New Product Commercialization Process

Automotive, Industrial and Electronic Assembly

DESCRIPTION
At LORD Corporation, we develop custom products by following a New Product Commercialization (NPC) process. Our NPC process involves five steps: Scoping, Proposition, Feasibility, Validation and Launch. Development projects vary in length from 6 months to 2 years, and convert ideas into commercialized products. Throughout the process, multiple customer engagements occur to ensure the final product meets the goals of LORD and the customer.

NEW PRODUCT COMMERCIALIZATION PROCESS

Scoping
- Problem statement
- Review known requirements
- Assess scope and risk

Proposition
- Customer facing event/CDR*
- Business case
- Technical approach

Feasibility
- Prototype development
- Prototype trials*
- Supply chain assessment

Validation
- Manufacturing scale-up
- Final Qualification Testing*
- Customer approval

Launch
- Commercial production
- Monitor manufacturing performance
- Lessons learned

EXPECTATIONS OF LORD
- Assign a cross-functional team* to manage the project
- Develop solutions that meet our customers needs
- Provide prototypes for testing and evaluation
- Support customer pre-production trials
- Commercialize product and provide ongoing customer service

EXPECTATIONS OF CUSTOMER
- Provide thorough product requirements
- Commit to purchase when requirements are met
- Assign a cross-functional team to manage the project
- Provide timely feedback and share test results on product prototypes and trials
- Provide volume and consumption forecasts

*Additional documents available
Roles & Responsibilities

CORE TEAM

ACCOUNT MANAGER
• Main customer contact
• Organizes customer interactions
• Manages sales account
• Establishes customer schedule, volumes, pricing, etc.

PROGRAM MANAGER
• Manages project execution
• Coordinates cross-functional project team for product development projects
• Owns NPC process

TECHNICAL LEAD/SCIENTIST
• Works with customer to determine wants/needs
• Determines technical approach
• Leads product development effort
• Collects physical property/performance data

TECHNICAL SERVICE
• Completes performance testing
• Generates technical data sheets
• Supports product line startup

SUPPORT TEAM

PROCESS ENGINEER
• Develops & validates manufacturing process
• Supports initial production batches

QUALITY ENGINEER
• Creates inspection plan for new products
• Monitors production during launch stage
• Establishes manufacturing capability
• Establishes preliminary/final manufacturing specifications

REGULATORY SPECIALIST
• Creates safety data sheets & labels
• Insures regulatory compliance
• Establishes need for certifications, registrations, etc.

MATERIAL PLANNING & SOURCING
• Sets up demand forecast for new products
• Establishes safety stock and re-order point guidelines for products

TECHNICAL MANAGER
• Manages technical resources

PRODUCT MANAGEMENT/MARKETING
• Product line strategy and road map
• Business development
• Understand market trends & customer needs
• Develops product literature/collateral
Customer Facing Events

DESCRIPTION
A Customer Facing Event (CFE) is an in person meeting between LORD personnel and the customer. LORD believes that open and ongoing communication is critical to successfully developing products that solve our customer’s problems.

It is important to have at least one Customer Facing Event at the beginning of a development project. Additional meetings throughout the life of the project are encouraged as well. These meetings are critical in building a relationship between LORD and the customer, and help maximize the information exchange between both parties.

CRITICAL DESIGN REVIEW
During at least one of the Customer Facing Events, LORD and the customer will perform a Critical Design Review (CDR). During this meeting, the LORD team will ask for input on wants and needs for product performance, properties, application and processing parameters, and pricing. Discussion should also include test methodology and potential risks associated with each one of these customer wants and needs.

ACHIEVING DESIRED OUTCOME
LORD will use the output from the Critical Design Review (CDR) to refine its technical approach and outline a development plan for the desired solution.

Working together with our customers to define wants and needs at the beginning of a new product development project, along with continued communication throughout the life of the project, ensures the most efficient development of custom products that meet the specific needs of our customers.

DISCUSSION CHECKLIST
- Identification of customer wants and needs
  - Performance
  - Properties
  - Application or processing needs
  - Desired price
- Technical feasibility
- Risk assessment or potential risks
- Test methods
- Additional success criteria

LORD ATTENDEES
- Product Developer
- Account Manager
- Program Manager
- Technology Manager

CUSTOMER ATTENDEES
- Product Developer
- Application and Production
- Technology Manager
DESCRIPTION
During the course of a development project, trials and testing will be conducted at LORD Corporation and the customer’s facility. Results from these trials provide critical feedback to both parties and ensure that the end product meets everyone’s expectations. Product testing may occur at LORD or the Customer’s Facility. The location depends on what stage the product is moving through, as well as the nature of the test being conducted. This document includes recommendations that will help product testing be more effective.

TESTING AT LORD CORPORATION
Testing at LORD will be completed in a lab environment. To ensure this testing is as effective as possible, LORD will:
- Use industry standard testing methods
- Work with the customer to determine appropriate testing when industry standard testing methods are not available
- Use materials that replicate our customer’s production environment as much as possible
- Work with customers to identify sources for any necessary materials, which would ideally be provided by the customer in an effort to eliminate third party variables

TRIALS AT CUSTOMER FACILITY
Testing and trials at the Customer’s Facility can be done in a lab or production environment. During early stages of the project, prototype testing is conducted to determine the prototype’s performance relative to targeted expectations. During the late stages of the project, testing of the final prototypes will confirm that all of the product requirements are met. The project will likely culminate with final qualification using the customer’s process. In order to make this testing as effective as possible, LORD will:
- Review the customer’s qualification plan and associated timing during proposition
- Strongly recommend that LORD personnel be on site for testing
- Require that both parties agree to testing procedures in the case that LORD is not able to be present during trials
- Encourage the timely sharing of results