

# 3-Day How to Lay Out a Warehouse or Distribution Center

## Description

Everything you need to rearrange or plan new facilities, including a review and comparison of basic warehousing methods and equipment. This popular course teaches the step-by-step application of Systematic Layout Planning (SLP), recognized throughout the world as the most organized way to develop layout plans. Extensive case exercises assure your mastery of the SLP method.

Essential learning for those who are short on space, storing new or different items, performing new functions, or simply looking for productivity improvements. Also valuable when a new warehouse management system (WMS) will impact your methods and layout.

## Objectives

- To improve the performance of warehouses and distribution centers.
- To reduce material handling costs in storage and order picking.
- To improve space utilization.
- To provide for flexibility, adaptability and volume growth.

## Who Will Benefit

- Managers of Warehousing, Distribution and Logistics
- Warehouse supervisors and team leaders
- Industrial Engineers and systems analysts
- Handling engineers and equipment suppliers
- Implementation teams for Lean, JIT, Quick Response and Supply chain improvement

## Timing

Duration: 3 days  
(1- and 2-day versions also available)  
Start: 8:00  
AM Break: 10:30  
Lunch: 12:00 – 1:00  
PM Breaks: 2:15 & 3:45  
Adjourn Days 1 & 2: 5:00  
Adjourn Day 3: 4:30

## Course Outline

### Day One

#### A. WELCOME AND INTRODUCTION

- Typical approaches to storage and warehouse layout.
- Three fundamentals of layout planning.

#### B. CASE EXERCISE: LAYING OUT A NEW FACILITY

- A six-step simplified planning procedure.
- Relationship charts and diagrams.
- Hands-on, case exercise in warehouse layout.

#### C. SYSTEMATIC LAYOUT PLANNING (SLP)

- The four phases of every layout project.
- Systematic planning procedures.
- Gathering and projecting key input data.

#### D. PROFILING AND INVENTORY ANALYSIS

- Activity and order profiles.
- Inventory profiles.
- Zoning and picking methods.
- Matching your methods to inventory levels and flows.
- Storage capacity calculations.

#### E. HANDLING & STORING EQUIPMENT

- Unit load handling and storage.
- Case and item picking and storage.
- Simple and complex equipment.

#### F. CASE EXERCISES IN METHODS SELECTION

- Layout by commodity, by activity, by customer, by storage mode...
- When to use each approach
- Factors affecting the grouping of materials.
- Defining activity-areas for planning.

### Day Two

#### A. CLASSICAL LAYOUTS AND FLOW PATTERNS

- Commodity, activity, and other storage zones.
- Basic flow patterns and their benefits.
- Charting your operations.
- Defining your activity areas.

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### Course Outline continued

#### Day Two continued

##### B. FLOW-OF MATERIALS ANALYSIS

- Ways to measure and visualize material flow.
- The quantified flow diagram.
- Guided application in flow analysis.
- Combining flow and other-than-flow relationships.

##### C. ESTIMATING SPACE REQUIREMENTS

- Five ways to establish space requirements.
- Short-range and longer-range projections.
- Case exercises in estimating space requirements.
- Balancing space required to space available.

##### D. FACILITIES PLANNING ISSUES

- Adjusting for physical features of the facility.
- The impact of utilities, lighting, HVAC, and other specialized requirements.
- Rack and aisle orientations.

##### E. CASE EXERCISE IN WAREHOUSE LAYOUT AND MATERIALS HANDLING

- Team exercise to improve an existing layout.
- Rearrange to reduce material handling effort.
- How to select the best overall layout.

##### F. CASE EXERCISE CONTINUES

- Layout considerations other than material flow.

#### Day Three

##### A. EVALUATION OF ALTERNATIVE PLANS

- Costs and intangibles.
- How to select the best overall layout.

##### B. DETAILED LAYOUTS

- Rack storage areas.
- Shelving arrangements and slotting.
- Dock areas.
- Application of SLP to equipment layout.

##### C. CASE PROBLEM IN DISTRIBUTION CENTER PLANNING

- Application of techniques from Days 1 and 2 to a distribution center expansion.
- Organizing the project.
- Developing a preliminary arrangement
- Integrating storage and handling methods.

##### D. CASE PROBLEM CONTINUES

- Improving the preliminary plan.
- Responding to changing and unforeseen requirements.

##### E. ORGANIZING YOUR LAYOUT PROJECT

- Recap of phases, steps, and planning documents.
- Working forms and templates for your next project.
- What top management wants to know.