

## 4-Day Planning Manufacturing Cells – with guidance to teams

### Description

A learn-as-you-do experience in Systematic Planning of Manufacturing Cells (SPMC). This workshop is designed for companies that wish to plan a cell during the workshop. Several case exercises are removed from our 2-day workshop and extra time is provided for up to three teams (15 to 20 people, maximum) to apply their learning immediately on actual company situations. Up to three different cells may be planned concurrently. These must be selected in advance and key input data about each must be collected before the workshop.

This course requires the active sponsorship of a plant manager or director of manufacturing. Plant management must be available on Day Four to review the teams' proposals.

Those not ready or interested in this approach will benefit from our standard 2-day course, which includes several case exercises.

### Objectives

- To reduce flow time, work-in-process, and material handling cost.
- To improve the planning and performance of manufacturing cells.
- To guide up to three cell planning teams in preparation of preliminary plans during the workshop.

### Who Will Benefit

- Cell and lean manufacturing teams, including cell operators themselves
- Manufacturing and process engineers
- Industrial Engineers and systems analysts
- Production supervisors and team leaders

### Timing

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

### Course Outline

#### Day One

##### A. WELCOME & INTRODUCTION

- Manufacturing cells defined.
- Foundation for lean manufacturing.
- Real-world benefits of successful cells.
- What risks and difficulties can be expected?

##### B. A SHORT-FORM, SIMPLIFIED APPROACH FOR PLANNING SMALL CELLS

- Three fundamentals of cell-planning projects.
- Six-step approach to cell planning and implementation.

##### C. CASE EXERCISE IN PLANNING A SMALL CELL

- Team exercise using the six-step approach.

##### D. HOW TO PLAN MANUFACTURING CELLS

- Typical approaches to cell planning.
- Systematic Planning of Manufacturing Cells (SPMC).
- The four phases of cell planning.
- Pattern of procedures for cell planning.

##### E. PHASE I CELL PLANNING TECHNIQUES

- Documenting the planning environment.
- Location and Orientation worksheet.
- Organizing the cell-planning project(s).
- Planning issues and priorities.

##### F. TEAM TIME – PHASE I PLANNING

- Teams organize and set up their actual cell planning projects, applying tools from the previous session.

#### Day Two

##### A. QUESTIONS AND REVIEW

##### B. HOW TO ANALYZE AND CLASSIFY PARTS

- Gathering and analyzing input data.
- How to classify parts.
- Summarizing and communicating parts classifications.

##### C. TEAM TIME – ANALYSIS OF PARTS

- Teams classify parts and materials for their actual cell planning projects, using tools from the previous session.

## 4-day Planning Manufacturing Cells – with guidance to teams

### Course Outline continued

#### Day Two continued

##### D. HOW TO ANALYZE CELL PROCESSES

- Process charting and visualization.
- Process improvement; eliminating waste.
- Determining work content and processing times.

##### E. ESTABLISHING CAPACITY, BALANCE & FLOW

- Equipment requirements and utilization.
- Analyzing flow through the cell.
- Line balancing.
- How to prepare a Cell Flow Diagram.

##### F. TEAM TIME – ANALYSIS OF CELL PROCESSES

- Teams analyze processes and equipment, using charting methods and forms from preceding sessions.

#### Day Three

##### A. QUESTIONS AND REVIEW

##### B. TEAM TIME – CELL FLOW DIAGRAM

- Teams make Cell Flow Diagrams, then identify and define supporting services required.

##### C. COUPLING PARTS AND PROCESS INTO AN EFFECTIVE CELL

- Layout and physical arrangement of the cell – basic choices.
- Material handling within the cell.
- Team exercise: Coupling the physical, procedural, and people aspects of a cell into a preliminary cell plan.
- Apply a comprehensive 160-point checklist and worksheet for cell planning.

##### D. MODIFYING, SELECTING & ACCEPTING CELL PLANS

- Modify and refine the preliminary overall plan.
- Selecting the most-preferred plan.
- What management wants to know before approving cell plans.

##### E. TEAM TIME – DEVELOPING A CELL PLAN

- Teams develop preliminary cell plans using alternative flow patterns, handling methods, and the checklist provided.

##### F. TEAM TIME CONTINUES

- Preliminary planning continues.

#### Day Four

##### A. DETAILED PLANS AND IMPLEMENTATION

- Principles of workplace design.
- Tie-in with lean manufacturing and other plant-wide programs.
- 60-point checklist for detailed design and implementation.
- Changes to expect: Physical, Procedural, and Personnel-related.
- The human element in planning.

##### B. TEAM TIME – ALTERNATIVE OVERALL PLANS

- Teams prepare alternative cell plans.

##### C. TEAM TIME CONTINUES

- Development of alternatives continues.

##### D. TEAM TIME CONTINUES

- Teams evaluate their alternative plans and prepare their presentations.

##### E. MANAGEMENT PRESENTATION OF ACTUAL CELL PLANS

Teams present their preliminary cell plans to plant management. Open issues are reviewed and next steps defined.

Note: Plans developed in this workshop will still need detailed planning. Effort remaining will vary with the amount of work accomplished, the nature of the cell(s) being planned, and the number of additional people needing to be involved.

##### EXTENSIVE REFERENCE MATERIALS AND TEXT

Your 120-page course manual includes detailed checklists and Working Forms for immediate application. In addition to your course manual, you will also receive *Planning Manufacturing Cells*, by Lee Hales and Bruce Andersen. This 270-page text provides complete documentation of the SPMC methodology. Dozens of illustrations show cell planning in action.