Diagnostic Questions:

Is a Product Development work process (phases, owners, inputs, outputs, deliverables) defined, communicated and utilized?

Is concurrent engineering used to involve customers, suppliers, manufacturers and other downstream design process players at the earliest (conceptual) stages of the process?

Are the individual design tasks and deliverables between tasks defined, understood and grouped optimally? (optimize series vs. parallel work, "batch" size of tasks, queues in critical work processes)

Are critical control points in the LMS System reflected in the PDT work process? (e.g, co-located cross functional teams, supplier integration, organizational structure (empowerment, accountability, compensation, reporting relationships), visual metrics, information technology, continual improvement)

Are revenue-generating improvements being made to the PDT process? Is the work process evaluated for identification and elimination of non-value added work on a continual basis?

Level 1 Plan	Level 2 Pilot	Level 3 Deploy	Level 4 Integrate	Level 5 Excel
▪ There is no formal development process in place and no information on how development tasks are to be done ▪ Development processes are complex and fraught with many delays ▪ Bureaucratic design or engineering departments are responsible for design and development ▪ Projects are completed through the application of common sense ▪ Engineers and specialists work through design process steps sequentially and toss design "over-the-wall" to manufacturing	▪ Development processes have been mapped and analyzed for non-value adding wastes that decrease quality and increase cost and lead time ▪ A reengineered development process is piloted on one or two new products; the first experimental cross-functional development teams are formed ▪ The design department still has major responsibility for new product development, but solicits input from other departments ▪ Customers and suppliers may or may not be members of design teams ▪ Reviews are ad hoc ▪ Team members attend review meetings but not all participate; business leaders rarely attend	▪ The new development process is formalized, and continuously reviewed to identify and eliminate delays and other forms of waste ▪ Multifunctional teams are used routinely for product development; most teams include customers and suppliers ▪ Manager of design department still controls the process ▪ Specific milestone activities force compliance with the formal development process ▪ Reviews are held on a regular basis but are not necessarily tied to a project plan ▪ Business leaders attend only if a crisis is pending ▪ Team members actively participate based on expertise	▪ The design process continues to be refined to improve quality, cost, and lead time ▪ Multifunctional teams are co-located physically or "virtually" through use of networked computers ▪ All development teams include suppliers and customers ▪ Project teams audit and measure compliance with the development process ▪ A database of lessons learned from previous projects is available and studied by the team ▪ Regular reviews are tied to a plan; business leaders actively participate to address risks ▪ Decisions are data-driven and customer focused	▪ Team managers are "heavyweights" who report directly to chief executive of the strategic business unit, not to department managers ▪ Technical and program reviews are fully integrated into the program schedule

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