

New Product Development Guide

Product/service innovation is the result of bringing to life new ways to solve customer problems that benefit both customers and the company. New product innovation is one of the major sources of growth and prosperity. It is also one of the more complex processes found in well run businesses. To bring innovative new products successfully to the marketplace is by its nature, broad and complex.

Below we present a guideline comprising the four key elements found in a world class new product development process. While some companies may not follow a deliberate element approach, the guide is useful in showing the range and complexity involved in successful new product introduction.

Project Management	
Leadership	<ul style="list-style-type: none"> <input type="checkbox"/> Project leader is responsible and accountable for project planning and execution within the fixed parameters of schedule, quality, functionality and both product and project cost issued at project start. <input type="checkbox"/> Project leader is technologically capable for project assigned.
Key Concepts	<ul style="list-style-type: none"> <input type="checkbox"/> Phase-gates are used to determine overall execution and management of all projects. <input type="checkbox"/> Phases, steps and tasks are defined with start, duration, effort by resource type, completion criteria and dependencies are standardized for various project categories. Critical resources are specifically identified. <input type="checkbox"/> A set of metrics are tracked and routinely updated to show original baseline, actual performance, and current forecast. Deviations from original baseline require an action plan for recovery. This set of tracked project metrics include: task schedule performance, first pass yield on key quality steps, project cost, production cost, and time to complete. <input type="checkbox"/> Tasks are defined with sufficient granularity to facilitate progress-to-plan measurement and early identification of obstacles to the plan's progress. <input type="checkbox"/> Outside suppliers and partners are full participants in the planning and execution of projects. <input type="checkbox"/> Product specification and features are driven by customer values.
Execution Approach	<ul style="list-style-type: none"> <input type="checkbox"/> Phase-gate reviews are required and determine if project will proceed into next phase. <input type="checkbox"/> Drumbeat project reviews are held with a defined governance structure and standard format that review: schedule performance, first pass yield, product cost, project costs, resourcing issues, and any recovery action. <input type="checkbox"/> Project leaders are given the authority that allow them to make many of the day to day decisions as well as guidelines which define what deviations to original plan require escalation to the governance board. <input type="checkbox"/> Project status, issues and Cycles of Learning (COL) are communicated within the entire team and all NPD process stakeholders. <input type="checkbox"/> Manufacturing and support processes are fully engaged in the project and their activities are synchronized with the project.

	<ul style="list-style-type: none"> ❑ Common goals and values drive the team members regardless of functional alignment.
Enabling Tools	<ul style="list-style-type: none"> ❑ Individual project plans are in place and track all required data on a routine and timely basis. ❑ Regular metrics reports which document key project baseline, actual and forecasted parameters including: project costs, product costs, schedule performance, and resource loading.

Process Management	
Leadership	<ul style="list-style-type: none"> ❑ Process Team leader is driving overall NPD process and sub-processes to entitlement with a cross-functional team focused on continuous process improvement. ❑ Standardized project plan elements, tools and metrics are defined and the responsibility of the NPD process team.
Key Concepts	<ul style="list-style-type: none"> ❑ NPD process cycle time, FPY, and productivity metrics have established entitlement goals and are used to track and drive continuous process improvement. ❑ Cycles of Learning are captured and used to routinely promote project learning. ❑ Individual project performance is aggregated for all projects and used to evaluate the health and performance of the NPD Process. ❑ Process policies, procedures and issues are communicated across all projects.
Execution Approach	<ul style="list-style-type: none"> ❑ Process representatives attend drumbeat project reviews to advise and ensure adherence to standardized policies and procedures. ❑ Discrepancies to plan are analyzed from a process perspective for root cause and process corrective action.
Enabling Tools	<ul style="list-style-type: none"> ❑ Process Metrics derived from multiple projects are used to drive continuous process improvement in cycle time, schedule performance, quality and productivity.

Portfolio & Pipeline Management	
Leadership	<ul style="list-style-type: none"> ❑ NPD Executive team is focused on aligning company strategy and new product development priorities and allocating resource capacity accordingly.
Key Concepts	<ul style="list-style-type: none"> ❑ Product portfolio management provides alignment of current and future projects with product/platform strategy and is used to optimize company performance. ❑ Pipeline management actively aligns product strategy with project priorities and allocates resources based on capacity. ❑ Product strategy is based on product line plans, overall platform strategies and appropriate technology roadmaps. ❑ Idea generation, business case development, and project start gates form a connected process with clear filters that synchronize product priorities and resource availability.

	<ul style="list-style-type: none"> ❑ “Voice of Customer” methodology is part of the requirements generation process.
Execution Approach	<ul style="list-style-type: none"> ❑ Integration of pipeline & product portfolio management optimizes company performance by setting the right priorities and aligning resources with those priorities at regular intervals. ❑ Use phase-gate approach to govern project from start through product launch.
Enabling Tools	<ul style="list-style-type: none"> ❑ Integration of project schedules, resource, and financial information for planned and actual projects is used in product life-cycle management.

Resource Management	
Leadership	<ul style="list-style-type: none"> ❑ Lead resource sponsors routinely schedule resources to align with project resource requirements based on project priorities developed by the NPD executive team.
Key Concepts	<ul style="list-style-type: none"> ❑ Resource utilization is planned at 80% to 100% for individuals and skill groups. ❑ Resource planning horizon is 18 months for both active and planned projects to facilitate capacity and capability planning of skill sets. ❑ Individual project resource needs are actively managed to match changing needs within a three-month window.

<p>Execution Approach</p>	<ul style="list-style-type: none"> ❑ Lead resource sponsors work closely with active and planned project plans to align their resources by name to task skill needs and timing constraints on a routine basis that maximize utilization of resources and minimize project disruptions aligned with defined project priorities. ❑ Resource needs are identified by skill and timing is extracted from active and planned project plans. ❑ Resource sponsors plan and track their resources by name to project, task, and schedule.
<p>Enabling Tools</p>	<ul style="list-style-type: none"> ❑ Database integrates project needs by skill and schedule for active and planned projects with each individual's skills and schedules.