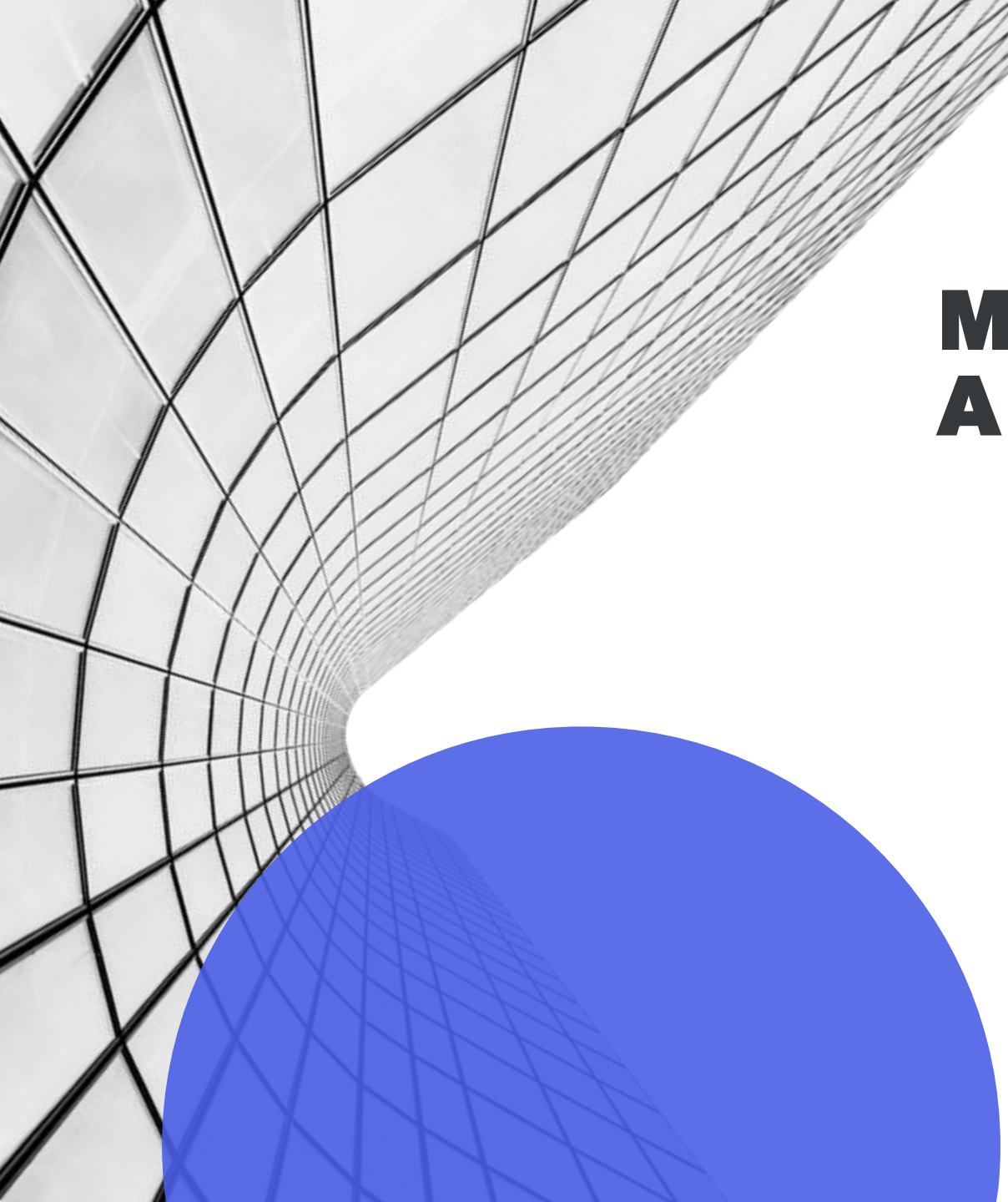
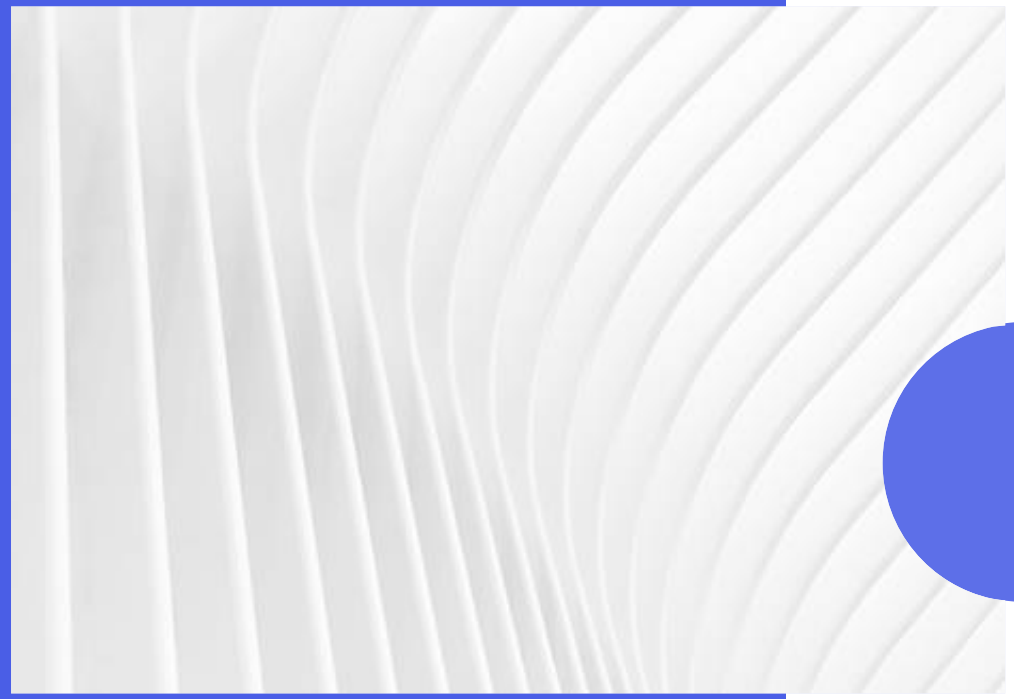


MANUFACTURING ANALYTICS

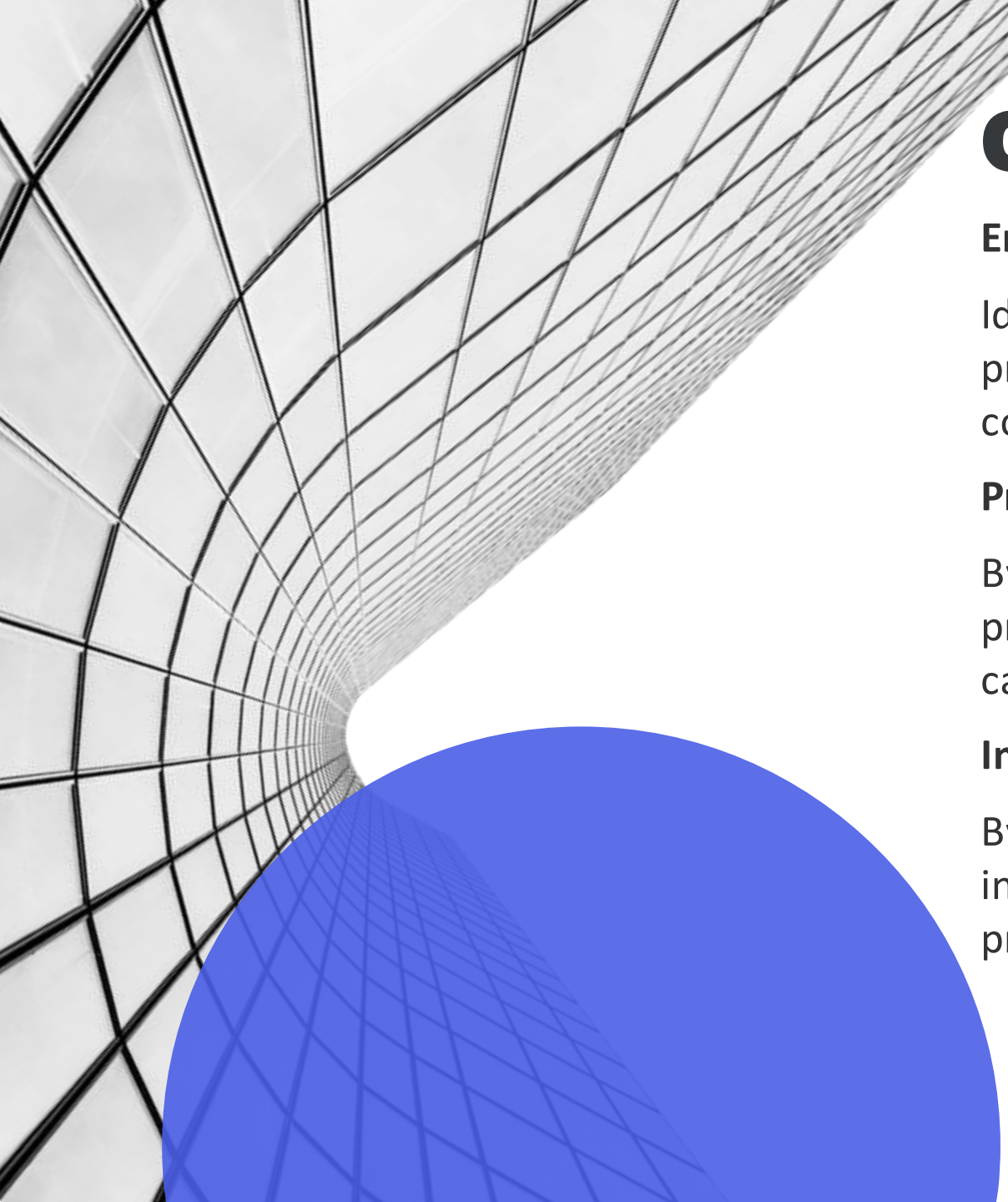
GROUP 5:

- ASUTOSH
- SAMVADANA
- UDHAYASRI
- PRASANNA

AGENDA



- OBJECTIVES
- LIST OF KPIS
- ANALYSIS
- KEY TAKEAWAYS



OBJECTIVES

Enhancing quality control:

Identifying trends and patterns in the manufacturing process, allows to detect quality issues and take corrective actions to avoid wastage.

Predictive maintenance:

By analyzing machine data, manufacturers can predict which equipment requires maintenance and can schedule it accordingly.

Improving operational efficiency:

By analyzing machine data, we can identify inefficiencies and bottlenecks in the manufacturing process to optimize production.

KPIs

1. Manufacturing quantity
2. Rejected quantity
3. Processed quantity
4. Wastage quantity
5. Employee wise Rejected quantity
6. Machine wise Rejected quantity
7. Production comparison trend
8. Manufactured vs Rejected
9. Department wise Manufactured vs Rejected

	Quantity
1. Manufactured	86725064
2. Rejected	524729
3. Processed	86200335
4. Wastage	38453237

```
1 SELECT sum(manufactured_qty) FROM PRODDATA;
```

sum(manufactured_qty)
86725064

```
1 SELECT sum(rejected_qty) FROM PRODDATA;
```

sum(rejected_qty)
524729

```
1 SELECT sum(manufactured_qty - rejected_qty) AS Processed_Quantity FROM PRODDATA;
2
```

Processed_Quantity
86200335

```
1 SELECT sum(produced_qty - processed_qty) AS Wastage_Quantity FROM PRODDATA;
2
```

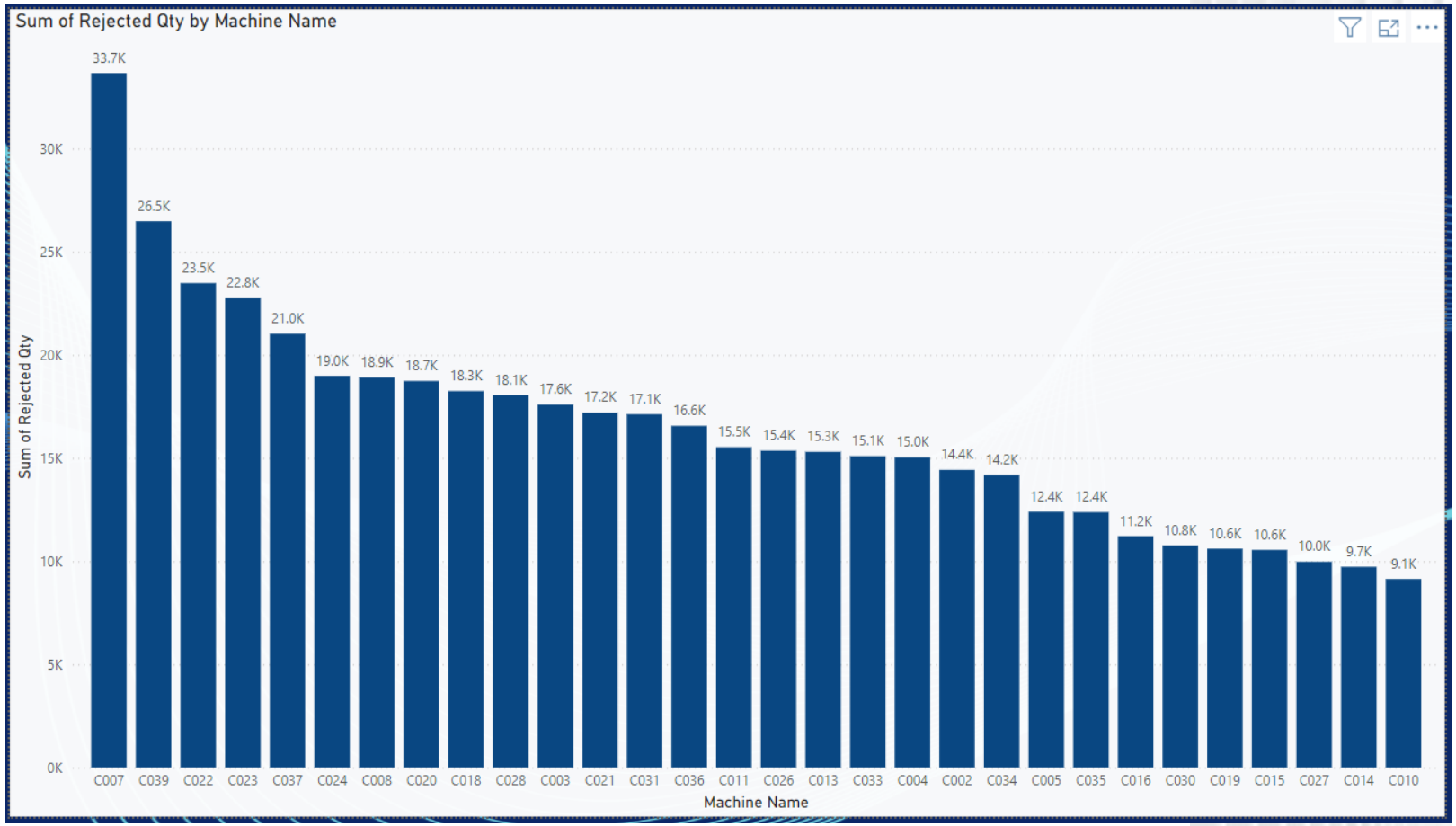
Wastage_Quantity
38453237

5. Employee wise Rejected quantity

- Out of Total rejected quantity of 52,4729, Shruti Singh has 520867 - which is exceptionally high
- Manager needs to investigate the reasoning behind it to reduce it.
- Appreciation should be sent to employees with lower rejections for motivation.

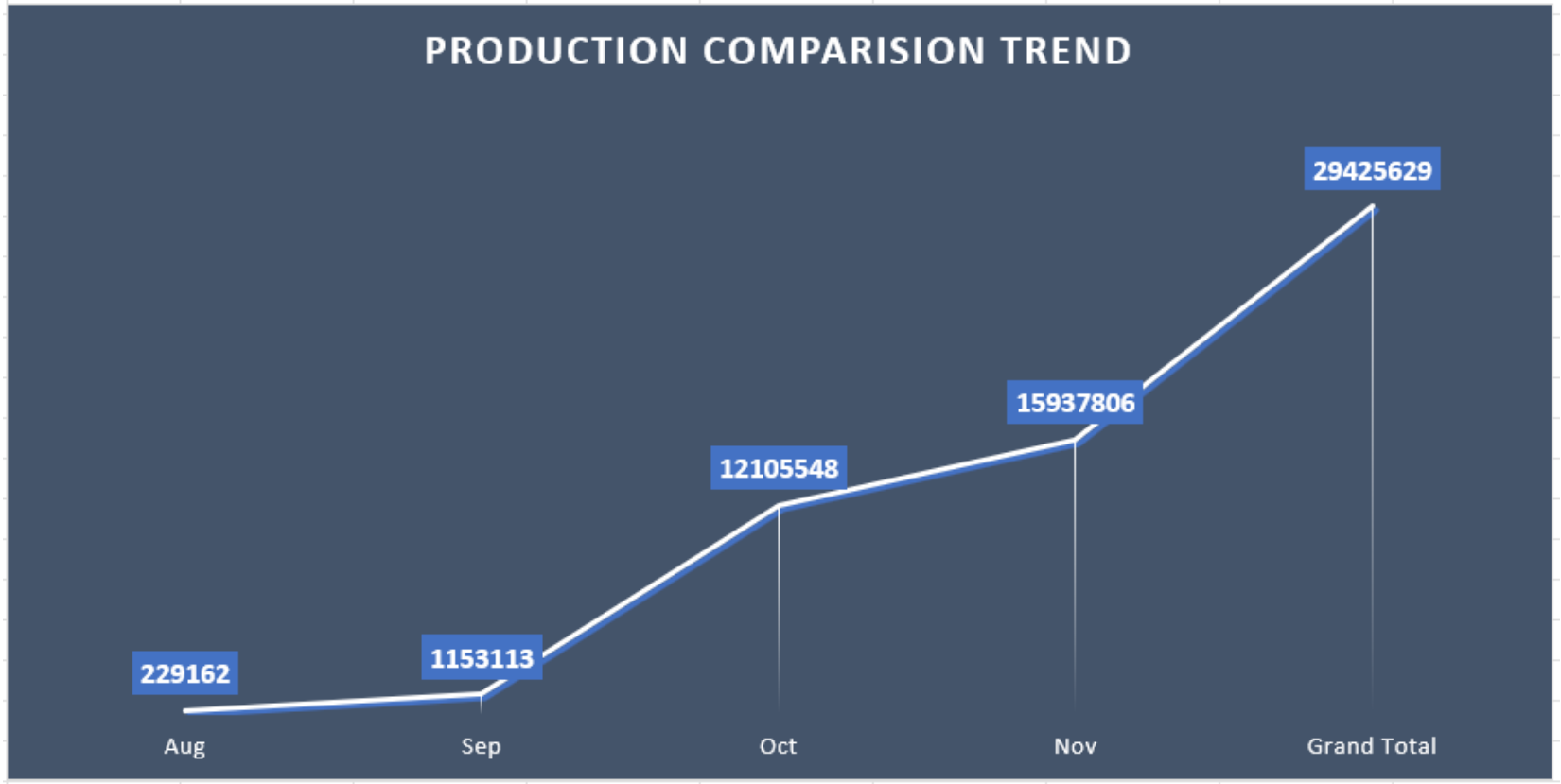
6. Machine wise Rejected quantity

- Performance of F1 machine is the best as it has the least amount of rejected quantity.
- The Performance of machines C007, C039, C022, C023, C037 needs to be evaluated as the rejected quantity is more than 20,000. Maintenance needs to be scheduled for these machines.



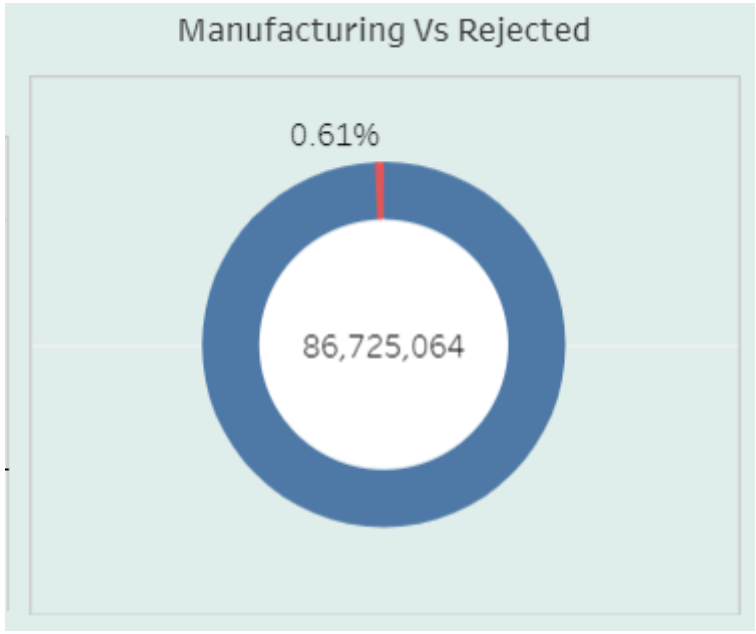
7. Production comparison trend

- There is an increasing trend in the production every month.
- This implies sales orders has been increasing



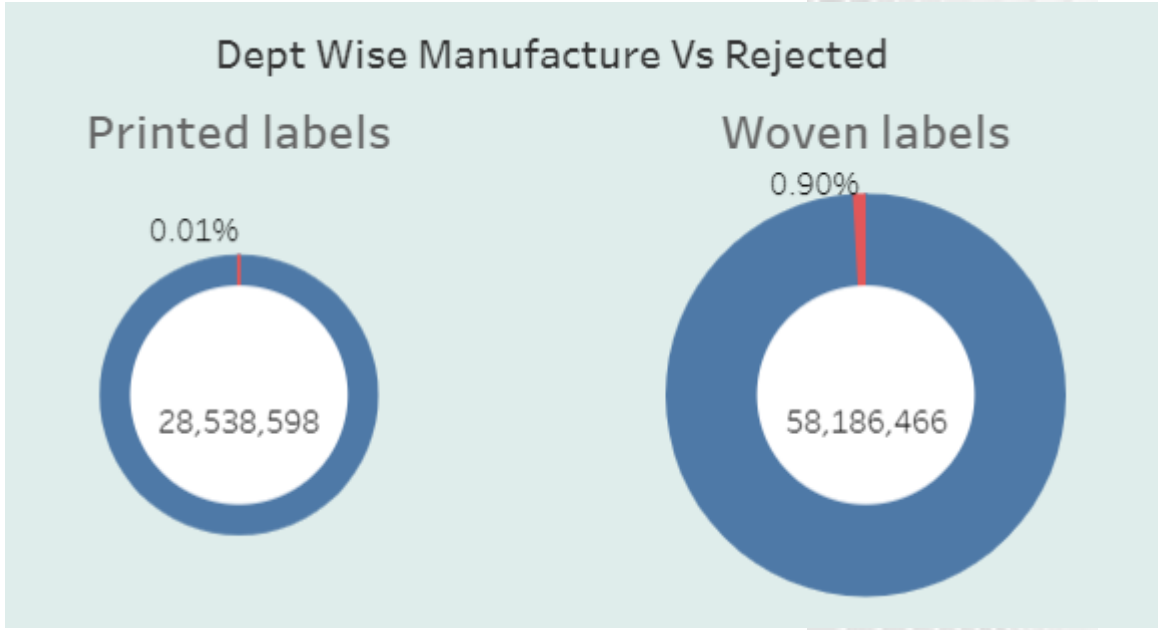
8. Manufactured vs Rejected

- Rejected quantity % is much lesser than manufactured quantity i.e. <1%
- By constant tracking, the rejected quantity % can be further lowered.



9. Department wise Manufactured vs Rejected

- Printed Label Department has lesser rejected quantity of 3221 as compared to Woven Label which is 5,21,508
- Woven Labels department needs to detect quality issues and take corrective actions.



KEY TAKEAWAYS

ROOT CAUSE ANALYSIS	QUALITY CONTROL	PROCESS OPTIMIZATION	TRAINING AND DEVELOPMENT	CROSS FUNCTIONAL COLLABORATION
Identify the primary causes of the high rejection rates. This might involve analyzing the production process, materials, machinery, and human factors	**Enhance quality control measures to reduce rejection rates. This could include more frequent inspections, improved testing protocols, and stricter quality standards**	**Optimize production processes to minimize defects. This may involve refining workflows, upgrading machinery, or implementing new technologies**	**Provide additional training for employees to ensure they are skilled in best practices and understand the importance of quality control.**	**Foster collaboration between different departments such as production, quality assurance, and supply chain to address quality issues comprehensively**

THANK YOU