Aditi Galada

PORTFOLIO

Design

2019

CURRICULUM VITAE

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ABOUT ME

I am a dedicated and capable final year undergraduate student with a strong academic background and internships in various apparel fields. Apart from my will to experience new cultures, an opportunity to learn more about fashion has motivated me to study further.

Education

(2016 – 2020) Bachelor of Fashion Technology

(2017) Web Design & Development

(2005 – 2016) CBSE CLASS 12

Work Experience

January 2020 - April 2020
Product Development Intern • Kontoor Brands

June 2019 - August 2019
Industrial Engineering Intern • Silver Spark Apparel Limited

June 2018
Operations Intern • Arvind Limited

July 2017
Supply Chain Intern • Indian Terrain Fashions Limited

June 2017
Retail Management Intern • Biba Apparels

SKILLS

Programming	HTML/CSS, JavaScript, jQuery, PHP, VB.Net, ASP.NET, C++, Python
Database	MySQL, MS Access
Fashion Design	Macramé, Draping, Pattern Making, Garment Construction
Software	TucaCAD, Lectra, FastReact, Datatex NOW, AutoCAD

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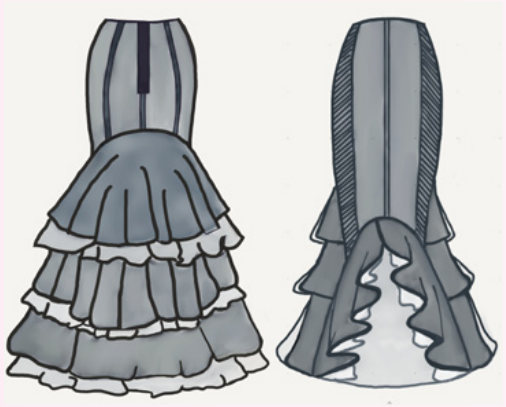
Apparel Design

Forever New Or Retro?

The iconic dove tail ruffled skirt gives the wearer a casual chic look. The flounce with polka dots, delicate tulle and tantalizing pin tucks unveil a playful femininity.



Classic Fairytale

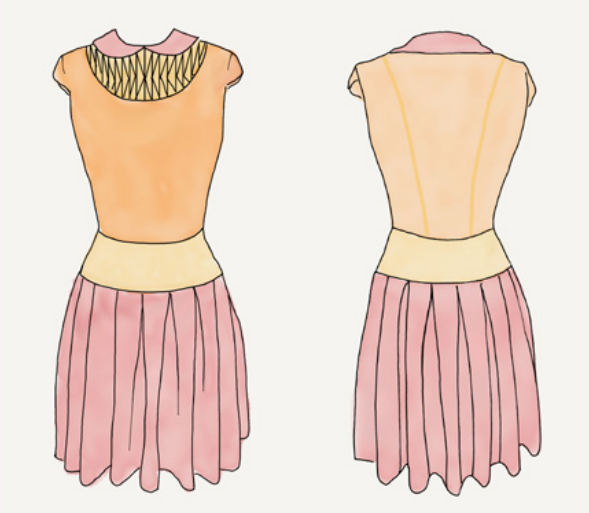
While symbolizing the journey from impediment to liberty the plush and comfy ball gown utilizes floral appliques and elegant fabrics to give a sense of depth and dimension which is sure to take every girl to her own fairyland.

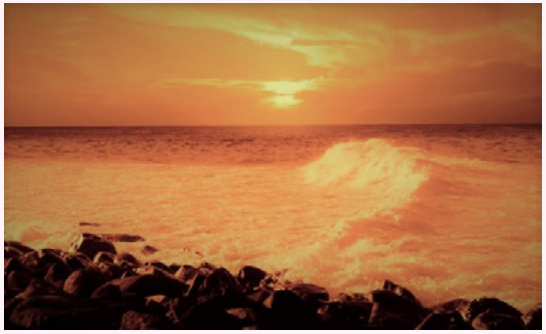
RIYASAT

Brocade fabrics with elegant floral motifs, tassels and laces have been combined to recreate ornate designs of Mughal Artifacts.
The same crop top paired with the skirt creates a royal mughal attire whereas the box-pleat palazzo gives a fusion look.

Mori Girl

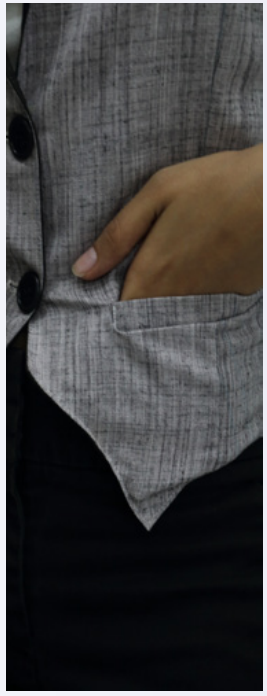
The Mori girl fashion emerged in Japan in 2007. Mori means “forest” and the look resembles a girl living in the forest. The pastel colors, petal sleeve, box pleats, tucks and peter pan collar blended with chikankari embroidery work fabric gives a dinkum Mori girl look.

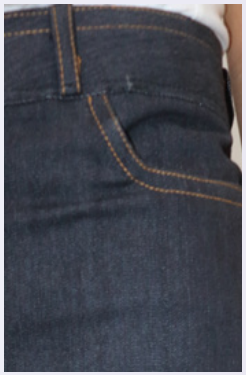




Work Pret

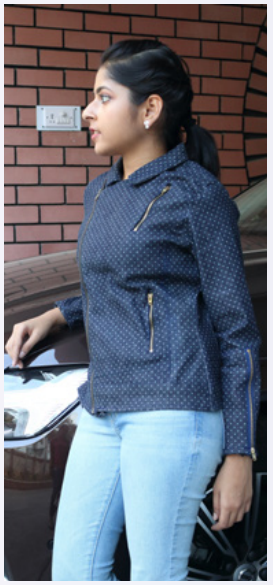
Pret is a range of modern power dressing garments. Crafted with superior cottons and outstanding finishing, these garments are sure to make a statement. The reversible waistcoat brings with it a new freshness. The timeless indigo jeans has an extraordinary calming effect when paired with a polo t-shirt.

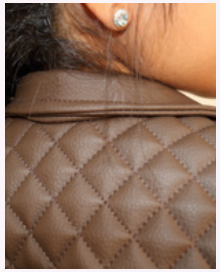




Non-violent Overlay

Clad in this satin lined quilted faux leather jacket, you have powers beyond ordinary. The power to woo every man, power to make others bow in your subservience and power to rule the world!





Daily Occasions

Fashion is best suited when combined with nature. A nature inspired collection, where style meets sustainability, created with attractive designs and blushed with a natural strawberry dye, adds a touch of cotton to daily occasions.









Natural Strawberry Dye



MATERIAL EXPLORATION

Macrame & Gypsum Art

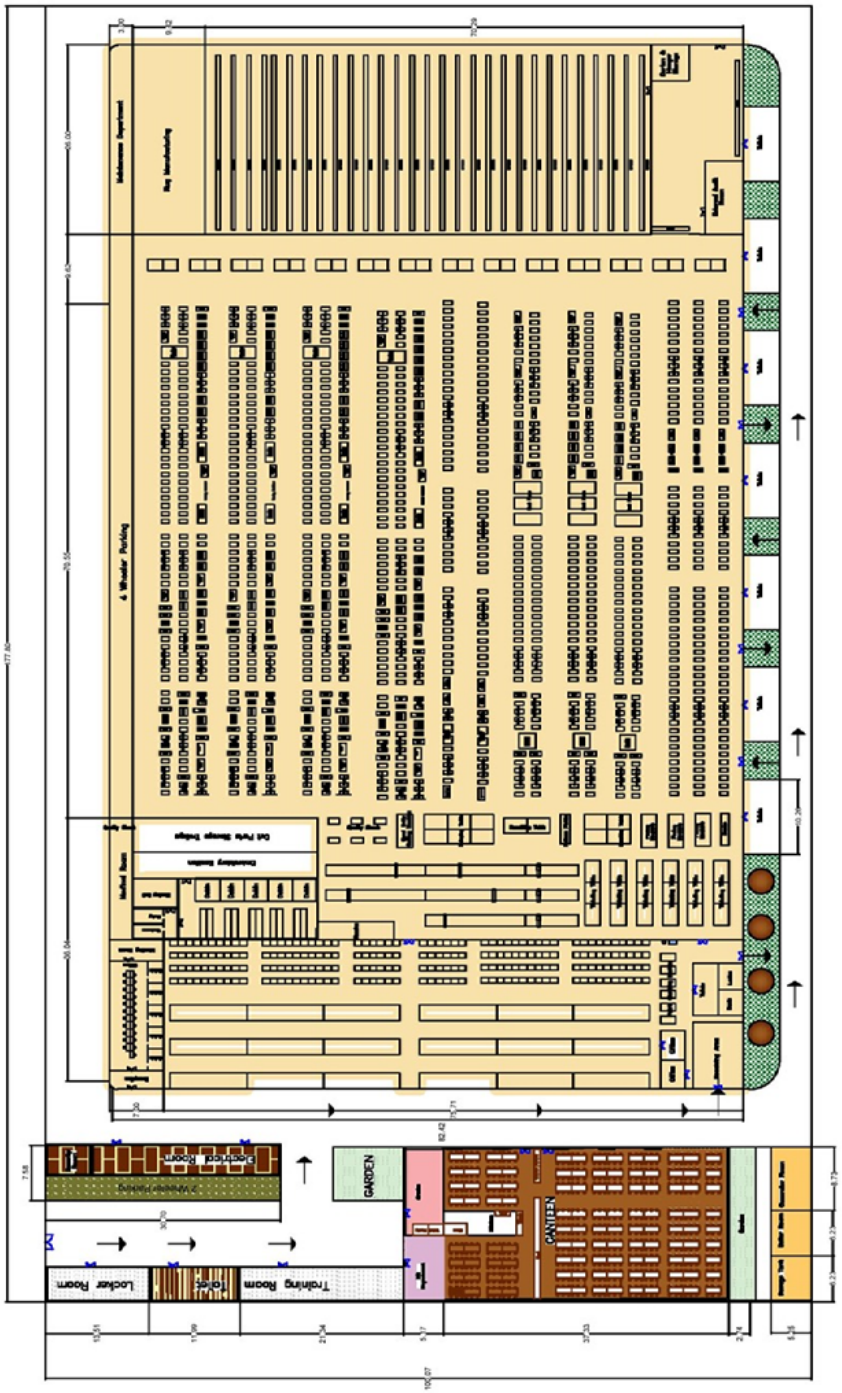
Elegantly molded gypsum flowers backed with magnets are attached to a T-shaped welded iron stand using it's magnetic property. Gypsum pots held with yarns strengthened by different knotting techniques such as square knots, half knots, half hitch knots, jasmine knots and spiral knots have been used to create an aesthetically pleasing pot hanging.

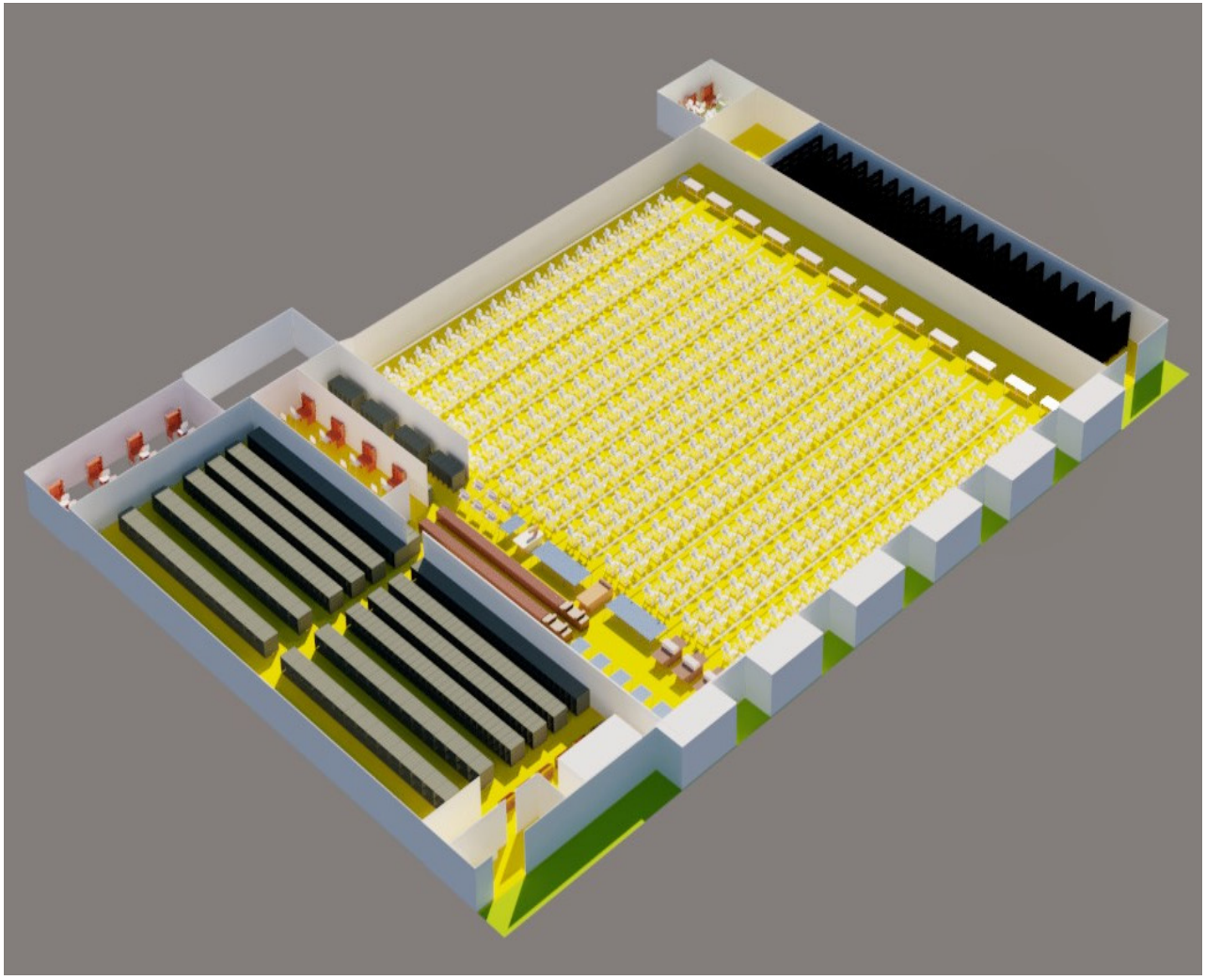
Heaven's Harvest

This 3D mural painting of a cupid with a flower basket in a rustic scenery made with a combination of different types of clay and glued to canvas attached to a ply wood base, is painted with acrylic colors and glossed with varnish. Larger structers are supported with polystyrene to impart a sense of depth while ensuring the painting remains light-weight. The malleability of clay made it possible to sculpt with at most precision using modeling tools.

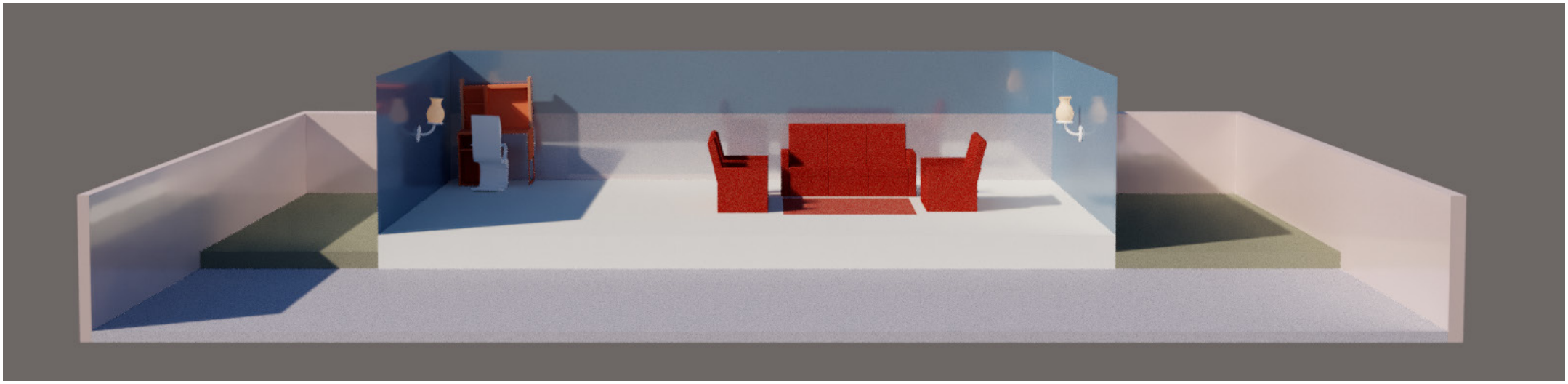
AutoCAD

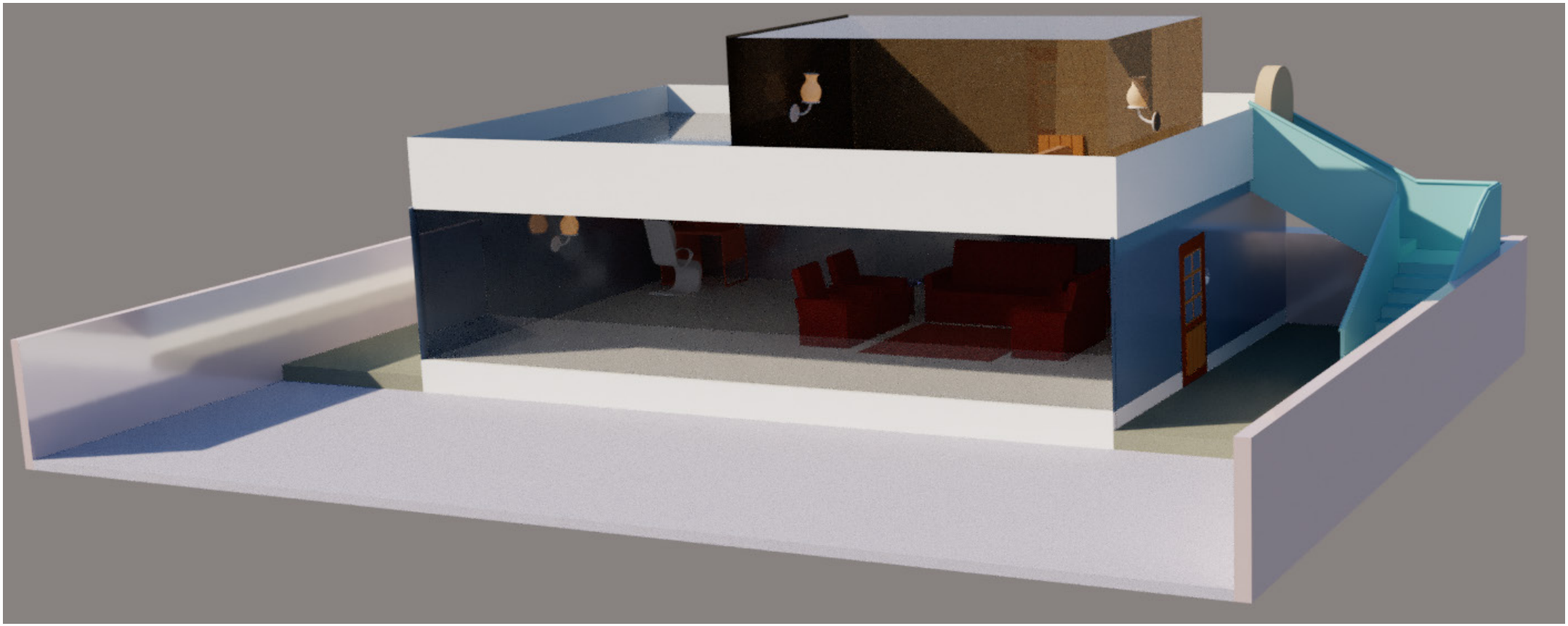
AutoCAD - Layout of Factory



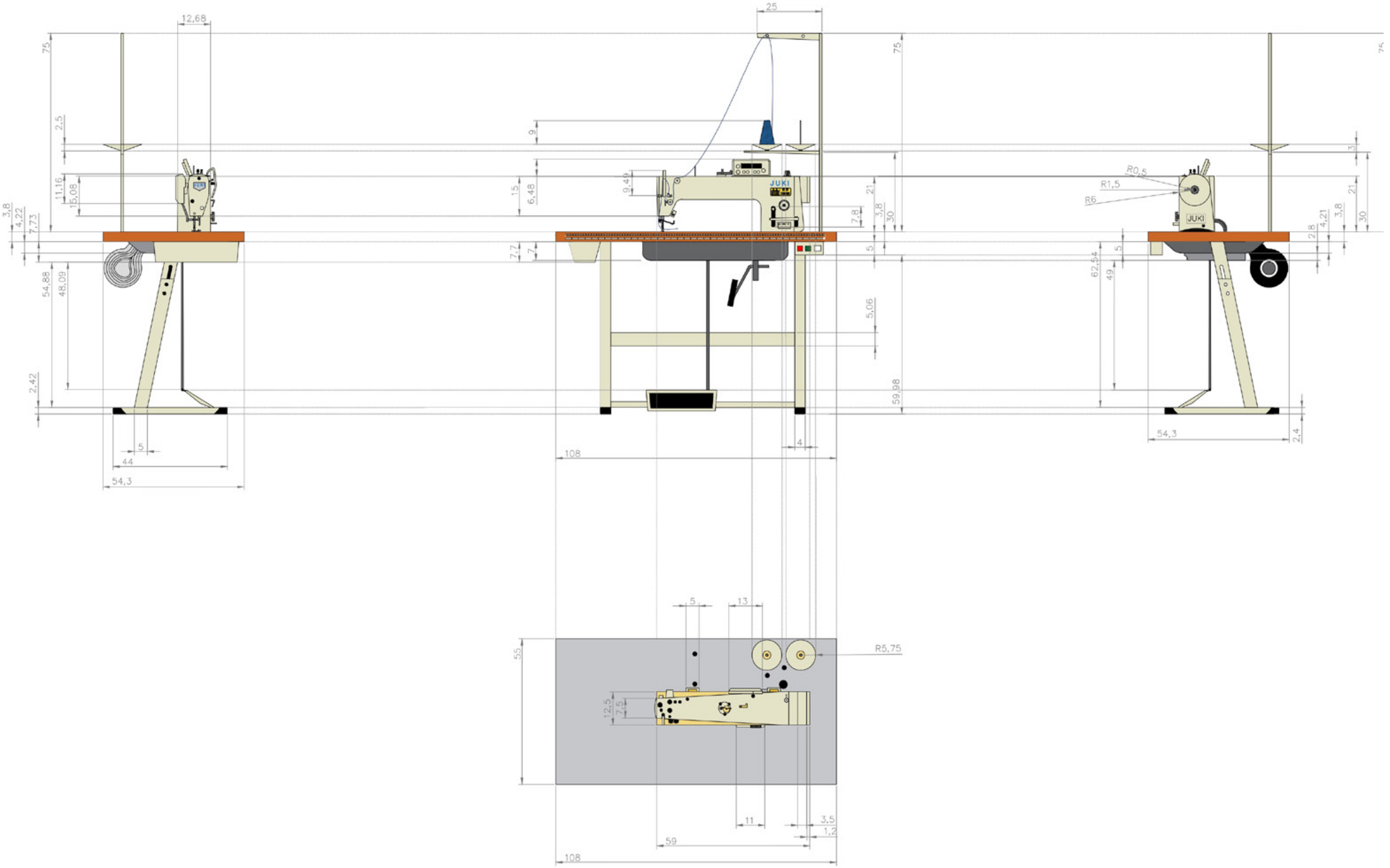


AutoCAD - 3D Models of a House

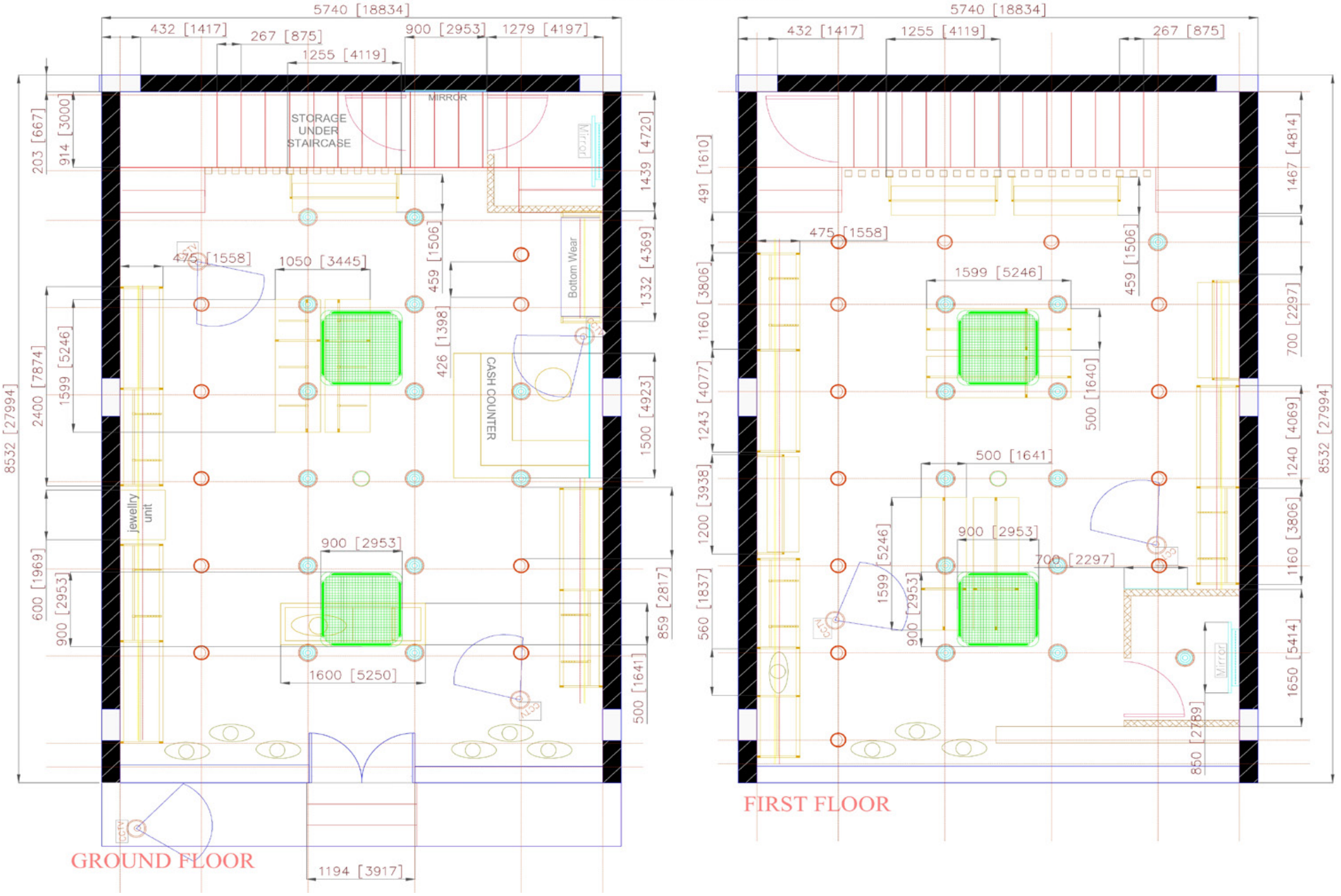




AutoCAD - Sewing Machine



AutoCAD - Apparel Showroom Layout



Project

Real Time Production Monitoring System

Problem

In the cutting department of a make to measure factory all orders were cut as single ply and processed individually. Workstations were present after every section to scan orders in order to update their location, however, manually scanning every bundle not only required manpower but was also subject to errors. As a result, bundles would get misplaced and in order to ship orders on time they would be re-processed.

Solution

Tracking sheets of individual garment would be scanned at the cutting machines and numerous quality checkpoints in order to open the marker. To improve the traceability of purchase orders, this prior process of scanning tracking sheets at various locations was integrated with the order tracking system.

First, a python application was created and installed on every cutting machine and quality checking table. This application would detect every purchase order number inputted on the computer in order to open the marker (no additional scanning was required) and update the order's location along with the time and date into an excel file on the centralized network. In this way, real time production reports were produced.

Second, another program was developed where the user could enter the purchase order number of the garment which had to be located and the program would output the latest location of the order, that is, the workstation where the tracking sheet was last scanned. The supervisors were trained on how to use the program.

PO Number	Time	Date	Cutter	Status
MCA4V2Z	06:03 AM	20/08/19	QC TABLE 1	not passed
MCA4UWL	06:22 AM	20/08/19	QC TABLE 1	not passed
MCA4UUZ	06:37 AM	20/08/19	QC TABLE 1	not passed
MCA4UJV	06:54 AM	20/08/19	QC TABLE 1	not passed
MCA4UNP	07:21 AM	20/08/19	QC TABLE 1	not passed
MCA4UZ1	07:38 AM	20/08/19	QC TABLE 1	not passed
MCA4UZ1	07:40 AM	20/08/19	QC TABLE 1	passed
MCA4UZ1	07:40 AM	20/08/19	QC TABLE 1	not passed
MCA4VHG	07:48 AM	20/08/19	QC TABLE 1	not passed
MCA4VHG	08:02 AM	20/08/19	QC TABLE 1	not passed
MCA4UKY	08:32 AM	20/08/19	QC TABLE 1	passed
MCA4WNE	08:59 AM	20/08/19	QC TABLE 1	passed
MCA4WLU	09:06 AM	20/08/19	QC TABLE 1	passed
MCA4WCF	09:11 AM	20/08/19	QC TABLE 1	passed
MCA4VTF	09:18 AM	20/08/19	QC TABLE 1	passed
MCA4VRT	09:27 AM	20/08/19	QC TABLE 1	passed
MCA4WJA	09:37 AM	20/08/19	QC TABLE 1	passed
MCA4WUA	09:42 AM	20/08/19	QC TABLE 1	passed
MCA4WGX	09:51 AM	20/08/19	QC TABLE 1	passed
MCA4UDN	10:04 AM	20/08/19	QC TABLE 1	passed
MCAA4WF	10:25 AM	20/08/19	QC TABLE 1	passed
MCA4WFC	10:36 AM	20/08/19	QC TABLE 1	passed
MCA4WFC	10:36 AM	20/08/19	QC TABLE 1	passed

Fig: Snippet of Excel Report

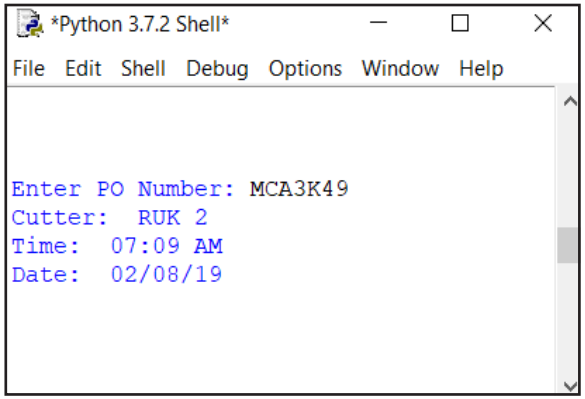


Fig: Snippet of the application

Enhancing Productivity - Store

Problem

a. The sub store was not able to provide cutters with the required feed and this resulted in the cutters being idle. This further led to delay in production and inability to ship the days orders.
b. Cutting machine operators had to get fusing from the sub-store.

Solution

a. Previously both the shell fabric and lining fabric were cut and kept in trays to feed to the cutting department.
To ensure continuous feed, the shell fabric was fed to the cutting department in roll form itself when more than 10 purchase orders had the same shell fabric.

b. Previously, operators would cut the knee lining fabric from the fabric roll. Instead, knee lining fabric was cut in bulk; operators would only have to pick and put the pre-cut fabric in the tray.

c. Fusing was added to the tray provided from the sub-store.

d. Formerly, operators had to match the code written on each fabric roll with the fabric code on the tracksheet.
Later, each fabric roll was given an alphanumeric code and this code was written on board which allowed the operators to identify required rolls faster.

Fig: Board Installed

B1	12658
B2	4130
B3	9547
B4	4174
B5	4149
B6	4193
B7	4123
B8	9543
B9	4155
B10	9544
B11	4177
B12	4152
B13	4150
B14	4127
B15	4133
B16	4159
B17	16640
B18	4163
C1	12660
C2	12661

Fig: Close up of the Display

Problem

Measuring fabric manually using measuring tape for every order was time consuming.

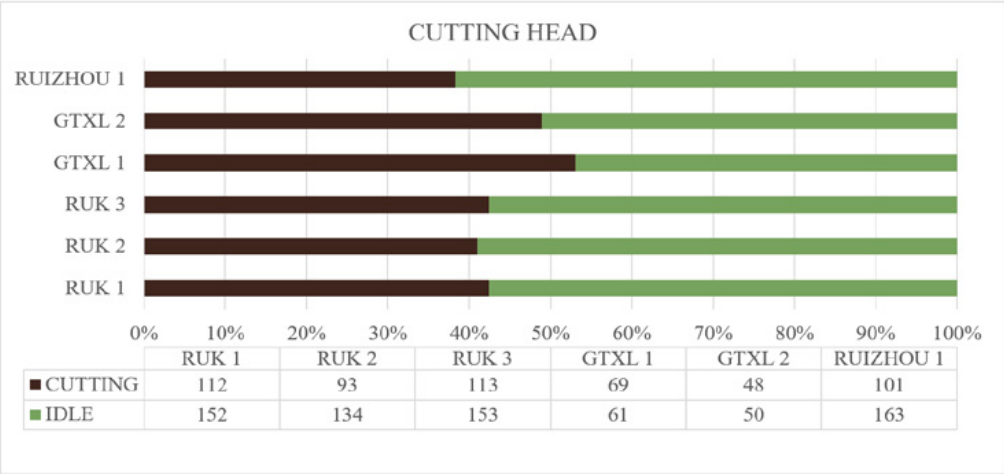
Solution

A laser light, round knife cutting machine and a table were installed in front of the carousel machine. When the consumption was entered in a touch screen monitor the laser light would move the required distance, the operator would pull the fabric till the laser light and cut the fabric using the round knife cutting machine placed at the end of the table.

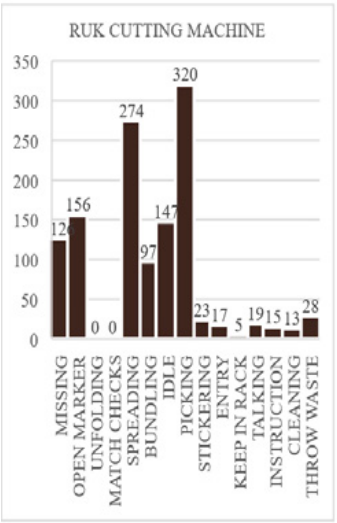
Fig: Laser light with carousel machine

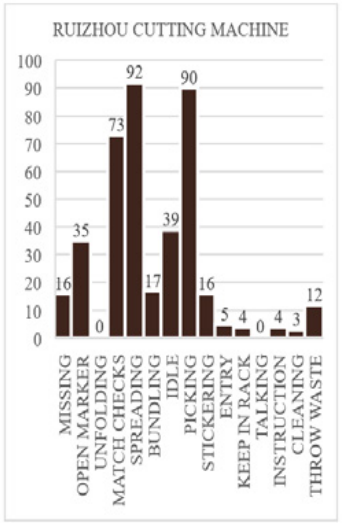
Enhancing Productivity - Cutting Section

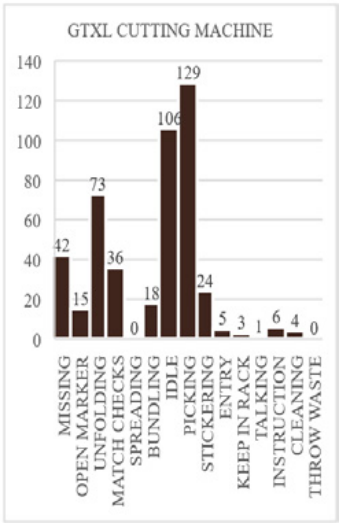
Work Sampling



	RUK 1	RUK 2	RUK 3	GTXL 1	GTXL 2	RUIZHOU 1
CUTTING	112	93	113	69	48	101
IDLE	152	134	153	61	50	163







Reason behind the low output of the cutting machines were:

- Time required for checks matching
- Frequent knife break in the Ruizhou cutting machine

Problem

a. Checks matching process included a step where a projected grid (neon green) was resized using the arrows keys in order to match the checks on the fabric. This process took about one minute per garment being cut.

b. Checks fabrics were being cut only on Ruizhou (auto nester) & Gerber Cutting machines (full width). Sometimes the orders or feed of solid fabric would get exhausted and the three Ruk cutting machines would remain idle and Ruizhou and Gerber cutters would excessive WIP.

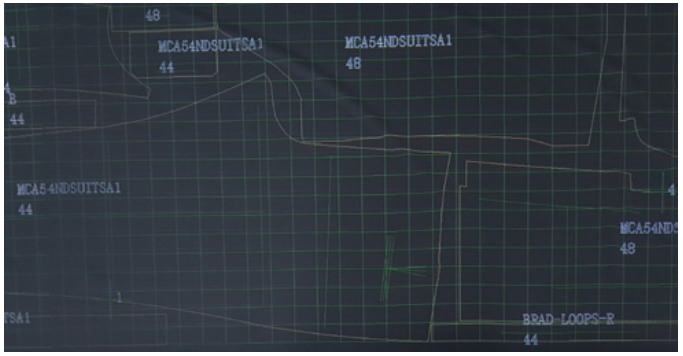


Fig: Matching of the projected grid with checks of the fabric

Solution

A swatch file of all the available checks fabrics with each checks fabric's x and y repeat size was created.

a. Cutting machine operators could match the projected grid with checks of the fabric by directly entering the repeat size in the software.

b. With the details of repeat size of every fabric, the CAD department could make manual markers to cut checks fabric on Ruk Cutting Machine.

Fabric Code	REPEAT SIZE	
	X (CM) (Along selvedge)	Y (CM) (Perpendicular to selvedge)
4149	4.7	3.9
4163	4.7	3.8
4123	4.3	3.6
9548	3.8	3.5
4127	4.9	4
17071	5	4.7
4139	4.8	4
4152	5.4	4.2
17070	4.5	3.5
17069	5	4.5
4137	5.3	4.6
4150	4.8	3.9
4174	5.3	4
4177	4.7	3.7
4166	5	4
4130	6	5.3

Fig: Repeat sizes

Enhancing Productivity - Cutting Section

Problem

The Ruizhou machine is used to cut garments with checked shell fabric. The fabric is laid on fold. In order to match the checks and prevent the layers from moving, the operators would staple the fabric onto the bed. Later, these pins would break the knife and cause rash cutting.

- Cost
  - o The cost of each blade was Rs.750
  - o Nearly 4 blades were getting damaged on daily basis.
- Time
  - o The knife change process required 20 minutes
- Hazard

Fig: Use of staples on Ruizhou Machine Bed

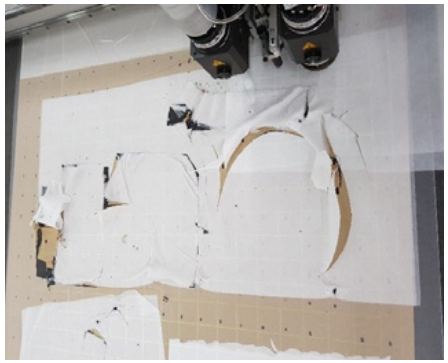


Fig: Rash Cutting

Solution

The magnetic property of the pins was used in order to remove all the pins from the bed before laying the next fabric. A powerful magnet provided to the machine operators who were trained to pick up all the pins from the bed using the magnet by just moving it across the bed once.

Fig: Pins picked using Magnet

Problem

The process of cutting collar and collar stand of checks garments manually was a very tedious process, the paper pattern had to be procured and cut using the rotary knife.

Fig: Block Cutting Collar

Fig: Print paper pattern

Fig: Rotary knife used to cut collar

Fig: Collar cut using rotary

Solution

The collar and collar stand were cut on the cutting machine by aligning the checks with the projection of patterns on the machine bed. This increased the output from 10 pieces per hour to 40 pieces per hour and reduced the man power requirement.

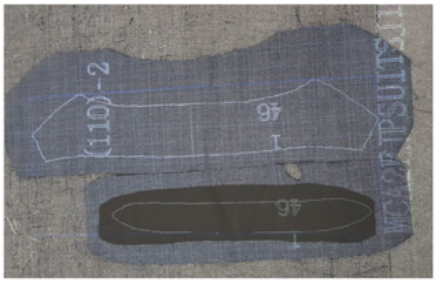


Fig: Matching checks with projection

Fig: Cutting Collar Components

Enhancing Productivity - Fusing Section

Problem

- Crowded workspace
- Parts Missing
- Low output
- No Standard Operating Procedure

Solution

To solve this problem, a rack and conveyor set up was added in front of the fusing machine.

- Conveyor: A longer conveyor was added in front of the fusing machine, so that operators could directly put the pieces onto the conveyor once the fusing and shell set up was ready.
- Panel over the conveyor: Panels were made of acrylic sheets to keep on top of the conveyor between railings. This increased the workspace for the operators.
- Angled rack: Two racks were placed back to back at a 120 angle. These racks were divided into 3 color coded columns and 4 rows. Each column was assigned to one operator.
- Job Reengineering: Each operator was assigned to work on specific panels. As they worked on the same panels repeatedly, their efficiency increased.

Fig: Fusing Machine Rack (Before)

Fig: Fusing Machine Rack (After)

Enhancing Productivity - Bundling Section

Problem

Track sheets were cut into 5 parts, namely, lining section, sleeve section, front section, collar section and back section using a rotary knife. This paper was then tagged with the respective part using a tagging machine. This time-consuming process created a bottle neck in the bundling section.

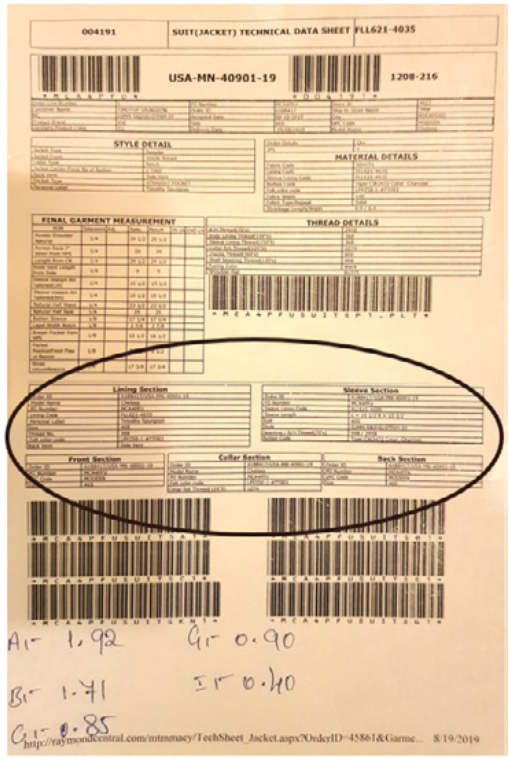


Fig:Tagging Process

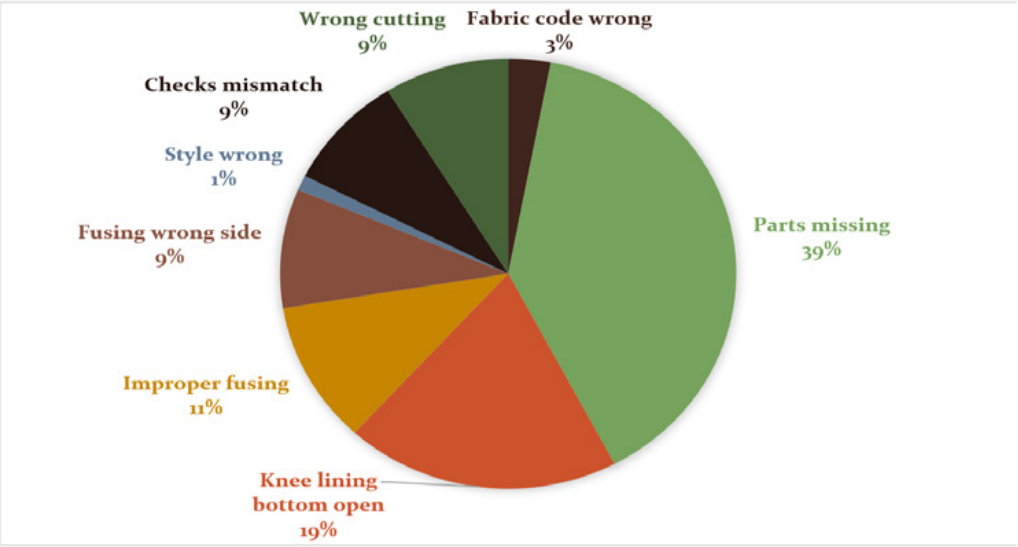
Solution

The tagging process was eliminated by a stickering process. Stickers were printed from the CAD department and provided to the cutting machine operators along the tracksheet who could attach the stickers while picking the part from the machine bed.

Fig: Stickering Process

Enhancing Productivity - Reducing Recutting

Reasons



Fabric Code Wrong

The number of orders with fabric code wrong reduced drastically after installation of the board with fabric codes (refer 2.1.) in the sub-store.

Parts Missing

PROBLEM
About 100 orders per day had at least one part missing which had to be recut. This required time, manpower (2 operators for recutting) and resources (300 meters shell fabric per month) to be spent on non-value-added activities.
Parts were most often missed at the cutting machine bed as the projection would be changed with the marker of the next order. This made it difficult to identify cut parts.

SOLUTION
All the parts of the garments were being stickered with the last 3 digits of the purchase order number before laying the polythene and cutting the fabric.

	Problem	Solution
Cutting Machine	Not picked	Improved visibility even after projection turned off
Fusing Machine	Mixed between bundles of same fabric	Bundling operator would know which bundle the part belonged to
	Small parts fall from conveyor	Fuse small parts nearer to fusing machine
Material Movement	Fall from bundle	Know which bundle to return to

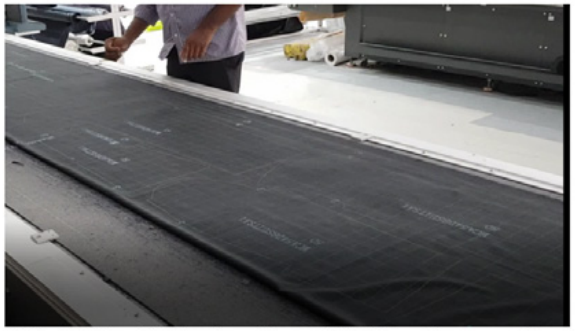


Fig: Before Stickering (Poor visibility of cut parts)

Fig: After Stickering

STYLE WRONG

PROBLEM
Three cutting machines did not have barcode scanners and operators would enter the purchase order number into the software manually. Occasionally, they would make a typing error which would result in the wrong marker being cut.

SOLUTION
In order to mistake proof, the process of opening the marker, all cutting machines were provided with barcode scanners.

Enhancing Productivity - Reducing Recutting

Fusing Wrong

PROBLEM
Numerous panels had to be recut due to fusing defects

SOLUTION
A board consisting of various fusible parts of a jacket and the placement of the fusing along with its type was displayed above every fusing machine. The display board was used to train new recruits and provided a reference to the operators.

Fig: Training Board for Fusing Operators

Knee Lining Bottom Open

PROBLEM
The knee lining fabric is given a finishing along the selvedge to prevent unravelling. To keep this finish intact, the bottom of the knee lining is not cut, the fabric is laid such that the fabric remains above the line to be cut. Sometimes the operators would negligently spread the knee lining such that the lower line of the knee lining would be cut on the fabric. This would result in the bottom of the knee lining unraveling. As a result of this, the knee lining would have to be recut.

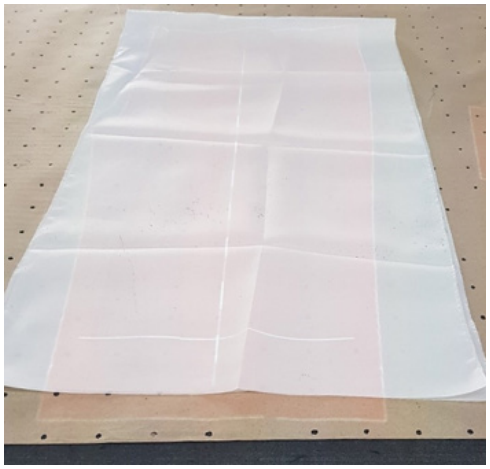


Fig: Spreading Knee Lining Fabric

SOLUTION
After a meeting with the pattern department, the bottom line was deleted from the knee lining pattern. This eliminated the knee lining bottom open problem.

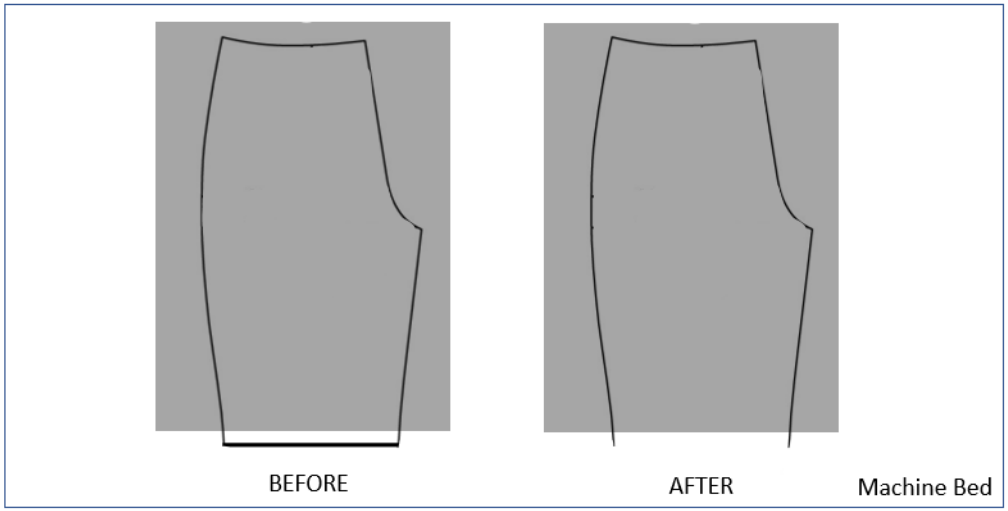
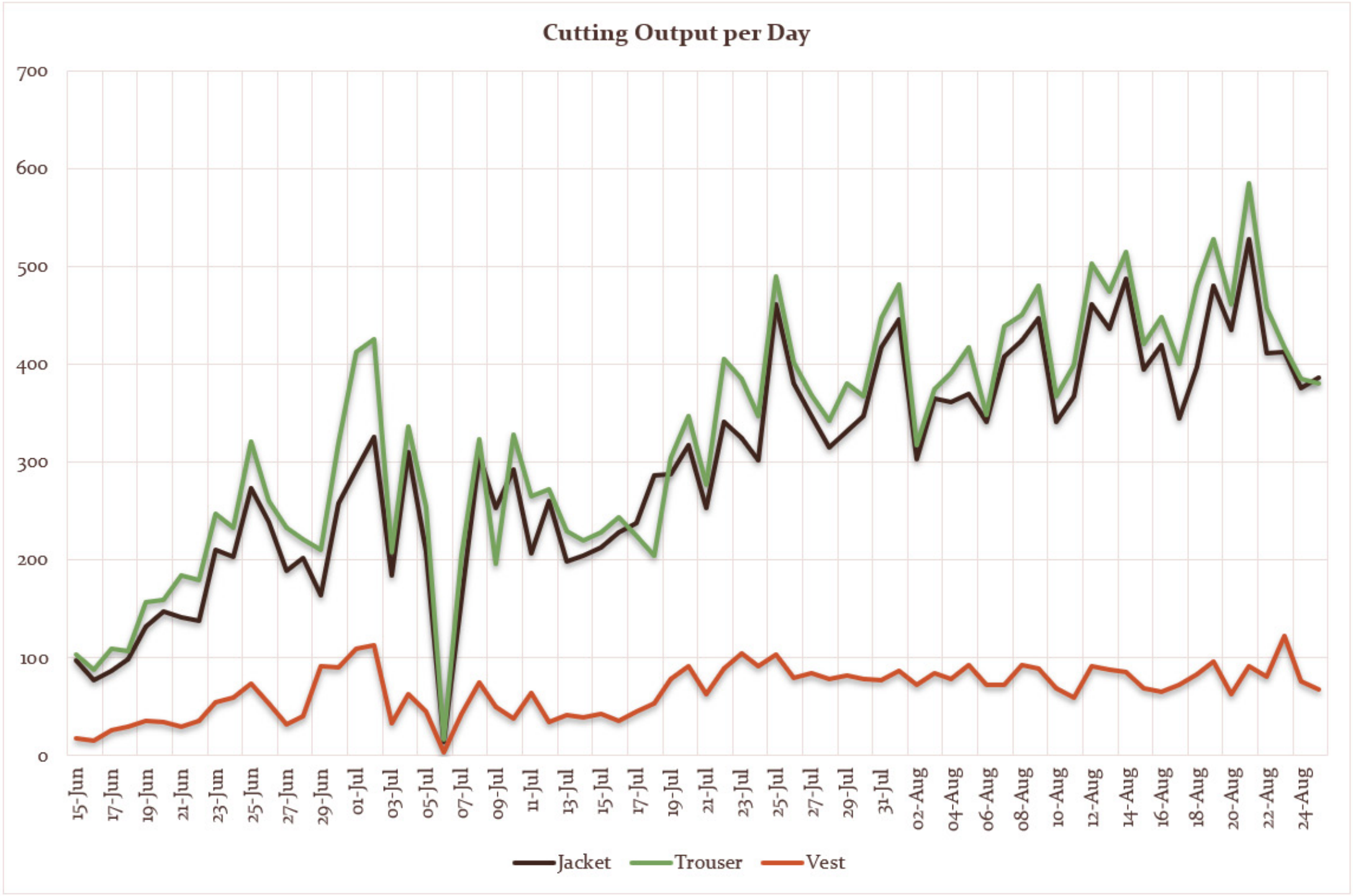
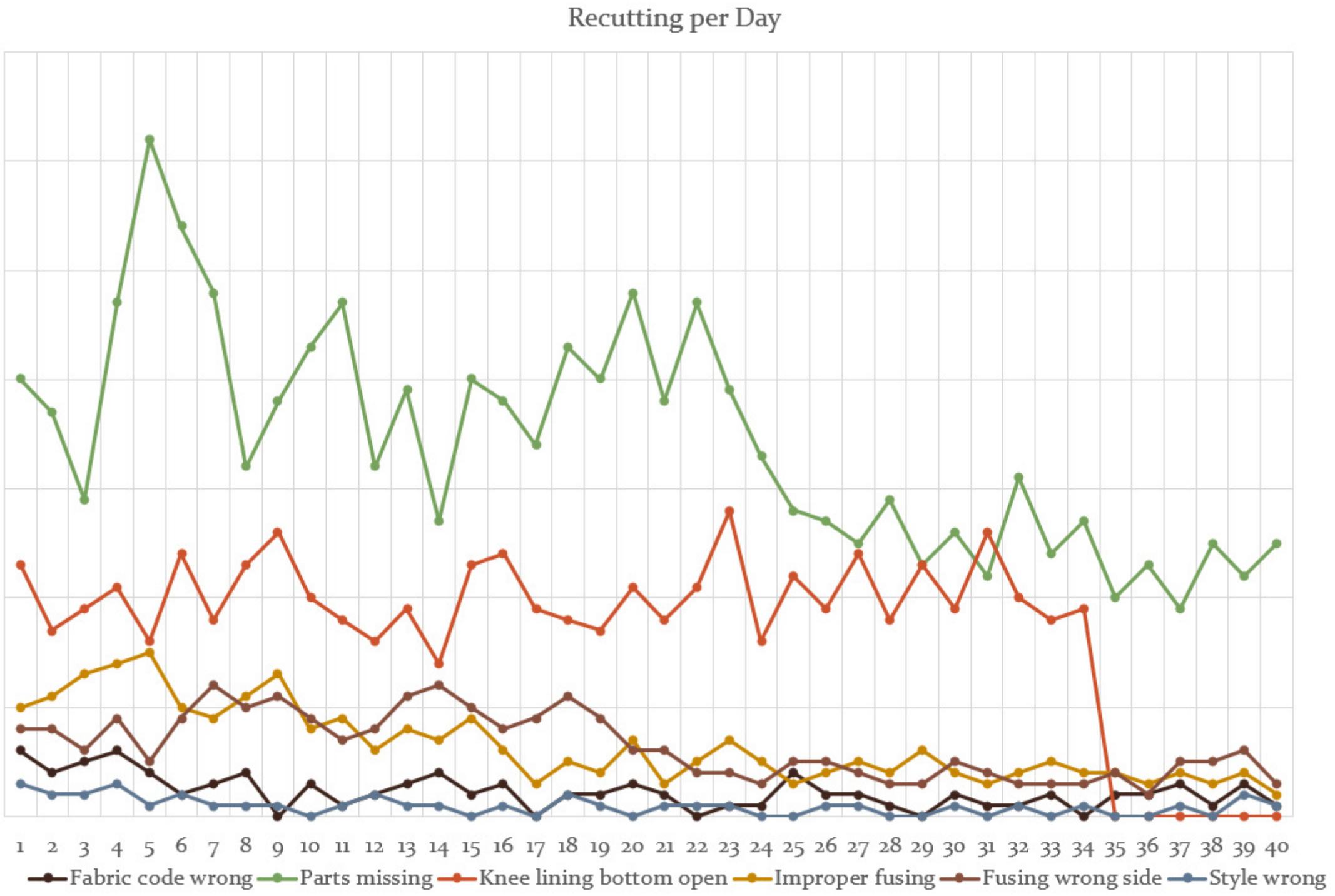


Fig: Modification in Knee Lining Pattern

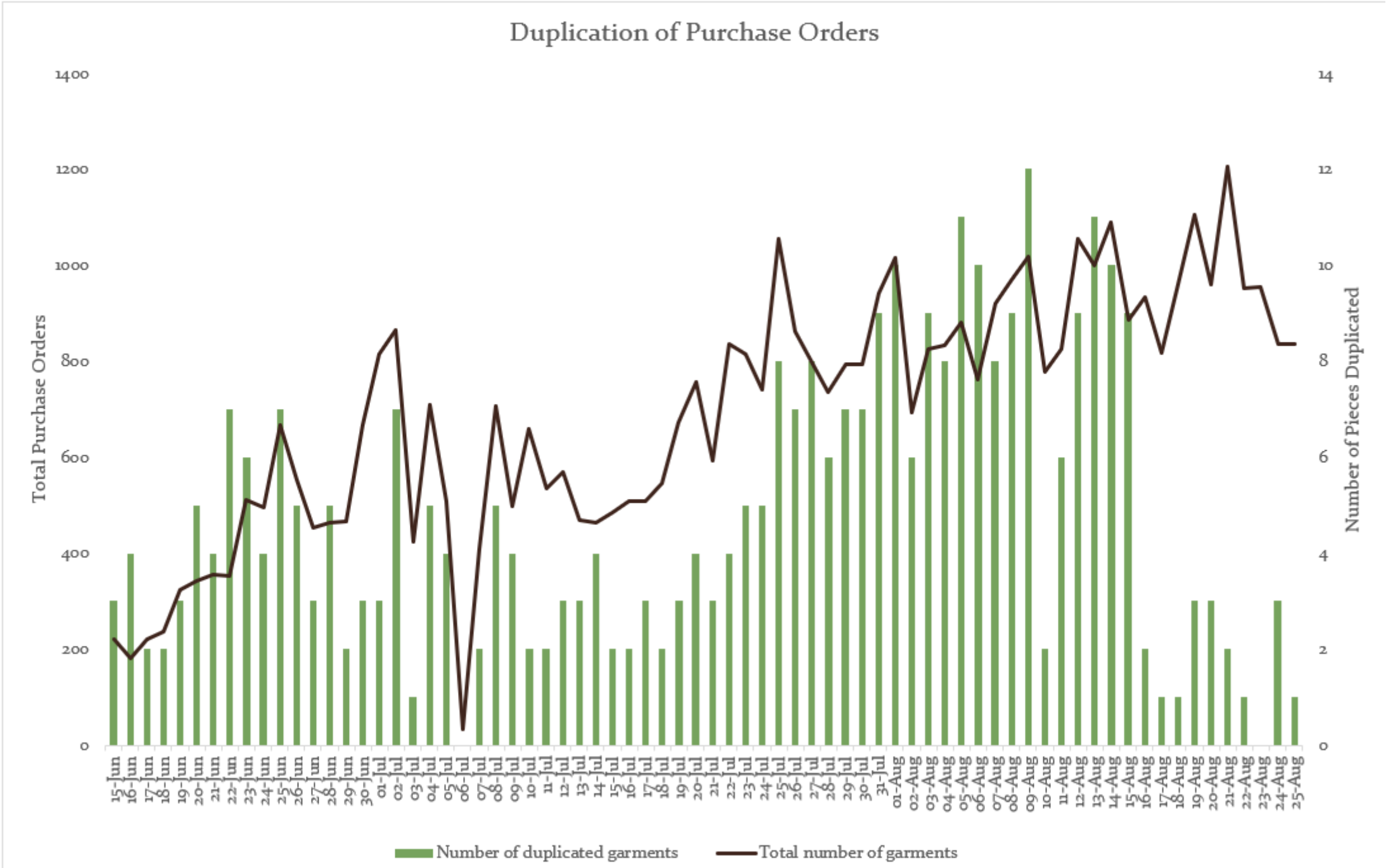
Result - 1.Output



Result - 2.Recutting



Result - 3.Duplication



Result - 4.Manpower

BEFORE
- Tagging: 4/shift
- Ready cutting: 3/shift
- Counting: 4/shift
- Cutter: 4 operators/shift

AFTER
- The tagging process was eliminated by using stickers to label parts on the cutting machine itself.
- The ready cutting of parts was reduced to only trouser facing and parts in which there was checks mismatch. The rest of the parts were cut at the cutter.
- The counting process at the bundling table was eliminated by giving responsibility to fusing operators for counting shell fabric & cutter operators for lining fabric.
- The number of operators on each cutter was reduced to 3 operators per machine from 4.

Result - 5.Cost

- Salary of Operators
    - Salary per month = 15 operators * 7000 Rs/per month = Rs. 1,05,000/mo
    - Savings per year = Rs. 12,60,000 /year
- Tagging
    - Tag guns & pins = Rs. 4000/mo
    - Savings per year = Rs. 48,000/year
- Cutting Machine Blade
    - Cost per knife = Rs. 750
    - Breakage per day = 3 times
    - Cost per month = Rs. 68,000/mo
    - Savings per year = Rs. 6,16,000 /year