

Diagnostic Questions: Do production lines, including major processes and subprocesses, have a common rhythm?
 Have both late deliveries and overproduction been eliminated?
 Products are designed with several mutually exclusive methods of production in mind.
 Production design and planning is done with the cost plan in mind.

Level 1 Plan	Level 2 Pilot	Level 3 Deploy	Level 4 Integrate	Level 5 Excel
<ul style="list-style-type: none"> ▪ Production is laid out using tried and true methods, only the part numbers change. ▪ Production Engineering is not distinguished from Design Engineering. ▪ QFD is not visible. ▪ Equipment design is done after product design 	<ul style="list-style-type: none"> ▪ Concurrent engineering is beginning to appear ▪ Standard schedule control system used, but link to business plan, and strategy rather weak ▪ Processes have own rhythm ▪ Product launch is smoother. ▪ Arrangements made to placate customers when deliveries are late 	<ul style="list-style-type: none"> ▪ Concept to cost equations are used from the first day of concept review. ▪ Learnings from earlier design/production cycles are feedback to the SOP of the process. ▪ Product introduction and execution is without major problems. 	<ul style="list-style-type: none"> ▪ Product variety is no longer an issue as production capability is completely integrated with process design. ▪ Production scheduled daily and integrated with CAD when necessary ▪ Production has clear relationship to business plan and strategy ▪ Overall lines have a common rhythm ▪ All deliveries are prompt ▪ MRP and DRP used as needed 	<ul style="list-style-type: none"> ▪ Production scheduled daily and is completely level ▪ Relation to business plan and strategy is strong ▪ Overall line has common rhythm ▪ No late deliveries