

Lean Cheat Sheet – Solutions for 10 Common Manufacturing Problems

Quickly identify process problems, quantify the impact on your operations and select a lean solution to make a difference

PROCESS PROBLEMS

IMPACT

LEAN SOLUTIONS

RESULTS

1. DEFECTS & REWORK

Quality problems, failed inspections and offspec product requiring extra effort to correct the issues



- Excess Processing Costs
- Scrap Product Costs
- Low Productivity
- Inflated Cycle Time

Root Cause Analysis

Determine the source of defects and errors and design corrective actions

- Increase Product Quality by 5% to 20%
- Eliminate 80% to 100% of Rework Activities

2. PROCESS DOWNTIME

Non-productive time when the process is not operating due to reliability issues and equipment breakdowns



- Increased Costs
- Production Shortages
- Unplanned Maintenance Activities

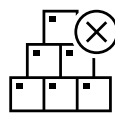
Pareto Analysis

Prioritize downtime causes and create action plans to reduce downtime

- Higher Production
- Increase Availability and Reduce Downtime by 5% to 30%

3. EXCESS INVENTORY

Large quantities of process inputs, work in progress or product inventory beyond customer demand needs



- Reduced Cash Flow
- High Storage Costs
- Risk of Product Damage
- Organization Challenges

Lean Material Flow

Using pull systems for efficient processing and ensure material availability

- Reduce inventory storage needs and improve cash flow by 10% to 30%

4. INVENTORY SHORTAGES

Frequently running out of process inputs or product shortages that negatively impact customer deliveries



- Increased Costs
- Production Shortages
- Dissatisfied Customers
- Production Delays

Kanban System

Inventory management system with automated min/max reorder points

- Eliminate stock outs
- Improve on time customer deliveries and customer satisfaction

5. COMPLEX CHANGEOVERS

Long process changeovers and equipment setups causing production delays and excess downtime



- Increased Costs
- Production Shortages
- Production Delays
- Scrap Product Losses

SMED Quick Changeover

Dramatically reduce equipment setup and process changeover time

- Increase Production
- Reduce equipment setup and changeover time by 40% to 80%

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6. PRODUCTION LOSSES

Production processes that experience poor process yield, speed losses or produce excessive scrap product



- Excess Processing Costs
- Scrap Product Costs
- Low Productivity
- Low Process Efficiency

OEE & The 6 Big Losses

Quantify the impact of production losses and create improvement actions

- Recover 5% to 20% of lost production costs
- Increase efficiency by 5% to 20%

7. OVERPRODUCTION

Producing more than what is needed to meet Customer demand, running extra production "just in case"



- High Product Inventory
- Inefficient Processes
- Excess Labour Costs
- Reduced Cash Flow

Takt Time & Cycle Time

Match production rates to customer demand rate for cost effective operation

- Increase production efficiency by 5% to 20%
- Reduce inventory storage requirements

8. LATE DELIVERIES

Production delays or supply chain breakdowns that result in late or delayed Customer deliveries or service



- Dissatisfied Customers
- Inflated Operating Costs
- Excess Labour Costs
- Extended Lead Times

Lean Material Flow

Create pull systems for efficient processing and material availability

- Decrease operating costs by 5% to 15%
- Reduce lead time for orders by 10% to 30%

9. RAPID GROWTH

Businesses that have grown faster than their processes, implementing technology solutions before process design



- Increased Costs
- Production Shortages
- Dissatisfied Customers
- Production Delays

Process Mapping

Create a Current State Process Map and identify actions to reduce waste

- Establish the foundation for sustainable growth
- Reduce operating costs by 10% to 25%

10. POOR PRODUCTIVITY

Employees that are busy but not effective, wasting time searching for tools, materials or production supplies



- Low Productivity
- High Operating Costs
- Production Delays
- Inflated Cycle Time

Time & Motion Studies

Track work activities to optimize the workflow and balance resources

- Increase productivity and efficiency
- Increase value added processing time



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