



GLOBAL JOURNAL OF RESEARCHES IN ENGINEERING: G
INDUSTRIAL ENGINEERING

Volume 21 Issue 1 Version 1.0 Year 2021

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-4596 & Print ISSN: 0975-5861

Avoiding Non- Value Added Activities by Applying Lean Techniques in Merchandising Process

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GJRE-G Classification: FOR Code: 290502



Strictly as per the compliance and regulations of:



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I. INTRODUCTION

Merchandising process involves its hard role from examine order till shipment, and thus they plays a very dangerous role in completing an order. The single mistake of each stage will be reflected only in the end process of shipment, so appropriate destinations that cause problem should be encircled priory to avoid issues. Every organization in today's condition, seeking for some proficient method to improve, in that way lean techniques utilization could be troublesome in implementing though it has its ideal improvement of all asserts like labour, cash and strategies. To accomplish these, the lean creation theory I utilized here is Kaizen and six sigma. The authors discussed about the lean role in the industries that is discussed by various authors.

The idea of 'Lean creation' was at first acquainted with the more extensive open in the book "The machine that changed the world" composed by Womack et al. (1990). The term is likewise perceived as 'Lean assembling' or simply 'Lean', to a business methodology with the target of ceaselessly limit squander and augment the progression of data and items (Liker, 2004; Ohno, 1988)(1).

Lean has subsequently expanded to business practice generally. Lean administration is turning into the norm for deliberate profitability improvement. Inefficient activity wiped out the unwanted exertion, space, and capital required and lead time is diminished while quality increments and the expense of value diminishes. Lean implementation faced various obstacles related to human aspects such as the lack of knowledge of daily kaizen practices for process improvement(5).

The Time Study observing framework, a yield of the examination, is a compelling and effective device to improve profitability in the whole sewing segment,

whose advantages stretch out to the entire association. Wasteful action is eliminated the result is that less effort, space, and capital are required and lead time is reduced whilst quality increases and the cost of quality decreases(6).The fundamental standards of lean and its goal is that the idea is based upon the worth creation forms, which implies that every movement, inside or outer, that doesn't support the end client, is recognized as waste, and will be killed from the procedure (Liker 2004; Hodge et al. 2011; Shah and Ward, 2007).

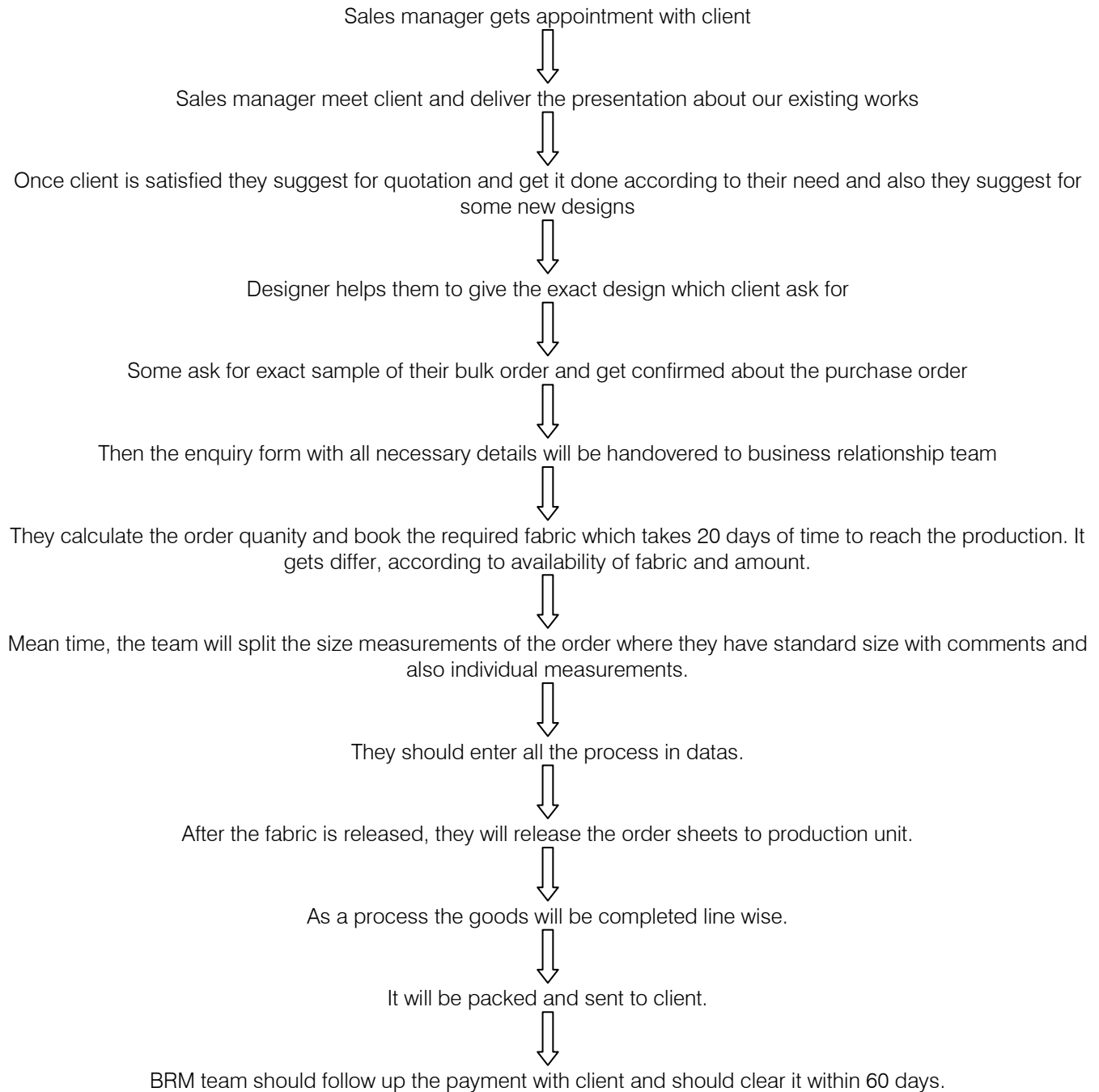
Here, certain changes in process were implemented to avoid non value added activities and getting gradual improvements in bottleneck areas.

II. METHODOLOGY

Garment Export Company is one of the important components in an export industry of India. The garment exporting is the second largest export from India after gems and jewellery export according to the year 2002 survey. The garment export is being in important contributor for the foreign exchange earnings of the country (Deshpande 2009). The Indian exports had a decline by one percent in 2017 when compared to 2016. This is highly possible only because of applying certain lean techniques and developing the standard process to make a prominent work flow.

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Process flow of an order



Hereby, above mentioned was the process flow happening in the merchandising process and highlighted stages are the bottle neck operations where efficient development is needed.

Lean Techniques were implemented to overcome the problem where occurred in production department is discussed here.

a) *Changing of order sheets*

According to Stern, Susan vi et al 1984 The textile exporting is the next largest source after agriculture in India. The textile has provide the jobs over 10 million employees. India has been the one of the

large exporters due to its skilled workforce of the employee, low wages, trained technicians etc. This made India to be the strong economy which gives the improvement of 7 per cent in 1983. Eliminating the waste of time and effort gradually increased them to next stage.

Here, some sheets of order sheets are not considered and used by the production unit. So order sheets was converted from six sheets into three sheets in which only required information are described short and clearly. This type of changes avoids paper waste, unwanted process, avoiding confusion and also minimizes the time to get it completely done.

Specification sheet: Pattern details, shade number, fabric width, parts of merchandise and accessories trims as shown in Fig. 1

Embellishment sheet: About the embellishment and its placements as shown in Fig. 2

Quantity sheet: About quantity, sizes and their comments as shown in Fig. 3

WORKAHOLIC		SPECIFICATION SHEET		QCC	
Order Ref code:	Project : Workaholic 2019 - 2020	Category :	Fabric:	Fabric swatch	
W/	Client : Merchandise : Half sleeve shirt Date placed :	Men	Shade no. : Fabric width :		
Pattern : Allen Solly Half Sleeve Regular Fit Shirt measurements					
Front 			Back 		
Accessories/Trims : Workaholic and size label Matching thread Matching 18L buttons		Canvas for collar Placket canvas		*NOTE :	

Fig. 1: Specification sheet

WORKAHOLIC		EMBELLISHMENT SHEET		QCC															
Order Ref code:	Project : Workaholic 2019 - 2020	Embellishment type:	Shade Card:																
W/	Client : Merchandise : Half sleeve shirt Date placed :	Embroidery (Satin fill embroidery with satin outline)	<input type="checkbox"/> Shade number (color) <input type="checkbox"/> Shade number (color) <input type="checkbox"/> Shade number (color)																
Embroidery placement : 																			
<table border="1"> <thead> <tr> <th>Size</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>S</td> <td>6</td> </tr> <tr> <td>M</td> <td>6</td> </tr> <tr> <td>L</td> <td>6</td> </tr> <tr> <td>XL</td> <td>6.5</td> </tr> <tr> <td>2XL</td> <td>6.5</td> </tr> <tr> <td>3XL</td> <td>6.5</td> </tr> </tbody> </table>			Size	A	S	6	M	6	L	6	XL	6.5	2XL	6.5	3XL	6.5			
Size	A																		
S	6																		
M	6																		
L	6																		
XL	6.5																		
2XL	6.5																		
3XL	6.5																		
A- highest point from the shoulder																			

Fig. 2: Embellishment sheet

Fig. 4: Client approval form

c) *Minimizing the timeline for each process*

According to Pankaj Sharma 2005, Indian exporting is typically lower than China in which China has 6 time more revenue in garment than India. The cycle time of a product is an important aspect in which it affects both price and delivery schedule.

Involving too much of time and no committed time leads to delay in process and delivery, to minimize the problem, deadline line for each process was allotted with confirmation of all team workers including production unit.

These are the proposal deadlines for each department

Sales manager confirming the enquiry- 5 days

Enquiry team working for their quotation – 2 days

Working for sample – 3 Days

Sales manger should get PO from client after confirming the sample – Minimum 2 days

Fabric should reach production at maximum – 30 Days

Production Process – Maximum 15 days (Depends On Quantity)

Client reachable - 60 days from PO (Compulsory)

Payment Clearance- 15 days from receiving goods.

d) *Catogirizing the datas according to priorwise*

According to Arashdeep Singh (2015) The 2d S, Seiton, manner 'neatness' and targets to have matters in the proper location or proper layout in order that humans can acquire or use something they want quick. To do that, one need to prioritise the need and importance of products/gadget to maximise ease of place. The key questions who, what, why, in which, while and the way (Imai, 1986) have to be requested of oneself in respect of each object. This pastime involves ensuring distinctive places for all items within the place of business, thereby facilitating employees to have green manipulate over the operations and allows employees to meticulously plan substances, supplies, or tools requirements.

There numerous datas in drive like internal request, purchase request, fabric booking, sample request, order sheet request etc. There will be more orders to look simultaneously but some have prior attention due to high value order or orders that received advanced payment etc.. In that case all these orders in a sheet will be highlighted in different way to indicates the importance and status of each orders shown in Fig 5 This reduces the confusion of getting jammed of finishing certain works. This goes by a flow and every order gets good time management and most probably the delay in each process will be eliminated.

Request No	Request Date	Purpose (Head of Account)	Client name	Value	Approved value	Expected date	Request settled date	Payee	Remarks
460	27.02.2020	Travel Request	Size Trial	400		Close In Internal		Alagumalai	Approved
571	04.03.2020	Travel	Hindustan	400		06.03.2020		Arum	Approved
572	04.03.2020	Vendor rent	Office	500		07.03.2020		Mihun	Approved
654	06.03.2020	Machine service- Tirupur	Flat lock machine	3,300.00		06.03.2020		Well known syndicate	Approved
651	26.02.2020	Office expense	Sales ban	3,300.00	200.00	26.02.2020			Approved
774	22.02.2020	Accessories	KCT-Yugam	4,423.00	4,423.00	24.02.2020			Approved/Hold
462	06.03.2020	Travel	Siechem	5,500.00	5,500.00	06.03.2020		Dinesh	Paid
464	06.03.2020	Client Visit	Intimate	4,150.00	4,150.00	07.03.2020		Ganesh	Paid
848	19.02.2020	Sizeset Washing	Sizeset	480	480	20.02.2020		Kokila	Paid
563	24.02.2020	Rabwin Goods Transportation	Diesel	500	500	26.02.2020		Ganesh	Paid
564	25.02.2020	Size set bag	Enmas	2,250.00	2,250.00	25.02.2020		Ganesh	Paid
564	25.02.2020	Couner	Enmas	2,250.00	2,250.00	25.02.2020		Ganesh	Paid
564	25.02.2020	Order car - Fuel	KCT-Yugam and ZF	800	800	27.02.2020	11.03.2020	Alshaya	Paid
459	26.02.2020	Travel Request	Pollex and Tianode	3,300.00	3,300.00	27.02.2020		Job Anudass	Paid
553	27.02.2020	Office car - Fuel	KCT-Yugam and ZF	800	800	27.02.2020	11.03.2020	Alshaya	Paid
551	08.02.2020	Freight	KPR	500	500	12.02.2020		Ganesh	Paid
561	17.02.2020	Bus Parcel	Pollex - Polo	500	500	17.02.2020		Ganesh	Paid
561	19.02.2020	Freight - Truck	Besten	498	498	19.02.2020		Ganesh	Paid
561	25.02.2020	Bus Parcel	Shanaz	320	320	28.02.2020		Ganesh	Paid
786	04.03.2020	Accessories and fabric	Ashtech	594	594	06.03.2020	11.03.2020	Alshaya	Paid
457	25.02.2020	Travel	Trivers & gown shankar	1,850.00	1,850.00	25.02.2020		Dinesh	Paid
781	05.02.2020	Packet, Collar & Cuff	Sathya	56,850.00	56,850.00	25.02.2020		Vetri	Paid
761	05.02.2020	Accessories	Sathya	23,854.00	23,854.00	25.02.2020		Vetri	Paid

Fig. 5: Status of orders in different colors

e) Minimizing the Sample pieces

According Fabrizio, Tapping (2006) The movement which does not add any value to the work is waste of motion. If the company is not having a efficient job process and office design leads to more walking, reaching or bending than necessary. The seiso is to clean the work place and setting things in order.

Giving more sample pieces to a specific client without getting purchase order is giving a way for client to involve in illegal process like implementing our designs with other vendor with minimum cost where that vendor does not have overheads and it is so easy for them to quote for less amount.

f) Created CRM Profile

According to Takhar (2004) has mentioned the benefits associated with 5S, such as fewer mistakes, high speed work management, better inventory management, improved employee discipline, and a more impressive environment to handle potential customers.

To get more effective relationships with client, created CRM profile, this is a platform in which all recurring clients can be added and started to have a relationship management with industry. In CRM all new output designs and quotations will be uploaded, so client get a chance to look details about all the merchandises and this helps to get more promoted about the ideas of design and create awareness about the industry works.

g) Proposal idea for new technique effective woven mask

Unfortunately, whole world was supposed to face a pandemic situation "Covid-19" which made everyone of us to protect ourselves with mask. When

comes to surgical, using of onetime usable mask is not most appreciable for day to day life.

So used technology in potential way and made an effective reusable woven single layer innovative cheap mask with best possible price that can be easily affordable and also highly effective. Here it is explained it in detail with design, pattern details, sourcing details and effectice costing.



SOURCING DETAILS

Yarn :	Knitting Details	Washing	Antimicrobial Treatment
30s OE - Bleached White	Single jersey	Autoclave or Silicon	We need to do the 100nm (Since for this corona virus have a 120nm in that size)
Sulochana Mills - MOQ 60 Kg	110-130GSM	PRODUCT LIFE : 10 - 15 washes	PSGTECHS COE INDUTECH
30days PDC Acceptable	32" Dia		We have given a approximate price will cnfirm the price after the lockdown is completed

DESIGN DESCRIPTION

- Fitting
- User friendly - No Irritation,soften feel and reusable
- No Nose pad - It is hazardous for longterm use.
- Production against Nano Particles -

COSTING DETAILS

Yarn Price /KG	214
Knitting Charge /KG	18
Washing /KG	16
Antimicrobial finsih /KG	180
Total'	428
5% Processing waste	21.4
Fabric Price	449.4
Consumption per Mask	7grams
Cost Per Mask	3.1458
Elastic Price per meter	5
Elastic Per Mask(12" including both side)	1.5
Sewwing thead (2 Meter)	0.016
Cutting	0.8
Stitching	2
Total	7.4618
Production & Management Over Heads	1
Margine 20%	1.49236
Grand Total	9.95416
Selling Price	10

Thus the above mentioned 7 methods are implemented in a way of lean approach to avoid non value added activities and to make a standardised flow in merchandise process.

III. RESULTS AND DISCUSSION

The proposal ideas had directed a standardized, effective and efficient flow of the process

to make the flow easier. To find the ranking of each changes, conducted a survey with 25 sample of merchandisers and designers. Their points for each changes was noted, consolidated and given below as Fig 7.

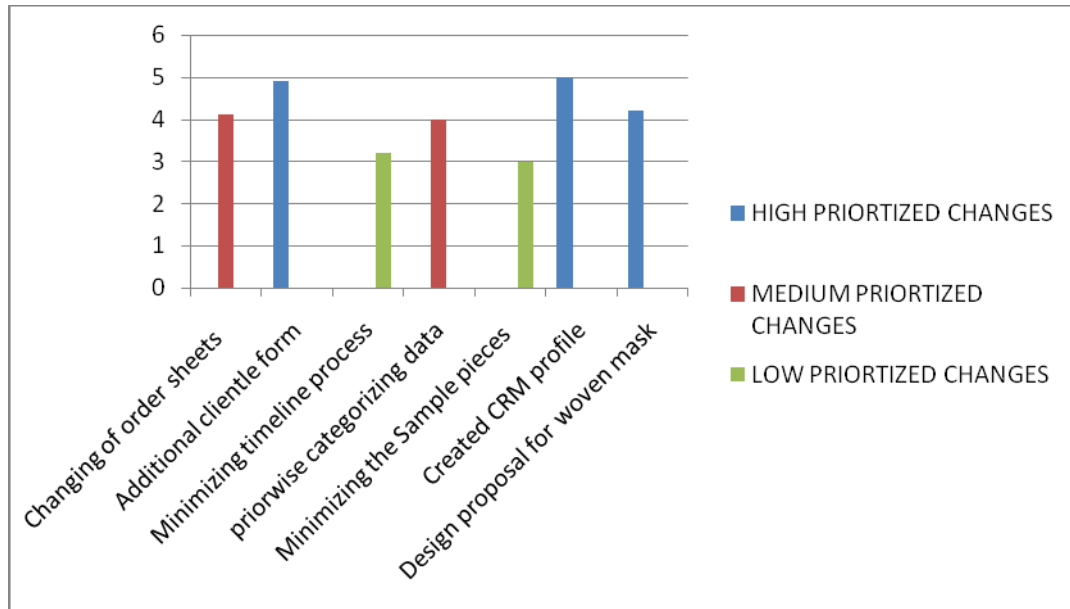


Fig. 7: Ratings of each methods

High Priortized Effective Changes	Medium Priortized Changes	Low Priortized Changes
<p><u>Additional form to clientle</u>- This gradually decrease the confusion between client and sales manager, sales manager and enquiry team and enquiry team with designers to follow up with correct flow.</p>	<p><u>Changing of order sheets</u> - This changes avoids paper waste, unwanted process, avoiding confusion and also minimizes the time to get it completely done.</p>	<p><u>Minimizing Timeline for each process</u>- It may not be suitable for all type of orders, it depends on clients, merchandise, fabric availability and quantity.</p>
<p><u>Created CRM profile</u>- Chances of attracting clients and maintaining their relationship for a long time.</p> <p><u>Design Proposal for effective woven mask</u> – This is cheap effective method that can be used for a month with expected filtration</p>	<p><u>Priorwise Data</u> - This reduces the confusion of getting jammed of finishing many requests. This goes by a flow and every order gets good time management and most probably in delay in each process will be eliminated.</p>	<p><u>Minimizing the Sample pieces</u>- Not all clients get satisfied with this point, as we are a startup company, we cannot demand for samples with clients.</p>

IV. CONCLUSION

Thus from the above study it was understood that the merchandising is an important job and lot of non value added activities are involved in it and making the task more risk. Therefore in this study, by considering the risks involved, the lean techniques has been selected and implemented for reducing the non value added activities and making easy job for merchandisers.

Thomas A. Fabrizio (2006) Reduction of waste in the office helps to increase the cost or time of doing the work This can be applied to the most of the problems in industry by doing the 5s the seven waste can be eliminated such as correction and rework, waiting, unnecessary motion, over processing ,equipment downtime, Inventory and storage and inspection. Most of the companies feel that 5 per cent of work is only value added and others are non value added or wasted activity.

As per the discussion, applying principles of lean techniques had a major role in developing the order process in a most possible way. It helps to reduce time, to reduce overlapping work and confusion and it also helps to maintain a standard way to move in a flow.

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