2,51,974	₹ 3,69,816	₹ 35,000	₹ 30,000	₹ 15,000	₹ 40,000	₹ 37,18,790
8	Change Over Time Reduction(SMED)	₹ 7,50,000	₹ 86,400	₹ 2,64,000	₹ 15,000	₹ 40,000	₹ 45,000	₹ 35,000	₹ 12,35,400
9	VSM	₹ 2,16,000	₹ 9,96,000	₹ 22,680	₹ 45,000	₹ 20,94,000	₹ 83,000	₹ 2,25,000	₹ 36,81,680
10	Inventory Reduction	₹ 40,000	₹ 2,40,733	₹ 8,000	₹ 20,000	₹ 1,08,000	₹ 25,000	₹ 1,07,986	₹ 5,49,719
Unit Wise Saving		₹ 36,76,050	₹ 17,04,812	₹ 7,36,040	₹ 37,72,000	₹ 40,78,000	₹ 7,18,000	₹ 9,46,586	₹ 163,81,488
Total Cluster Saving in Rupees = 1,63,81,488/-									

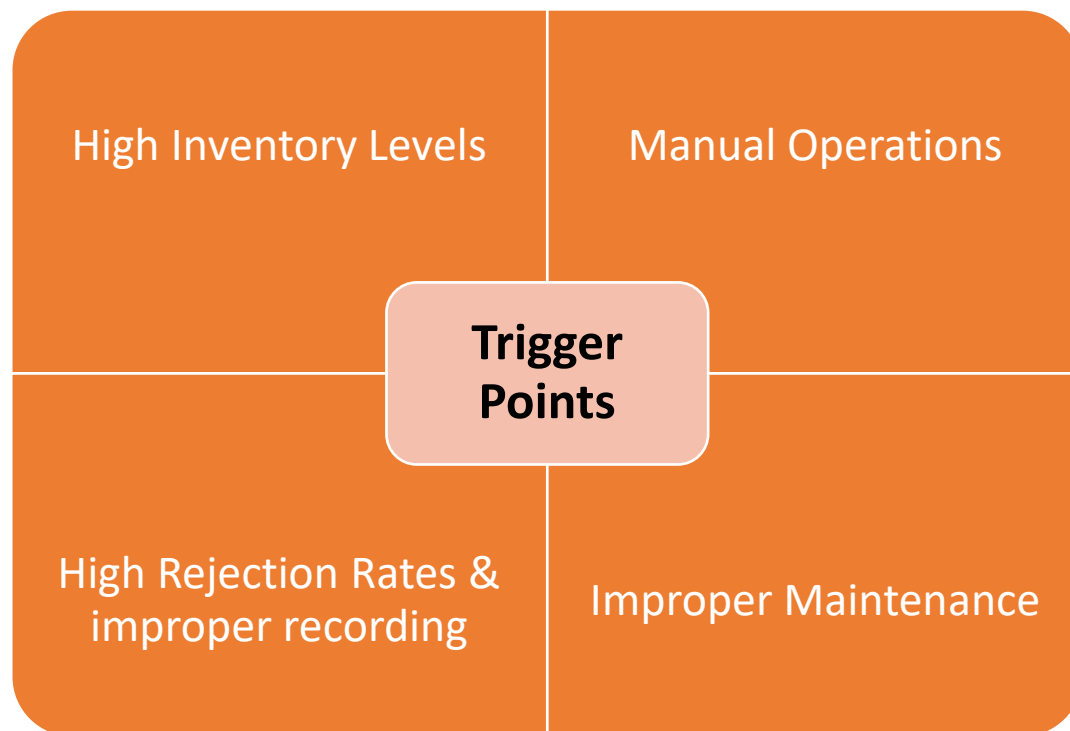
Engineering and Fabrication Cluster, Yamuna Nagar

Number of Cluster Members: 9

Locations: Yamuna Nagar, Haryana

Consultant: LBE Consulting Group

Nature of Business: Hydraulic equipment, pumps, insulators, Gasifiers, Electrical control panel, Aluminum utensils etc.



Details of Units Participating:

1. Oriental Engineering Works Pvt Ltd
2. Yamuna Power & Infrastructure Ltd
3. Chanderpur Works Pvt Ltd
4. Ambey Engineering Corp.
5. Yamuna Automotive Components
6. Switch Gear & Logic Control
7. Bimal Aluminium Pvt Ltd
8. M/S JK Metal Industries
9. Erol Exports Pvt. Ltd.

Glimpse of Lean Implementation:

M/s Chanderpur Works Pvt Ltd, Yamuna Nagar (Haryana)



BEFORE



AFTER

Initially, there was no arrangements made for storing of incoming raw material pipes. After implementation of Kaizen, customised racks were prepared and visual control was implemented as well.

M/s Yamuna Automotive Components, Yamuna Nagar (Haryana)



BEFORE



AFTER

At the outset, there was no proper stand for CNC cutting tools and holders. After lean intervention, a tool holder stand is made for CNC tools and holder. This has saved searching time and enabled easy reach.

M/s Oriental Engineering Works Pvt Ltd, Yamuna Nagar (Haryana)

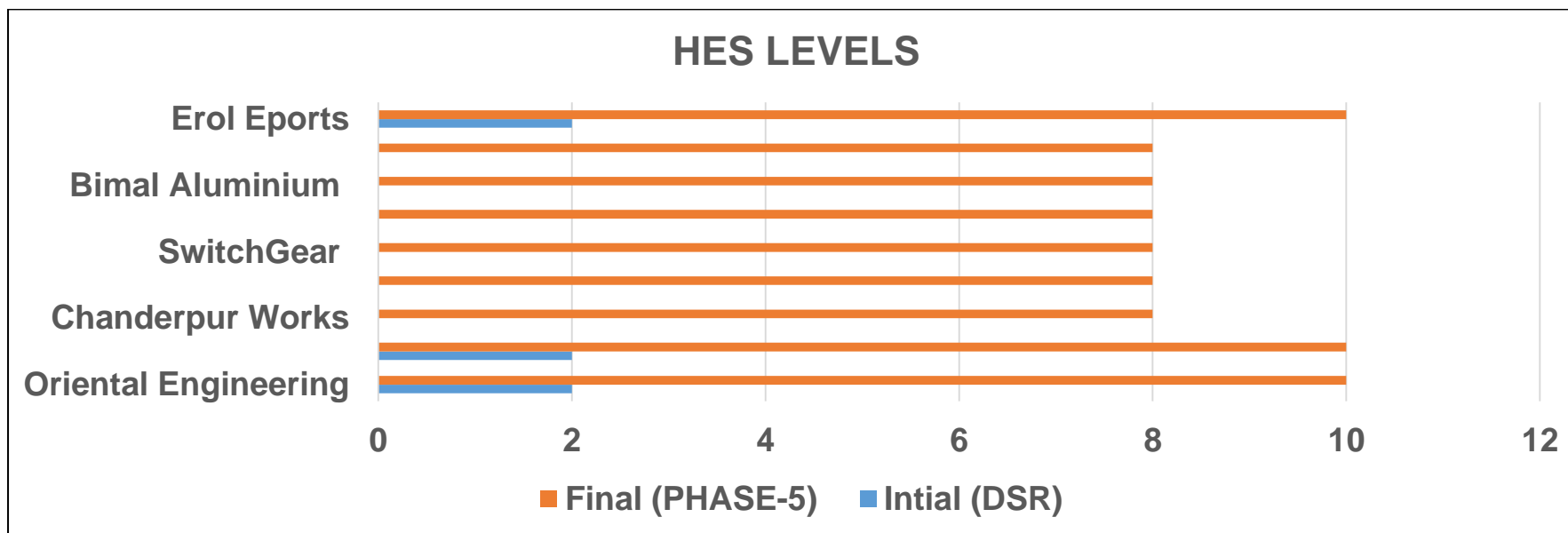
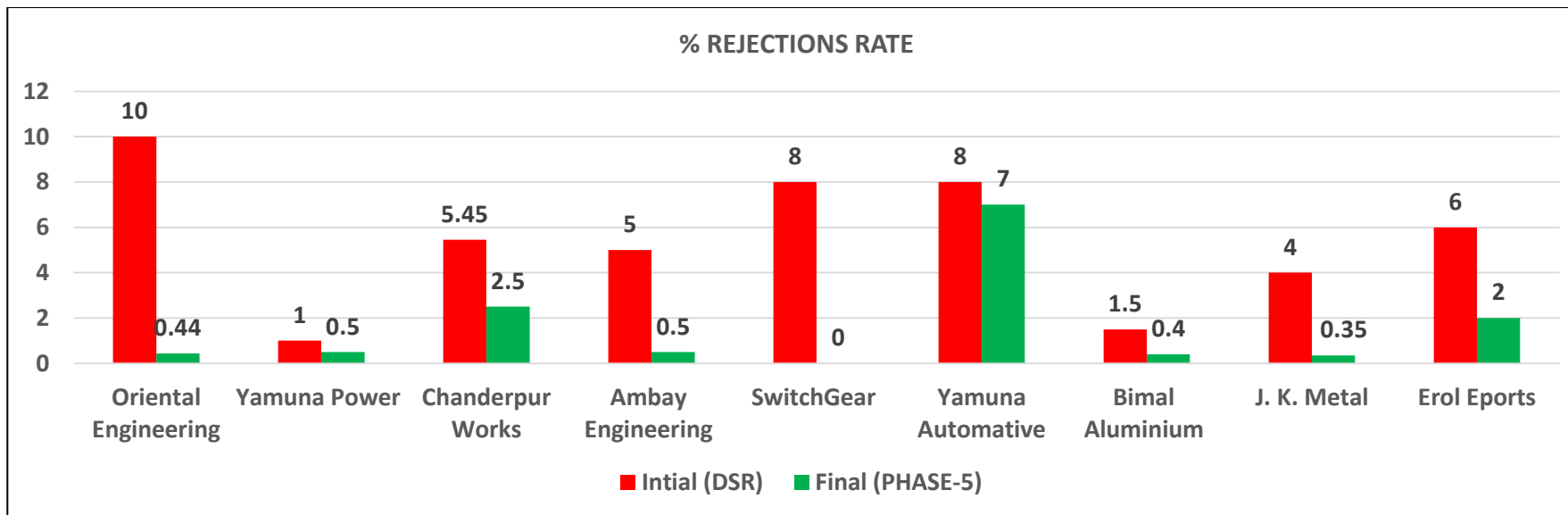


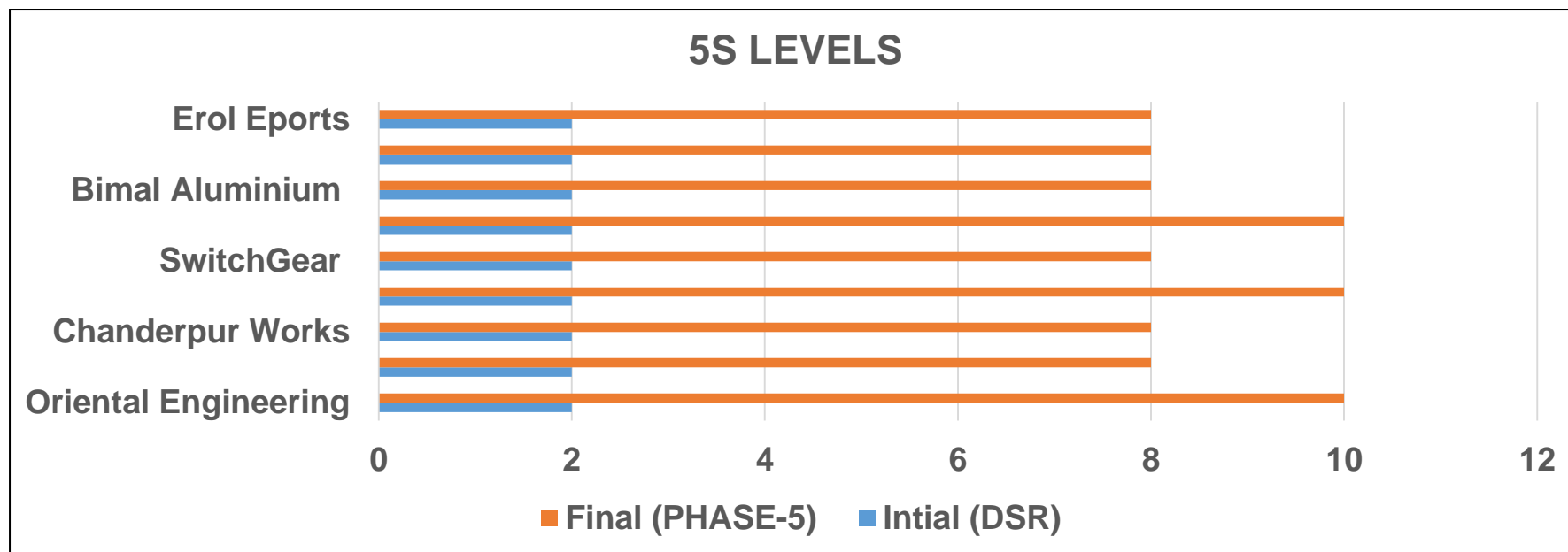
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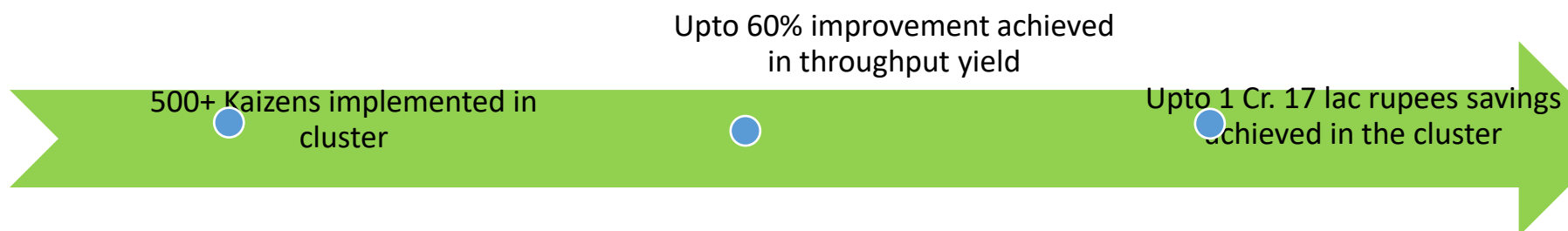
AFTER

Initially, there were lot of obsolete files piled up in the office area, after deploying 5S, all files were sorted and only relevant files were stored at a proper location.





Key Landmarks



Savings from Lean Intervention

Cluster Name: Fabrication & Engineering Cluster, Yamuna Nagar Summary Of Lean Implementation Outcomes- Till Phase-5th											
Sr No	Lean Project	Cluster Units									Total
		Oriental Engineerin g Works Pvt. Ltd.	Yamuna Power & Infrastruct ure Ltd.	Chanderpur Works Pvt. Ltd.	Ambay Engineerin g Corpo.	Switch Gear & Logic Controls	Yamuna Automot ive Compon ents	Bimal Aluminium Pvt. Ltd.	J. K. Metal Industries	Erol Exports Pvt Ltd.	
1	5 S (Housekeepin g)	₹ 5,54,800	₹ 4,63,263	₹ 6,88,032	₹ 3,71,200	₹ 82,000	₹ 92,000	₹ 5,88,000	₹ 3,20,000	₹ 53,200	₹ 32,12,495
2	Quality Improvement	₹ 10,000	₹ 1,16,771	₹ 50,000	₹ 80,000	₹ 30,000	₹ 45,000	₹ 6,00,000	₹ 75,000	₹ 85,000	₹ 10,91,771
3	Labour Productivity (Productivity Improvement)	₹ 1,00,000	₹ 6,35,981	₹ 1,50,000	₹ 1,00,000	₹ 50,000	₹ 40,000	₹ 6,00,000	₹ 1,50,000	₹ 85,000	₹ 19,10,981
4	Inventory Reduction Cum Stores Management	₹ 2,00,000	₹ 16,09,756	₹ 1,50,000	-	-	-	₹ 6,00,000	-	₹ 50,000	₹ 26,09,756
5	SMED	₹ 60,000	-	-	-	-	-	-	-	-	₹ 60,000

6	TPM & My Home My Machine	₹ 60,000	-	₹ 2,04,927	₹ 45,000	-	₹ 80,000	-	₹ 10,000	-	₹ 3,99,927
7	Production Planning & Control (PPC)	-	-	-	-	-	-	-	-	₹ 50,000	₹ 50,000
8	Poka- Yoke (Mistake Proofing)	-	₹ 50,000	-	₹ 50,000	₹ 35,000	-	-	-	-	₹ 85,000
9	In-process Material Management	-	-	₹ 50,000	-	-	-	-	-	-	₹ 50,000
10	Reduction in Manual Operations by Low Cost Automation	-	₹ 70,000	-	₹ 20,000	₹ 50,000	-	₹ 12,00,000	₹ 50,000	-	₹ 13,90,000
11	Documentation & Systems Implementation	-	-	₹ 1,50,000	-	-	-	-	-	-	₹ 1,50,000
	TOTAL SAVINGS (UNIT WISE) IN RUPEES	₹ 9,74,800	₹ 27,09,000	₹ 13,42,959	₹ 6,16,200	₹ 2,47,000	₹ 2,57,000	₹ 35,88,000	₹ 6,05,000	₹ 3,10,200	₹ 107,99,930
Total Cluster Saving in Rupees = 107,99,930											

Auto Cluster, Minda Under Progressive Alliance of Competitive Enterprises (PACE – SOCIETY)

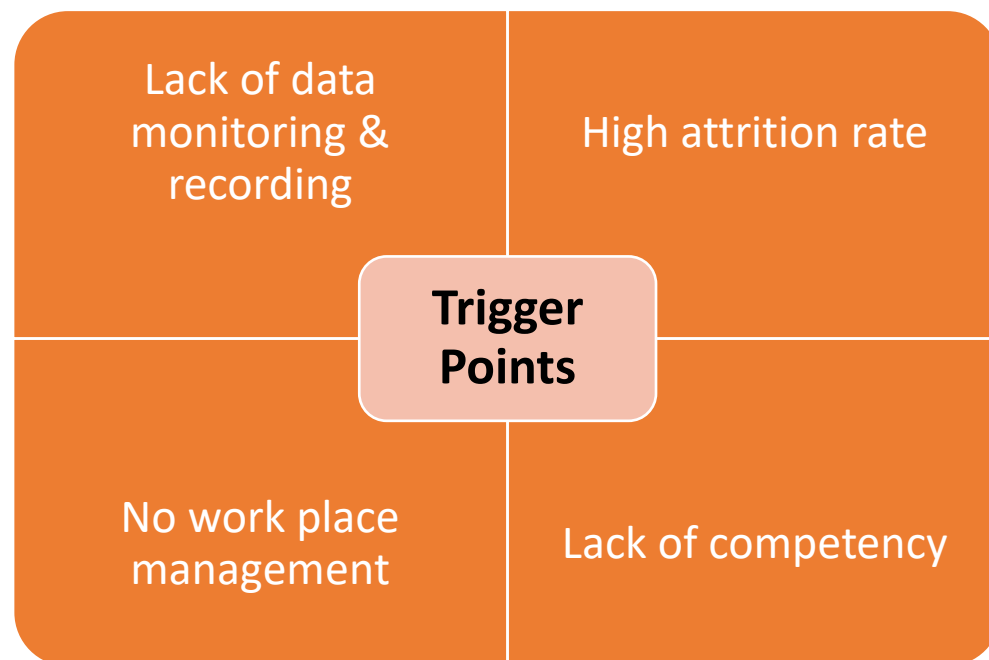
Cluster Scenario:

Number of Cluster Members: 10

Locations: Delhi NCR

Consultant: Quality Growth Services Pvt Ltd.

Nature of Business: Rubber Moulded, Brackets & Latches, Lock assemblies, Springs, Fasteners



Details of Units Participating:

- 1) Astron Polymers Pvt Ltd.
- 2) Gowel Rubber
- 3) Mehra Metal Components Pvt ltd.
- 4) Plasto Metal Engineering Pvt Ltd.
- 5) R&N Techauto Industries Pvt Ltd.
- 6) Diksha Springs Udyoug
- 7) Empire Fasteners
- 8) Rohit Industries
- 9) Talbros Marugo Rubber Pvt Ltd.
- 10) Omax Auto

Glimpses of Lean Implementation:

M/s Gowell Rubber Industries, Faridabad (Haryana)



BEFORE



AFTER

Initially, hot Components were kept together in one bin, which results in deformation due to heat in components. A Quick-win kaizen was deployed and a rack was designed and erected to separately hold all the parts away from each other and give them time to cool off. **Internal Rejection PPM reduced from 14320 PPM to 8183 PPM.**

M/s Empire Fasteners, Sahibabad (Uttar Pradesh)



BEFORE



AFTER

Initially, material handling was being done manually by workers. After lean implementation, a trolley was designed for better transportation of material. This reduced time required for transportation as well as man-power.

M/s Diksha Springs Udyog, Noida (Uttar Pradesh)

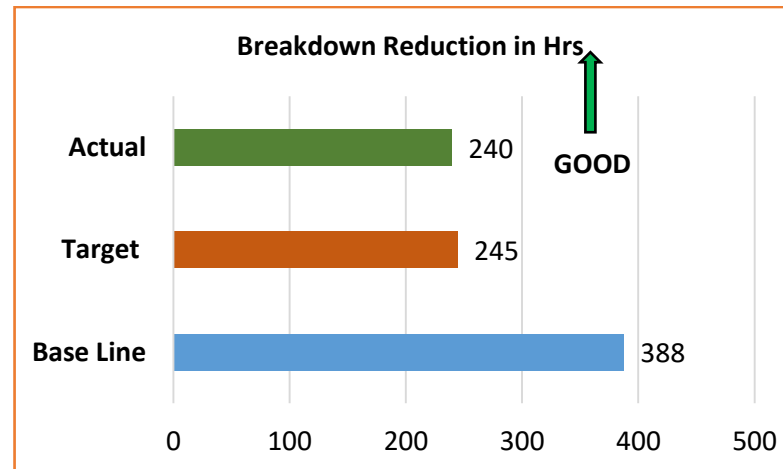
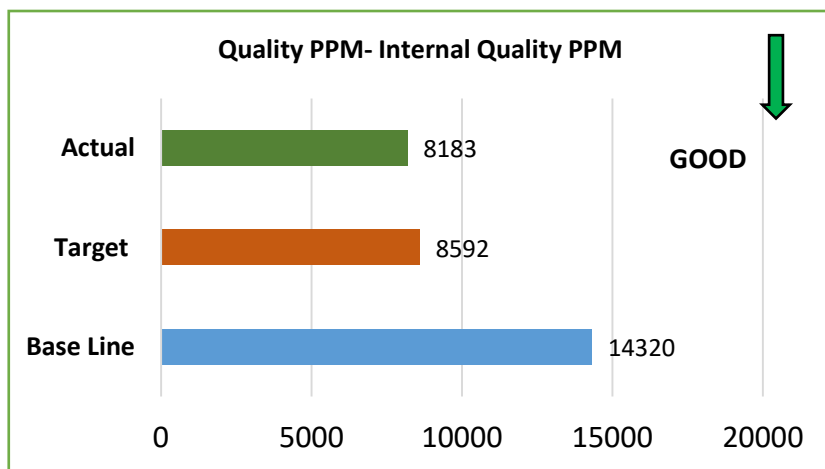
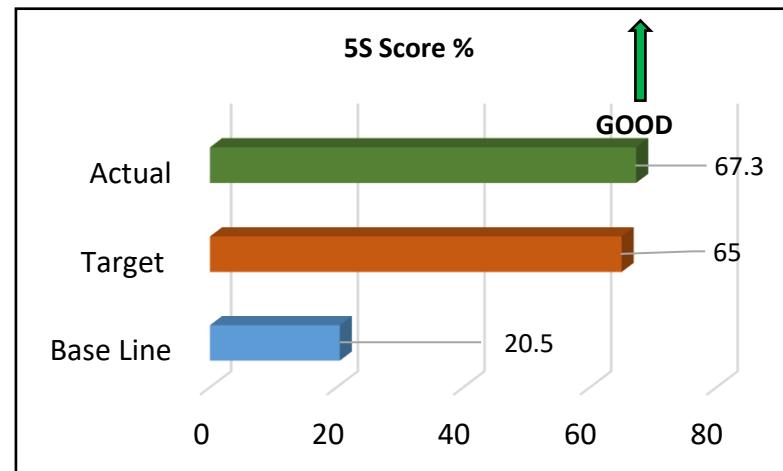
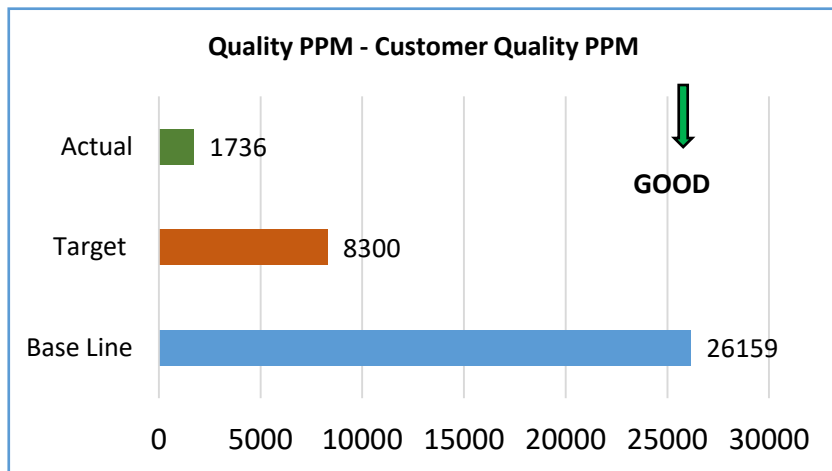


BEFORE



AFTER

Initially, Lot of time & manpower was getting consumed during retrieving of material from store area. A kaizen implemented for this unnecessary movement 5S was deployed and all material was allocated at a proper location with floor markings. **This resulted in savings of time and effort.**



*PPM = Parts per Million

Key Landmarks

Rejection PPM has been reduced from 15019 PPM to 1247 PPM

Yearly breakdown time has been reduced from 177 hrs to 69.5 hrs

5S score has improved from 24% to 52% for overall factory.

Daily work management has been introduced with daily targets.

Savings from Lean Intervention

Auto Cluster, Minda Under Progressive Alliance of Competitive Enterprises (PACE – SOCIETY)												
Summary Of Lean Implementation Outcomes												
Sr No	Lean Project	Cluster Units										Total (All units)
		Gowell Rubber	Mehra Metals	Diksha Spring	Plasto Metals	Rohit industries	Talbro's Marugo	Omax Autos	Empire fasteners	Astron Polymers	R N techauto	
1	5S	₹ 35,180	₹ 72,602	₹ 63,375	₹ 98,972	₹ 1,56,000	₹ 50,350	₹ 51,302	₹ 3,96,377	₹ 1,25,000	₹ 22,060	₹ 10,71,218
2	Kaizen	₹ 3,53,027	₹ 23,72,529	₹ 3,17,820	₹ 5,14,120	₹ 2,69,650	₹ 1,69,875	₹ 25,000	₹ 2,59,699	₹ 13,66,949	-	₹ 56,48,669
3	SMED	₹ 40,000	₹ 53,760	₹ 4,09,500	₹ 1,36,500		₹ 1,24,000	₹ 9,750	-	₹ 10,12,500	-	₹ 17,86,010
4	Quality Improvement	₹ 3,94,416	₹ 2,83,282	₹ 24,276	-	₹ 35,640	₹ 1,98,000	-	-	₹ 10,96,546	₹ 3,12,696	₹ 23,44,856
5	Inventory Reduction	-	-	-	-	-	-	-	-	-	₹ 15,97,752	₹ 15,97,752
6	Break Down Reduction	₹ 1,06,200	-	-	-	-	-	-	-	₹ 6,66,432		₹ 7,72,632
7	Productivity	-	-	-	-	₹ 71,400	-	-	-	-	-	₹ 71,400
8	Delievery Adherence	-	-	₹ 11,41,185	-	-	-	-	-	-	-	₹ 11,41,185
9	Layout Improvement	-	-	-	-	-	-	₹ 3,83,400	-	-	₹ 2,16,000	₹ 5,99,400
Total Savings		₹ 9,28,823	₹ 27,82,173	₹ 19,56,156	₹ 7,49,592	₹ 5,32,690	₹ 5,42,225	₹ 4,69,452	₹ 6,56,076	₹ 42,67,427	₹ 21,48,508	₹ 150,33,122
Total Cluster Saving = 1,50,33,122/-												

TTPK Knit Garment-2

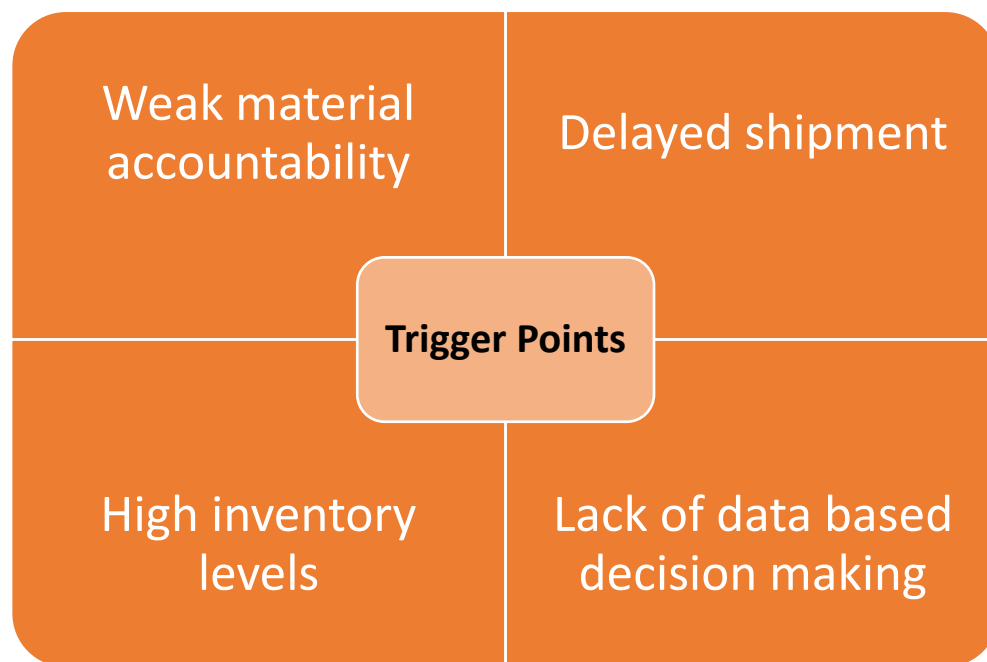
Cluster Scenario:

Number of Cluster Members: 6

Locations: Tirupur

Consultant: Kryasilis

Nature of Business: Knitted garments specialized in Men's polo, kids wear and women's wear.



Details of Units Participating:

1. ASWATHI EXPORTS
2. PRITHVI INNER WEARS
3. PRO KNITS
4. SYDNEY APPARELS
5. THE AINNURRUVAR
6. VALUE FASHION

Glimpse of Lean Implementation:

M/s Awasthi Exports, Tirupur (Tamil Nadu)



BEFORE



AFTER

Fabric Section was made to focus on the improvement of the overall shop floor bringing in practices for systematic disposal of material and cleaning

M/s Value Fashion, Tirupur (Tamil Nadu)



BEFORE



AFTER

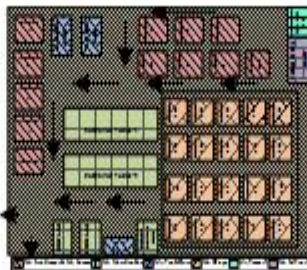
- Sewing section was made to focus on the batch size reduction targeting single piece flow for better material accountability and defect control.

5S-Activities

5S
Awareness
to the core
team
members



Creation of
5S zone and
assigning
zone leader
& zone
facilitator



Identification
of model
zone and
initiation of
1S, 2S & 3S
activity



5S
Awareness
to all zone
members

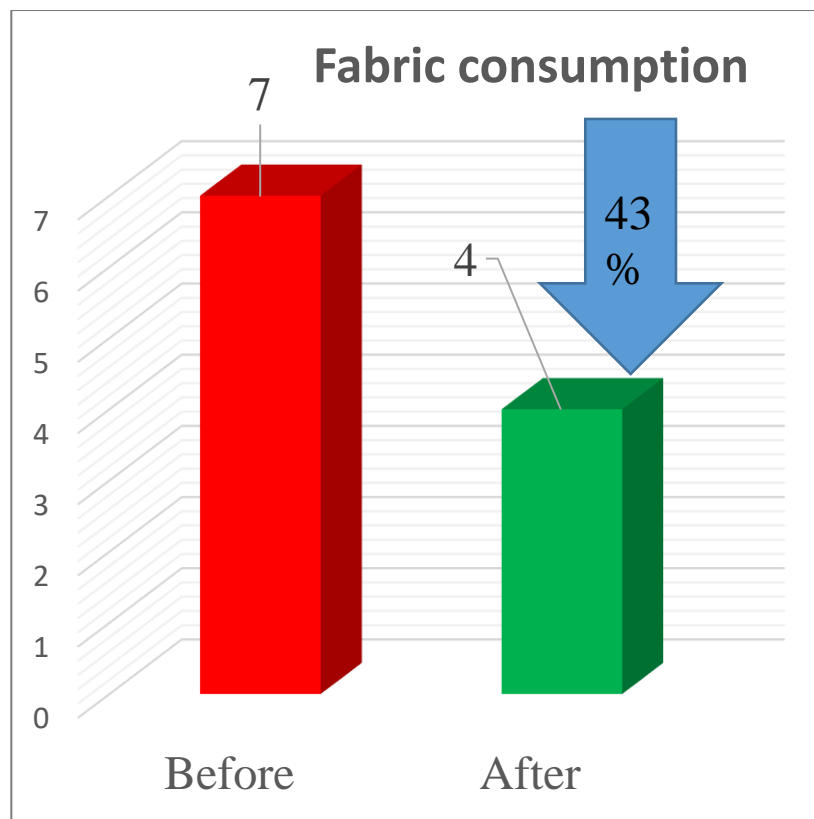


Initiation of
5S across
the shopfloor

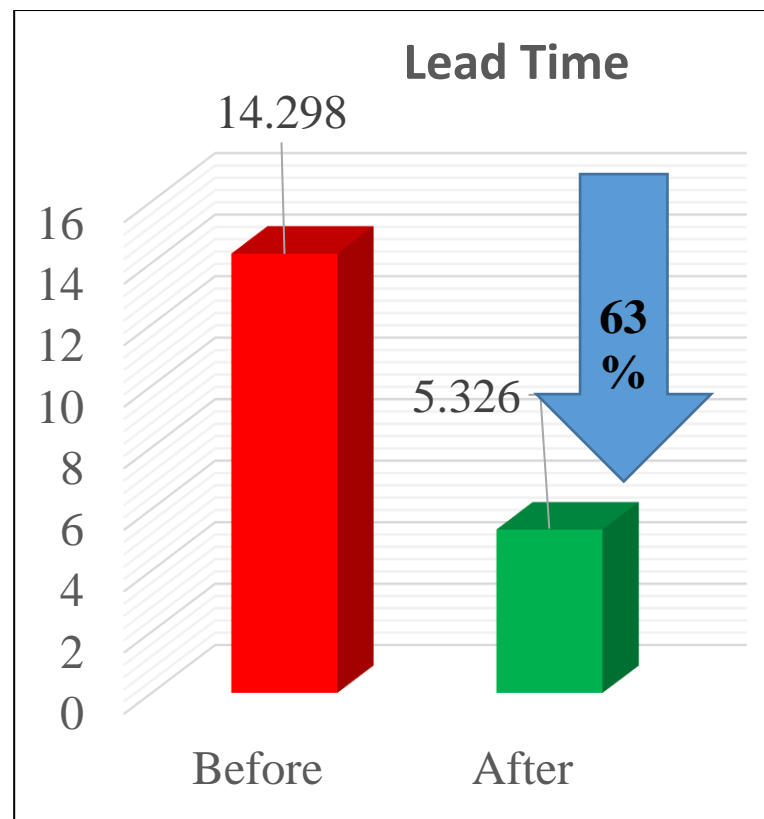


Reward &
Recognition
for Best 5S
zone

Benefits Realised – An average of 1826 Sqft. of space was saved in most units. Space saved was re-utilised in some units. Material accumulation and clutter reduced and an organised work area observed.



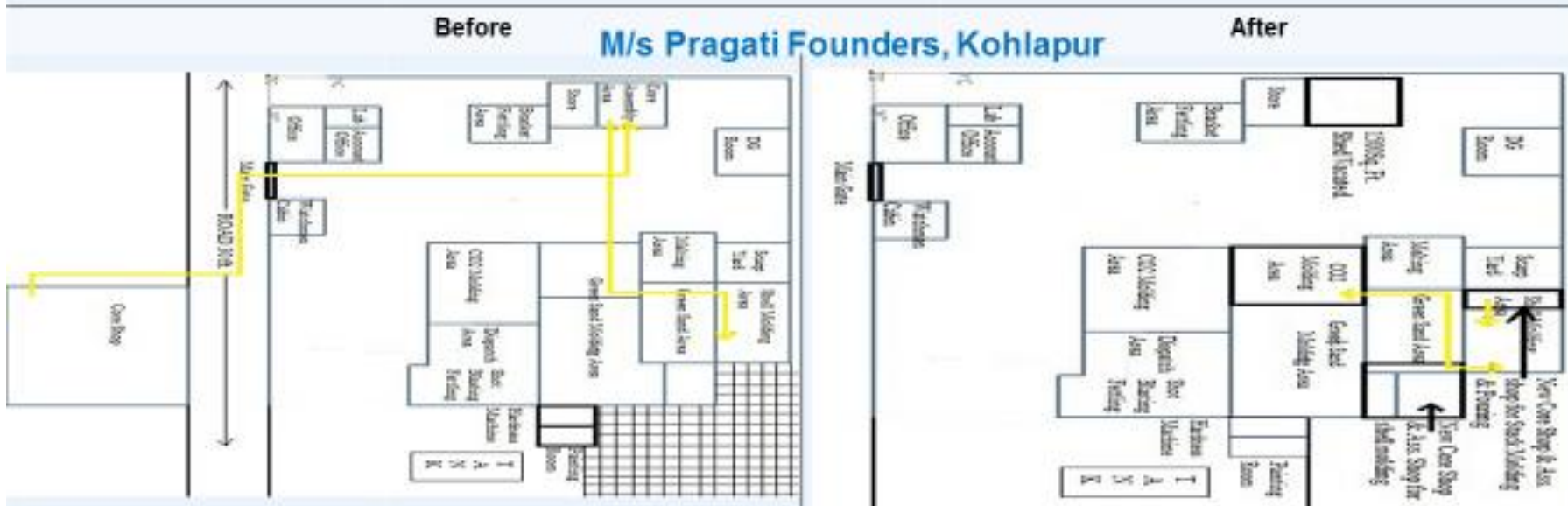
Fabric buffer allocation decreased by 43% after deployment of lean into the 6 units



Lead Time of the process got decreased by 63% after the deployment of lean.

M/s Pragati Founders, Kohlapur (Layout Change and 5S)

Opportunity	Measures Taken	Benefits
<p>'Core Shop' and 'Core Assy. Shop' located away from 'Pouring area'.</p> <p>1. Total travelling dist. = 128 mtrs.</p> <p>2. Two helpers+ foreman employed = Rs. 25000 per month</p> <p>3. Rent cost = Rs. 14,000</p>	<p>With 5S and VSM, vacant area created in main shop. Core shop and core assy. Area shifted there.</p> <p>Total travelling distance reduced to 30 mtrs.</p>	<p>1. Rent cost saving = Rs. 14000</p> <p>2. Foreman+ 2 helpers cost saving = Rs. 25,000/-</p> <p>3. Transport trips reduced = Rs. 9000/- saved</p> <p>4. Savings by applying single piece flow = Rs. 16000/-</p> <p>5. Defects reduced = Rs. 2000/- saved</p> <p>6. Total Rs. 66,000/- savings/month * 12 = <u>Rs. 7,92,000/- lakh p.a.</u></p> <p>7. Space saving = 1500 sq. ft.</p>



M/s Pragati Founders, Kohlapur Owner's statement

Company goes from -3 % (Loss making) to a 12 % profit with lean implementation

*"We are very much thank to DI Mumbai and specially to QCI Delhi for their effort to bring us in Lean Cluster. We have been very much benefited by Lean tools like 5s, cellular Layout, kaizen, Kanban, Poka Yoke, etc. yearly we have got the savings of Rs 62,13,534. We have been converted **from loss making unit to profit making unit** due to Lean Mfg. Activity. We will keep this going and sustain in our factory."*

Mr. Milind Patil, Managing Director, M/s Pragati Founders

Key Landmarks:

Lean Implementation: Cost- Benefit Analysis

Scale (Investment in P&M - Manufacturing Units)	No. of Units	Total Savings in Lakhs	Savings Per Unit (Lakhs)	Investment in P&M - Per Unit (Lakhs)
Micro(<0.25 Cr)	47	Rs 624.00	Rs 13.28	Rs14.80
Small(<0.25 Cr & < 5 Cr)	204	Rs 6343.20	Rs 31.09	Rs 183.40
Medium(< 5 Cr &< 10 Cr)	24	Rs 1145.40	Rs 47.73	Rs 750.20
	275	Rs 8112.60	Rs 29.50	Rs 204.00

On Time Delivery
percentage was improved
by 26%

Defect percentage of
Cluster was reduced by
73%

Continuous improvement
through improved
employee involvement