

PEOPLE IN MANUFACTURING

REFERENCES

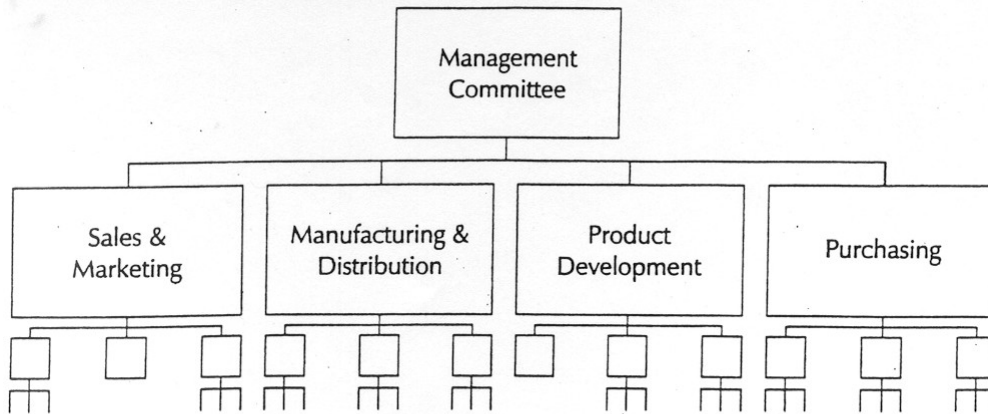
1. "The Practice of Management," by Peter Drucker, Harper and Row, New York, 1982.
2. "Fundamentals of Quality Control and Improvement," by Amitava Mitra, Prentice Hall, New Jersey, 1998.
3. "Applied Psychology in Personnel Management," by Wayne Cascio, 1991.

PEOPLE IN MANUFACTURING

1. Organization
2. Management
3. Supervisors
4. Workers

ORGANIZATIONAL STRUCTURE – FUNCTIONAL

A Functional View: Emphasis on Hierarchy

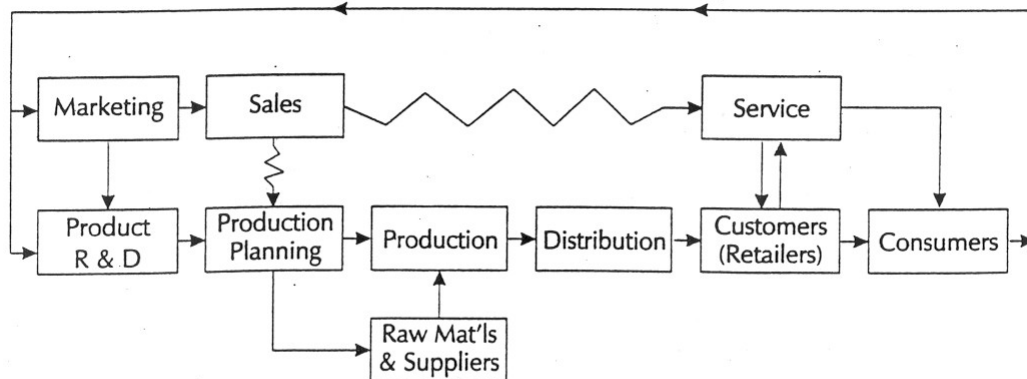


Characterized by:

- Responsibility defined by function of the department
- Communication within functional boundaries—up and down the hierarchy
- Tasks structured to achieve functional goals

ORGANIZATIONAL STRUCTURE – PRODUCT ORIENTED

A Systems View: Emphasis on Key Work Processes



Characterized by:

- Responsibility for process and results are cross-functional
- Communication across functional boundaries
- Tasks structured for collective efficiency and effectiveness

ORGANIZATIONAL STRUCTURES

- Functional
- Product
- Hybrid

DESIGNING ORGANIZATIONS

- 1.Objectives
 - a. Make Money
 - b. Stay in Business
 - c. Others
- 2.Define Functions
 - a. How to Achieve Objectives
- 3.Group Functions
- 4.Objectives of Functions
- 5.Job Descriptions
 - a. What Does Each Individual Do
- 6.Management Controls
 - a. Metrics or Measures of Performance

MANAGEMENT

- 1.Manage the Business
 - a. Know and Satisfy Objectives (Economic, etc.)
 - b. Manage the Company so it Satisfies Objectives
- 2.Manage Managers
 - a. Make a Productive Enterprise Out of People and Resources
- 3.Manage Workers and Work

Remember Time – Short and Long Term Views

DEMING'S COMPONENTS OF THE SYSTEM OF PROFOUND KNOWLEDGE

- 1.Knowledge of the system and the theory of optimization.
- 2.Knowledge of the theory of variation.
- 3.Exposure to the theory of knowledge.
- 4.Knowledge of psychology.

DEMING'S 14 POINTS FOR MANAGEMENT

1. Create and publish to all employees a statement of the aims and purposes of the company or other organization. The management must demonstrate constantly their commitment to this statement.
2. Learn the new philosophy, top management and everybody.
3. Understand the purpose for inspection, for improvement of processes and reduction of costs.
4. End the practice of awarding business on the basis of price tag alone.
5. Improve constantly and forever the system of production and service.
6. Institute training.
7. Teach and institute leadership.
8. Drive out fear. Create trust. Create a climate for innovation.
9. Optimize toward the aims and purposes of the company and the efforts of teams, groups, staff areas.
10. Eliminate exhortations for the workforce.
11. a) Eliminate numerical quotas for production. Instead, learn and institute methods for improvement.
b) Eliminate management by objectives. Instead, learn the capabilities of processes, and how to improve them.
12. Remove barriers that rob people of pride of workmanship.
13. Encourage education and self-improvement for everyone.
14. Take action to accomplish the transformation.

SEVEN DEADLY DISEASES

- 1.Lack of Constancy of Purpose
- 2.Emphasis on Short Term Profits
- 3.Evaluation of Performance, Merit Rating or Annual Review
- 4.Mobility of Top management
- 5.Running a Company on Visible Figures Alone
- 6.Excessive Medical Costs
- 7.Excessive Costs of Warranty

SOME OBSTACLES

- 1.Neglect of Long Range Planning
- 2.Counting on Technology to Solve Problems
- 3.Search for Examples
- 4.Our Problems are Different
- 5.Obsolescence in Technical/Business Schools
- 6.Reliance on Quality Control Departments
- 7.Blaming the Workforce
- 8.Quality by Inspection
- 9.False Starts
- 10.The Unmanned Computer
- 11.Meeting Specifications
- 12.Inadequate Testing of Prototypes
- 13.Help Can Only Come From Someone Who Understands All About Our Business

MANAGEMENT'S NEW JOB

Analytical Thinking

- Make Decisions Based on Facts/Data
- Collect Data
- Make Observations
- Take Measurements
- Quantify Characteristics of Processes
- Analyze Data
- Use Statistical Methods
- Chart Variation
- Understand Common/Special Causes

Leadership

- Coach/Mentor/Role Model
- Decision Making to the Lowest Level
- Two Way Communication
- Develop Pride of Workmanship
- Inverting the Pyramid
- Support the Worker
- Remove Barriers

All Employees Want to do the Best Job They Can

JOB ANALYSIS

Industrial Psychology

1. Review/Define Documentation

- a. Required Tasks

- b. KSAs (Knowledge/Skill/Ability)

2. Site Observation of Work

3. Interviews/Surveys of SMEs (Subject Matter Experts – Workers and Supervisors)

TASK LIST FOR
TOOLS AND PARTS ATTENDANT, WG-6904

1. Issues (locates, retrieves, dispenses, and returns) tools, parts and equipment requested by maintenance, construction and shop personnel using an electronic wand or computer keyboard.

For example: gathers items by visual recognition, by customer's direction, or by name - proper or slang; records information either by waving the wand over tool or part codes and encoded numbers on the employee's badge, or by manually entering the same information on the computer keyboard; searches likely locations for misplaced items; tests and tags electrical and pneumatic tooling before issue and also upon return.

2. Identifies/recommends tools and equipment based on customers' descriptions.

For example: understands which tools and parts are needed based on customers' descriptions; when requested items are out of stock, recommends substitutes that fit users' requirements.

3. Requisitions items by completing a requisition form (B chit) in order to replenish low inventory.

4. Stores items within the tool room according to accepted tool room methods, techniques, and procedures, following general storage plans.

For example: checks-in various tools, equipment by entering data via computer keyboard; places, arranges and rotates items in tool room.

5. Verifies (examines, counts, compares, reconciles) tool room inventory and documents in order to ensure adequate quantities and appropriate condition of supplies.

For example: compares counts and names of items on container labels of incoming tooling and matches this information with that shown on material route tag (MRT) or requisition form (B chit); matches specific item names, models, and tool control numbers or Central Tool Room (CTR) numbers with similar specific information at Tool Room bin locations; reviews on-hand inventory, and identifies shortages of same; responds to questions concerning availability of inventory.

6. Recognizes by visual inspection damaged tooling/equipment upon return, generates tool inquiry from the computer, and stamps the inquiry to indicate damage or loss.

7. Maintains, inspects, cleans, adjusts, and performs minor repairs on tools and equipment.

For example: visually inspects all tools for unsafe conditions and broken parts; inspects calibration stickers; changes abrasive wheels on grinders; greases and oils powered hand equipment.

8. Shuttles tools by truck from one tool room to another upon request of the customer; picks up and delivers tooling that is damaged or due-for-calibration to the calibration lab and back to the tool cribs.

9. Washes, cleans, assembles, and inspects safety equipment, such as various types of respirators and safety belts.

10. Receives new material from vendors coming into the tool control system, identifies material with a control number, and stores until needed; also receives cost class 68 items ordered by other shops and codes.

KNOWLEDGES, SKILLS AND ABILITIES LIST FOR
TOOLS AND PARTS ATTENDANT, WG-6904

- A. Knowledge of tool control operations (such as storage location and tagging systems); requisition, issue, and receipt procedures; tool inspection, inventory, and order procedures.
- B. Knowledge of the computerized Automated Tool Control System.
- C. Knowledge of the names, usage, condition, and maintenance of the basic hand tools, parts, and equipment used in the trades at this facility.
- D. Ability to use simple hand tools to make minor repairs or adjustments to materials and equipment.
- E. Ability to read and interpret material about issuing and storing of tools and equipment, such as tool room catalogs, inventory listings, issue and turn-in records, tool control numbers, manufacturers, specifications, stock catalogs, manuals, and bulletins.
- F. Ability to communicate orally with customers and co-workers with tact and courtesy.
- G. Ability to use automated equipment, such a bar code wand, computer keyboard, and electrical tool tester.
- H. Ability to work independently and without direct supervision.
- I. Knowledge of regulation and safety requirements associated with radiological materials.
- J. Ability to relate effectively to people from different trades and different organizational levels.
- K. Ability to adapt to working environments with different characteristics (e.g., clean vs. dirty, quiet vs. loud).
- L. Ability to stand, bend, and stoop up to 80% of the workday.
- M. Ability to lift up to forty (40) pounds.

Table 3
KSA Ratings for Tool and Parts Attendant

| KSAs (Abbreviated) | Weight | Necessity | | Level Needed | | Training Needed (Months) | | |
|---|--------|-----------|-----|--------------|-----|--------------------------|------|--------|
| | | Mean | SD | Mean | SD | Mean | SD | Median |
| A. K of toolroom procedures. | 11.0 | 3.00 | .00 | 3.00 | .00 | 10.50 | 3.00 | 12.0 |
| B. K of Automated Tool Control system. | 10.2 | 3.00 | .00 | 2.50 | .58 | 2.75 | 3.50 | 1.0 |
| C. K of tools used by tradesworkers. | 7.8 | 2.75 | .50 | 2.50 | .58 | 3.75 | 3.20 | 3.5 |
| D. A to use hand tools. | 3.1 | 1.75 | .50 | 2.25 | .50 | 3.50 | 2.89 | 3.5 |
| E. A to read and interpret materials. | 8.8 | 2.75 | .50 | 2.50 | .58 | 2.50 | 3.00 | 1.0 |
| F. A to communicate orally. | 8.1 | 2.50 | .58 | 2.50 | .58 | 4.75 | 5.50 | 3.5 |
| G. A to use automated equipment. | 7.5 | 2.33 | .58 | 2.67 | .58 | 2.67 | 2.89 | 1.0 |
| H. A to work independently. | 8.4 | 2.50 | .58 | 2.75 | .50 | 7.00 | 6.00 | 8.0 |
| I. K of safety regulations and requirements. | 4.8 | 2.50 | .58 | 2.50 | .58 | 3.25 | 3.20 | 3.5 |
| J. A to relate effectively to others. | 7.2 | 2.25 | .50 | 2.50 | .58 | 4.75 | 5.50 | 3.5 |
| K. A to adapt to different work environments. | 6.6 | 2.25 | .50 | 2.00 | .00 | 3.75 | 3.86 | 3.5 |
| L. A to stand, bend, and stoop. | 9.2 | 3.00 | .00 | 2.75 | .50 | 3.25 | 5.85 | 0.5 |
| M. A to lift (40) pounds. | 7.4 | 2.50 | .58 | 2.25 | .50 | 3.25 | 5.85 | 0.5 |