Production Operations Transition-To-Lean Roadmap

**Entry**

**Phase 0: Adopt Lean Paradigm**
- Build vision
- Establish need
- Foster lean learning
- Make the commitment
- Obtain Sr. Mgmt. buy-in

**Phase 1: Prepare**
- Integrate with Enterprise Level
- Establish an Operations Lean Implementation Team(s)
- Develop implementation strategy
- Develop a plan to address workforce changes
- Address Site Specific Cultural Issues
- Train key people
- Establish target objectives (metrics)

**Phase 2: Define Value**
- Select initial implementation scope
- Define customer
- Define value - Quality, Schedule, and Target Cost

**Phase 3: Identify Value Stream**
- Record current state value stream
- Chart product and information flow
- Chart operator movement
- Chart tool movement
- Collect baseline data

**Phase 4: Design Production System**
- Develop a future state value stream map
- Identify takt time requirements
- Review make/buy decisions
- Plan new layout
- Integrate suppliers
- Design visual control system
- Estimate and justify costs
- Plan TPM system

**Phase 5: Implement Flow**
- Standardize operations
- Mistake proof processes
- Achieve process control
- Implement TPM
- Implement self-inspection
- Eliminate/reduce waste
- Cross train workforce
- Reduce set-up times
- Implement cell layout
- Implement visual controls

**Phase 6: Implement Total System Pull**
- Select appropriate production system control mechanism
- Strive for single item flow
- Level and balance production flow
- Link with suppliers
- Draw down inventories
- Reassign people
- Re-deploy/dispose assets

**Phase 7: Strive for Perfection**
- Team development
- Optimize quality
- Institutionalize 5S
- Institute Kaizen events
- Remove system barriers
- Expand TPM
- Evaluate against target metrics
- Evaluate progress using lean maturity matrices

**Supply Chain/External Environment**
- Legal
- Environmental
- Financial
- Information
- Procurement
- Engineering
- Quality
- Safety
- Mgmt. buy-in
- Commitment
- Learning
- Paradigm

**Enterprise / Production System Interface**
- Government Req'd. Systems (MMAS, EVMS, etc.)
- Training and Human Resources
- Workforce/Management Partnership
- Environmental
- Legal

**Production System Transition**
- Plan TPM
- Estimate and design visual
- Integrate
- Plan new layout
- Review
- Identify takt time
- Develop a future system
- Justify costs
- Control system
- Suppliers
- Decisions
- Make/buy
- Requirements
- Stream map
- State value
- System control
- Operations
- Inspection
- Controls
- Layout
- Times
- Workforce
- Reduce waste
- Dispose assets

**System Pull**
- Re-deploy/
- Dispose assets