



ISMAIL
INDUSTRIES
LIMITED

LEAN MANUFACTURING AND TRANSPORTATION WASTE IN ISMAIL INDUSTRIES

An Overview of Lean Practices and Logistics Efficiency

DATE:- 15TH JAN'25



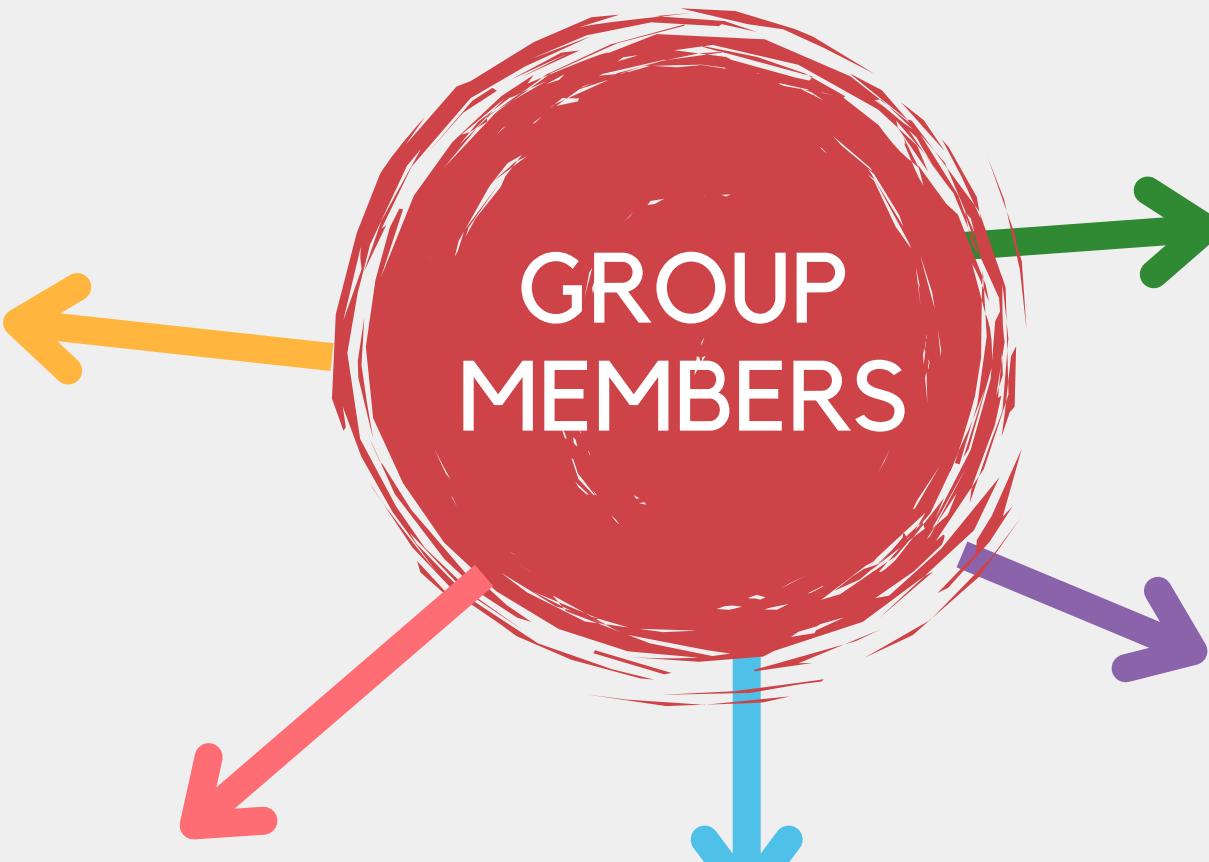
ISMAIL
INDUSTRIES
LIMITED

MEMBER'S NAME AND ID'S

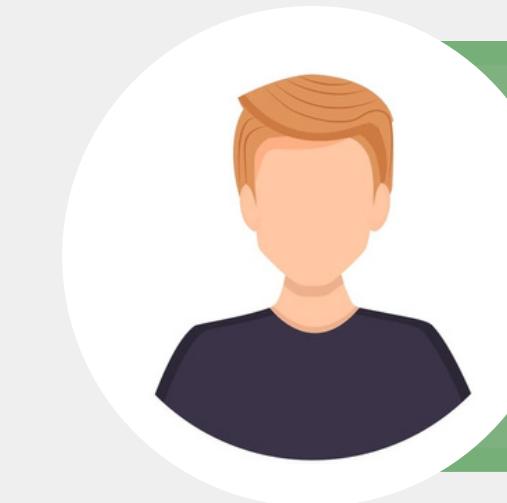
SABRINA
ARSHAD
59642



ZEESHAN
JALALANI
62952



ANEEQA
HAFEEZ
57798



SYED
MUHAMMAD
HUZAIFA
55971



USAMA
RIAZ
54517



LEAN MANUFACTURING AND TIMWOODS WASTE TYPES

CONTENT:

- **LEAN MANUFACTURING:**

A systematic approach to minimizing waste and optimizing processes to deliver maximum value to customers.

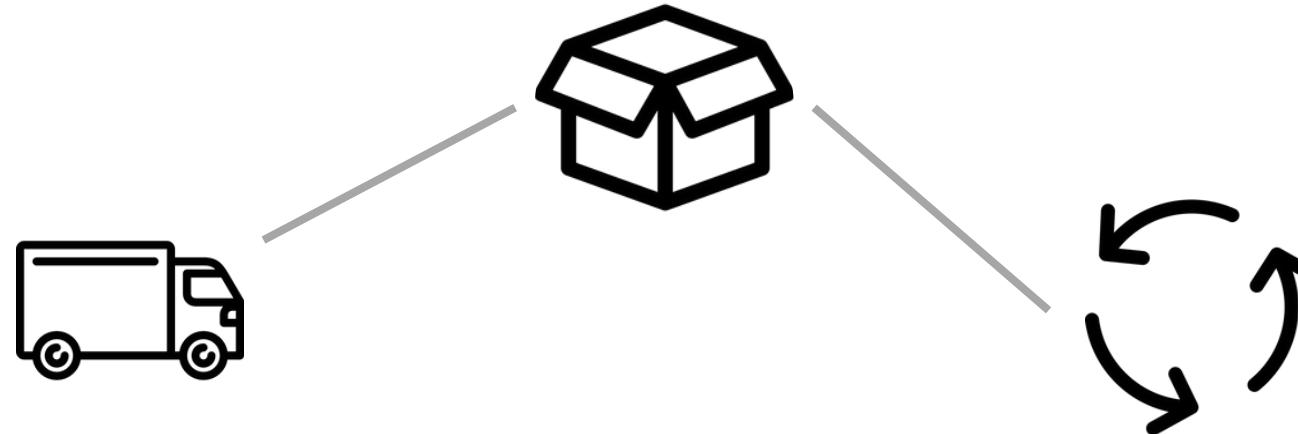
- a. Focus on efficiency, cost reduction, and quality improvement.
- b. Continuous improvement and optimizing workflows.



TIMWOOD (WASTE TYPES)

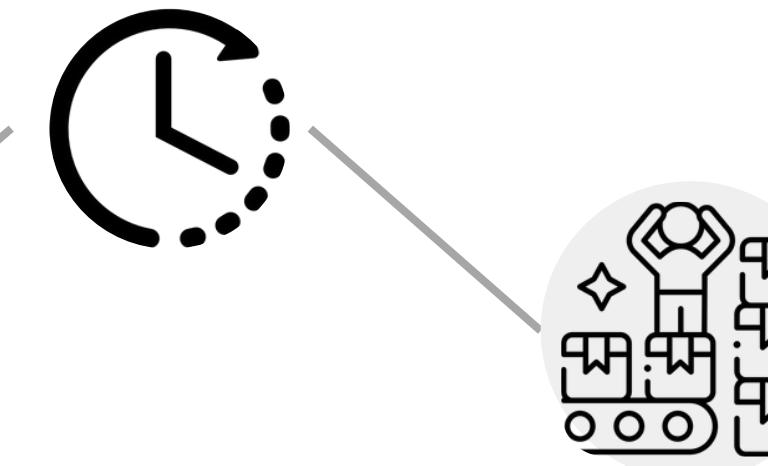
Inventory:

Excess stock beyond demand.



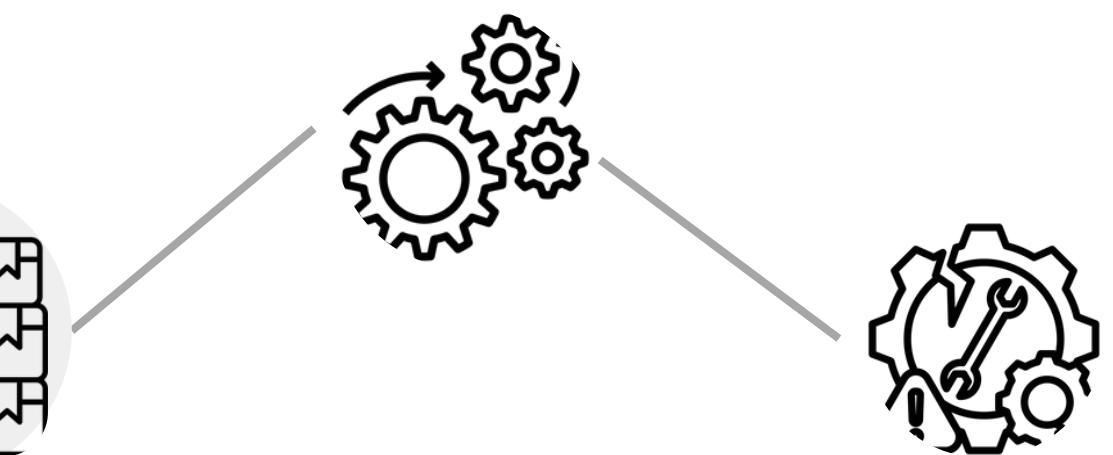
Waiting:

Idle time due to delays.



Overprocessing

Unnecessary steps/resources.



Transportation:

Unnecessary movement of materials,
products, or information..



Motion:

Unproductive movements by
workers/machinery.



Overproduction:

Producing more than needed.



Defects

Errors requiring rework/repair.





TRANSPORTATION WASTE IN LEAN MANUFACTURING

01 EXCESSIVE MOVEMENT OF RAW MATERIALS

Long distances due to poor layout.

02 UNNECESSARY TRANSFER OF FINISHED GOODS

Multiple moves between locations.

03 FREQUENT RELOCATION OF WIP

Shifting partially completed items repeatedly.

04 TRANSPORTING ITEMS FOR REWORK

Moving defective items back.

05 LONG TRAVEL DISTANCES

Inefficient facility layout..



TRANSPORTATION WASTE IN LEAN MANUFACTURING

CONT

06 OVERUSE OF
VEHICLES/EQUIPMENT

Increased wear and costs.

07 INEFFICIENT MOVEMENT OF
PACKAGING MATERIALS

Relocation instead of storing near production areas.

08 EXTERNAL TRANSFERS
OF INVENTORY

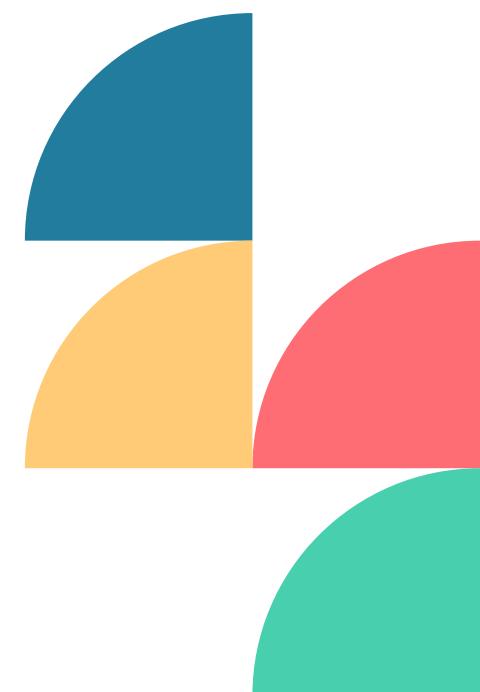
Off-site storage due to overproduction.

09 BATCH-BASED
TRANSPORT

Delays from moving full batches.

10 REPEATED HANDLING

Multiple unnecessary movements due to uncoordinated processes.

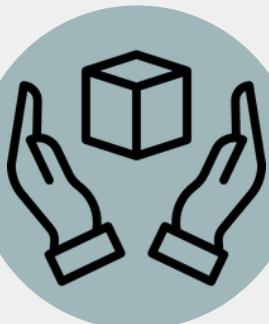




ISMAIL INDUSTRIES LTD. OVERVIEW



Founded: 1988, Karachi, Pakistan.



**Main
Products:**

Confectionery, biscuits, chips, flour, and more.



**Key
Brands:**

CandyLand, Bisconni, SnackCity, Astro Films.



Operations: Leading confectionery manufacturer and exporter in Pakistan.



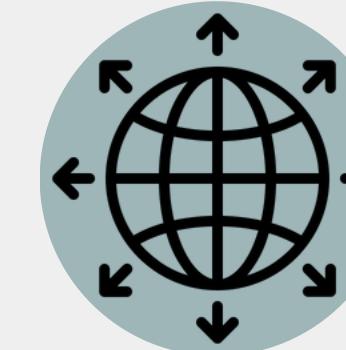
Sustainability

Focus on environmental, social, and governance (ESG) factors.



ISMAIL INDUSTRIES LTD. OVERVIEW

CONT.2



Expansion: Has diversified into packaging and plastic films via Astro Plastics



Certifications ISO 22000 (Food Safety), SANHA (Halal).

Total Assets Employed In 2024 4740

Gross sales:
121490 (2024)

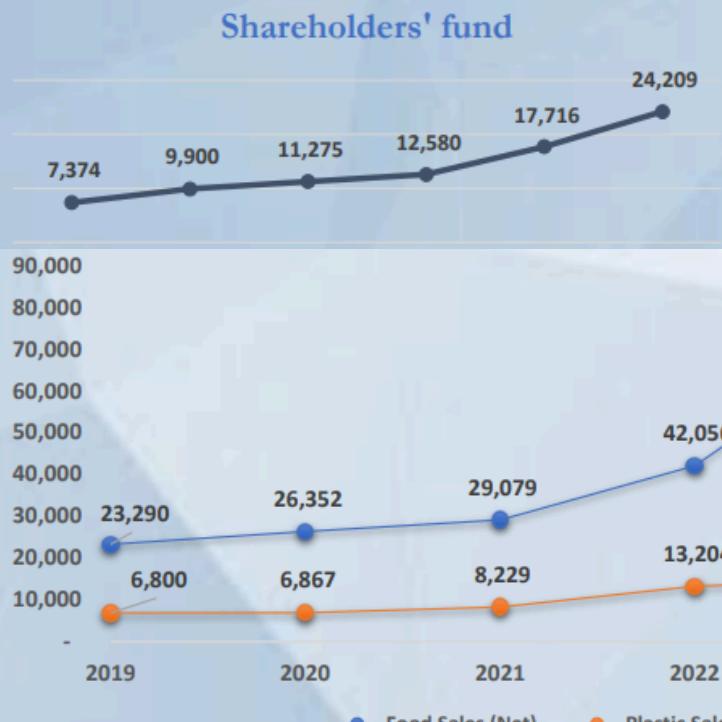
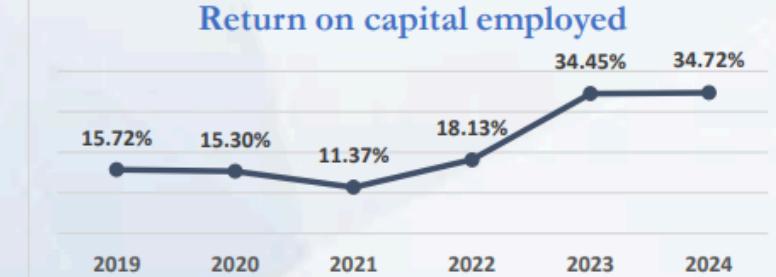
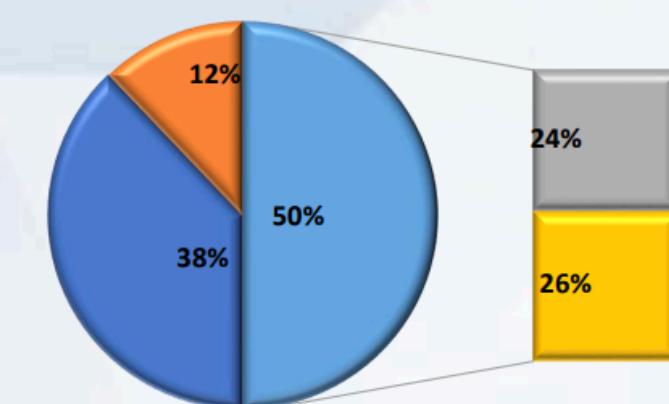
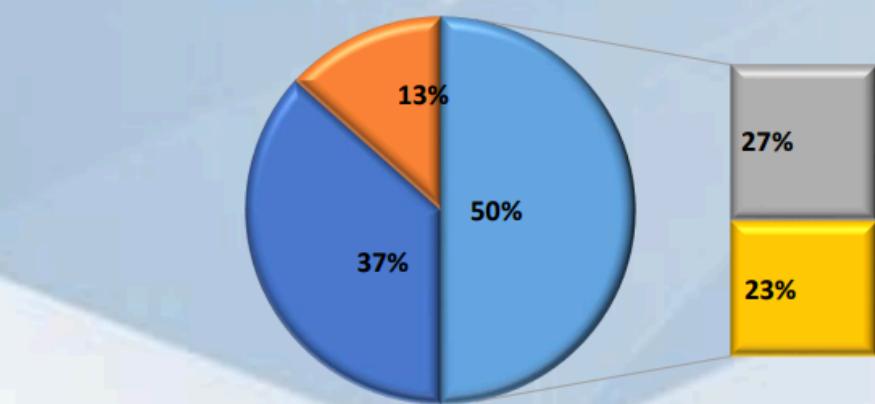
Total Assets Turnover Ratio 1.20 (2024)

Net Sales:
108887 (2024)

ISMAIL INDUSTRIES LTD. OVERVIEW

■ Total Liabilities ■ Total Equity ■ Current Assets ■ Non- Current Assets

■ Total Liabilities ■ Total Equity ■ Current Assets ■ Non- Current Assets



Financial Position 2024

Financial Position 2023



TRANSPORTATION PROCESS FLOW AT ISMAIL INDUSTRIES LTD.

CONTENT:

1. TRANSPORTATION PROCESS:

- Our transportation process begins with efficient loading management.
- We carefully calculate the space between trucks and packages.
- Containers must be fully utilized to avoid wasting space.
- Proper stacking patterns are ensured to prevent product damage.
- We achieve 97% container utilization by using strong master cartons.
- Transit trials are conducted to test the quality of packaging.
- Loading times are measured to ensure the process is fast and efficient.
- Transit times are tracked to estimate delivery durations accurately.
- We use vehicle trackers to monitor movement and ensure timely arrivals.
- Route planning and journey time calculations are done for every trip.
- After transit, products are unloaded quickly and distributed correctly.



KEY PERFORMANCE INDICATORS (KPIs) IN TRANSPORTATION

1

LOADING VEHICLES IN CONTAINERS:

Measure loading efficiency (e.g., 90 of 100 trucks loaded efficiently).

2

LOADING TIME:

Efficiency of loading process (e.g., 75% if the time was 45 minutes instead of 60 minutes).

3

TRANSIT TIME:

Timeliness of deliveries (e.g., 80% efficiency if the trip took 8 hours instead of 10).

TRACKER USE:

95% of vehicles equipped with GPS for real-time location tracking.

4

DELIVERY ACCURACY:

Percentage of successful, error-free deliveries (e.g., 98% accuracy).

5



KEY PERFORMANCE INDICATORS (KPIS) IN TRANSPORTATION

CONT

6

DAMAGE RATE:

Percentage of damaged goods during transit (e.g., 0.5%).

7

FUEL EFFICIENCY:

Distance per fuel unit (e.g., 10 km/liter).

8

ROUTE PLANNING EFFICIENCY:

Reduce travel time by 15%.

9

TRANSPORTATION COST:

Percentage of operational costs (e.g., 20%).

10

TRANSPORTER WASTAGE:

Waste of resources during transport (e.g., 10%).



KEY CHALLENGES ENCOUNTERED BY ISMAIL INDUSTRIES LTD.



ECONOMIC ISSUES:

- Supply chain disruptions (COVID-19 impact).
- Rising production costs due to imported raw materials and currency fluctuations.
- Energy shortages (electricity, gas, water).



FINANCIAL STRAIN:

- Increased finance costs from higher borrowing.
- High leverage ratio (70%) impacting financial flexibility.



MARKET COMPETITION:

- Intense competition from unbranded products.
- Price sensitivity in the consumer market.



STRATEGIC RESPONSES TO CHALLENGES AND MARKET EXPANSION

CONTENT:

1. INTERNATIONAL EXPANSION:

In June 2024, Ismail Industries announced plans to open a subsidiary in Abu Dhabi, UAE, to mitigate domestic challenges.

Economic Issues

- Diversify product portfolio to reduce reliance on specific markets.
- Focus on cost optimization by improving operational efficiency.

Financial Strain

- Secure low-interest loans or government subsidies for financial support.
- Implement strict budget controls and prioritize high ROI projects.

Market Competition

- Invest in innovation and R&D to differentiate products from competitors.
- Strengthen branding and marketing efforts to build customer loyalty.

BUSINESS PROPOSAL: ENHANCING LOGISTICS SECURITY FOR ISMAIL INDUSTRIES LTD.

OBJECTIVE:

Safeguard transportation of 3 million Cartons of goods worth 9 billion, in November, December, and January, cumulatively by establishing a robust Logistics Security Team In Punjab.

TEAM STRUCTURE:

Third-party security personnel
3 supervisors
15 Trained guards/ security providers

RESPONSIBILITIES:

Monitor routes, escort vehicles, collaborate with law enforcement, implement tracking systems.



COST ANALYSIS AND RETURN ON INVESTMENT (ROI)



ROI CALCULATION:

PERSONNEL COSTS:

- The Third-Party security company charges
- Supervisors:
 $3*150000*3(\text{months})=1350000$
- 15 trained guards:
 $15*60000*3(\text{months})=2700000$
- Total =4050000
- Cumulative fee for Fuel ,Vehicles, Devices and Specialized trainings and service =5490000

1. Estimated losses due to Theft: 0.5 % of the total value of goods in these 3 months.
2. Estimated reduction in losses/prevented thefts: 90%
3. Insurance covers approx.; 50 % of losses.
4. Net Prevented Losses (Savings): PKR 18,000,000.
5. Total Costs: PKR 9,540,000.
6. ROI: 88.7%.
7. Time to Recover Costs: Approximately 6.4 months.
8. Conclusion: With estimated losses due to theft being 0.5%, the ROI becomes positive at 88.7%, and the company will recover the costs of the logistics security team within 6.4 months. This investment appears financially viable in this scenario. This means meaning that for every PKR 1 spent on setting up the security team, the company would save PKR 0.887 in prevented losses.



CONCLUSION FOR LOGISTICS SECURITY PROPOSAL

CONCLUSION:

- ROI of 88.7% demonstrates strong financial and operational benefits.
- Significant risk reduction in theft and pilferage.

THANK YOU