



# MAINTENANCE ENGINEERING AND MANAGEMENT IN MANUFACTURING INDUSTRY





# What is the Importance of Maintenance in the Manufacturing Industry?

- Ensures smooth operations
- Reduces emergency repair costs
- Improves workforce and machine efficiency
- Ensures compliance with safety standards



# WHAT ARE THE TYPES OF MAINTENANCE?

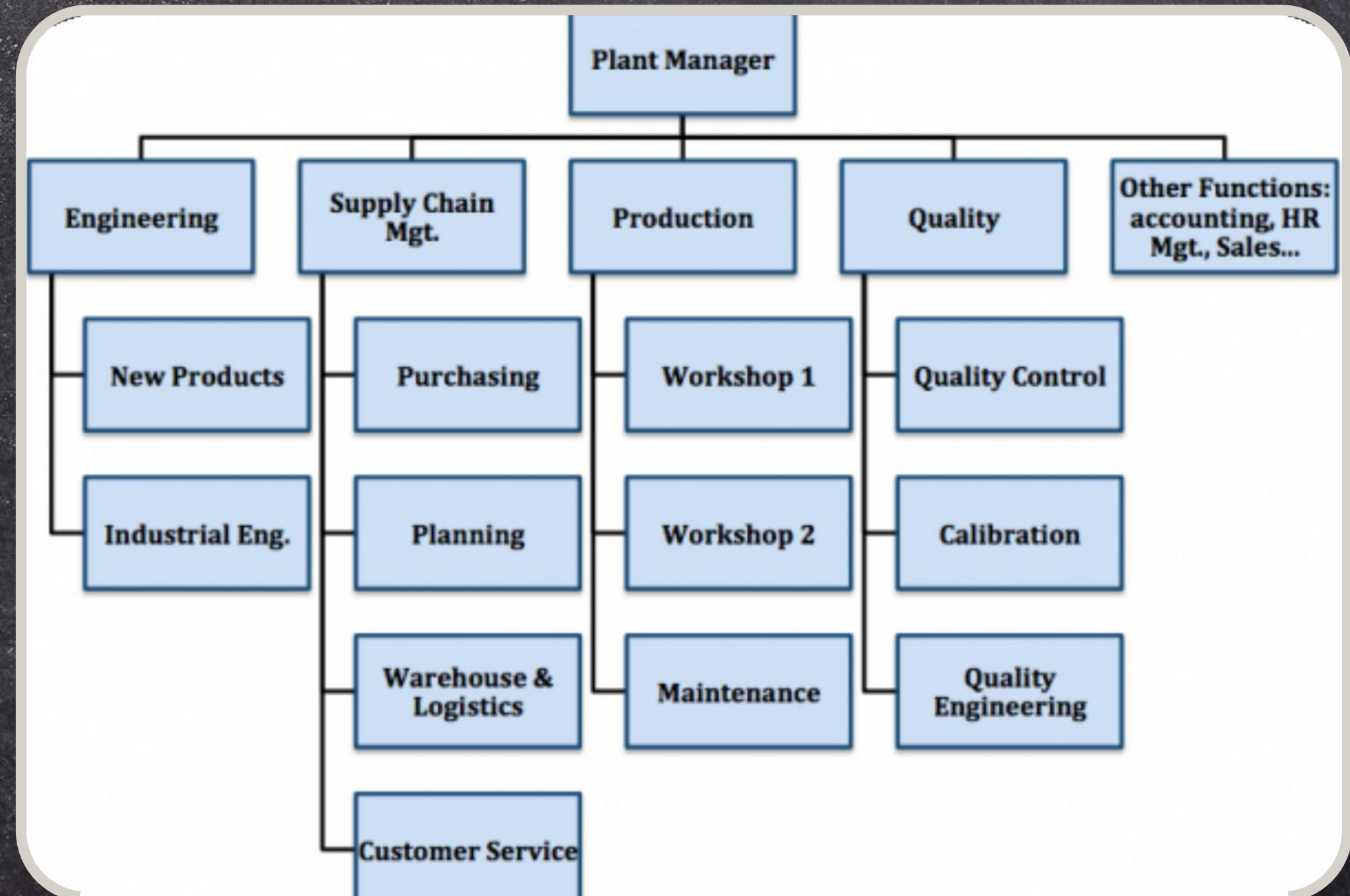
- Preventive Maintenance
- Predictive Maintenance
- Corrective Maintenance
- Breakdown Maintenance
- Total Productive Maintenance (TPM)





# Who is Responsible in Manufacturing & Maintenance?

- Production Manager
- Manufacturing Engineer
- Maintenance Engineer
- Quality Control Staff
- Supply Chain Manager
- Maintenance Technicians
- Machine Operators







# What is Computerized Maintenance Management System (CMMS)

- Automates Maintenance Tasks
- Improves Equipment Efficiency
- Real-Time Monitoring
- Enhances Compliance & Safety
- Used in Various Industries.



# WHAT is the Future of Maintenance Management in Manufacturing Industry?

- AI & Machine Learning
- IoT & Sensor
- Predictive & Preventive Maintenance
- CMMS (Cloud-Based)
- Automation & Robotics
- Digital Twin
- Big Data & Cloud Computing





# CNC Process in Manufacturing



1. Analysis meeting



2. Custom raw material



3. CNC program



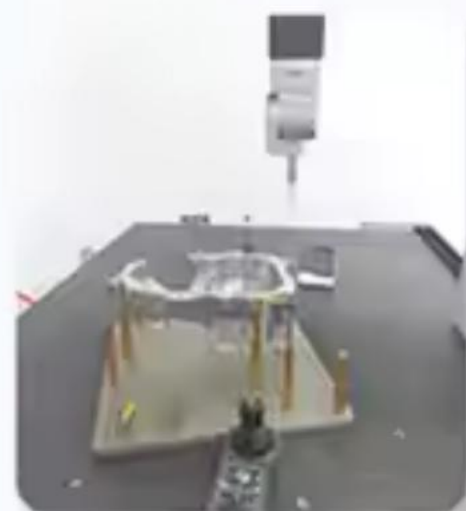
4. Cutting tools usage



5. Change tools automotive



6. CNC processing



7. CNC parts inspection



8. Surface treatment



9. Package



# Conclusion

- Efficient Maintenance
- Evolving Strategies
- Technology Integration
- Industrial Impact
- Future Ready

