

Group :  
Line / Cell :

Site / Plant :

Project :  
Project Leader :

## Phase 4 : Application & Line Design

Invalidated

Non Formalized

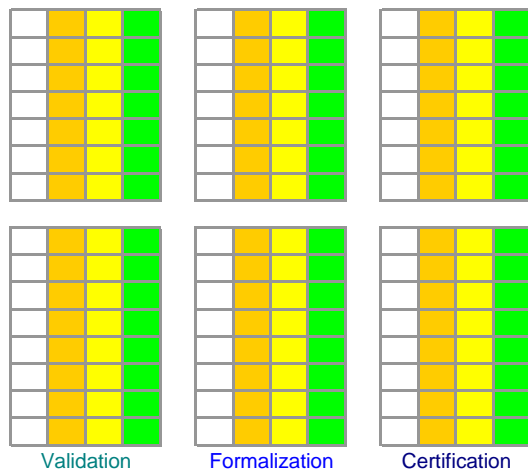
Non Certified



### 8 Mixed-Model Line Design Calculations

- 8.1 Calculations Completed for Each Process
- 8.2 Sum of Demands at Capacity
- 8.3 Takt Time :
  - 8.3.1 Effective Work Hours are Defined
  - 8.3.2 Effective Work Hours are Visually Verified
  - 8.3.3 Number of Shifts by Process are Defined
- 8.4 Average Time Weighted
- 8.5 Resources :
  - 8.5.1 Number of People
  - 8.5.2 Number of Operations
  - 8.5.3 Number of Machines
  - 8.5.4 Number of Pieces in One Machine
- 8.6 Range of Actual Work Content Times Noted
- 8.7 Impact of Setup Times Evaluated (as Necessary) :
  - 8.7.1 Matrix of Setup Times Defined (If Variable Product to Product)
  - 8.7.2 Proper Dual Card Kanban Design Recovers Setups
  - 8.7.3 Number of Setups Possible Estimated
  - 8.7.4 Appropriate Sequencing Rules Defined
- 8.8 Data is Relevant and Up-To-Date

### 9 Family of Products Definition



- 9.1 Product Families Defined to Lines Sharing Similar Requirements :
  - 9.1.1 Processes
  - 9.1.2 Work Content and Total Times
  - 9.1.3 Facilities and Equipment
  - 9.1.4 Setups
  - 9.1.5 Material Presentation
  - 9.1.6 Yields
- 9.2 Effective Efforts Defining Commonalities as well as Differences
- 9.3 Opportunities to Increase Mixed Modeling Exploited :
  - 9.3.1 Increased Response Capability
  - 9.3.2 Maximum Utilization of Common Resources
  - 9.3.3 Reduction in Complexity of Kanban Management
  - 9.3.4 Improved Employee Flexibility between Processes
  - 9.3.5 Further Reductions In Space
  - 9.3.6 Increase in Aggregate Capacity - Common Process Utilization
  - 9.3.7 Improvement of Recovery Capacity, Planned Maintenance
  - 9.3.8 Specialization Decisions are Supported by Data Analysis