

## Product Development Checklist

### Overview

- This four Step approach will minimize the investment of time and money until the product is proven to have a satisfactory probability of success in development and marketing.
  - The output of each Step is essentially a milestone to be met before proceeding to the next.
  - Each new Step provides additional information that improves the quality of the subsequent Step.
  - These Steps will also minimum expenses if the project development proves to be straightforward, or if significant development uncertainties are discovered.
  - Sufficient information will be obtained for an informed decision on whether to move forward with the project, put the project on hold awaiting future technological developments, or terminate further efforts.
- The objective is to obtain the most promising design implementation, identify any significant uncertainties involved in producing it, estimate the probability of resolving them, and obtain the best cost/time schedule for marketing the product

### STEP 1 Market Identification

- **Preliminary Market Evaluation**
  - Define the needs of the prospective market
  - Define the desirable performance specifications
  - Determine the Primary application areas
  - Market search for competing products
  - Performance analysis of competing products
  - Technological analysis of competing products
  - Preliminary performance/cost requirements for successful product
- **Plan addressing performance and cost factors**
  - Determine the Design uncertainties in creating superior product
  - Identify the major technical, production, marketing and cost uncertainties
  - Correlate and prioritize the uncertainties
  - Incorporate the uncertainties into a Critical Task Diagram

# Global Precision, Inc.

*A development and manufacturing company*

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## **STEP 2 - Prototype Development Plan**

- Outline the significant design, technology, marketing and patent issues
- Create a Development Diagram, with supporting discussions and references, outlining the tasks necessary to produce a practical, cost-effective prototype.
  - The Development Diagram identifies and prioritizes the most significant development uncertainties, and permits a product design, which minimizes the number and effect of the uncertainties. It permits early understanding of cost/performance relationships. It correlates tasks and their significance, and optimizes the design and development process.
  - The Development Diagram identifies and minimizes potential show stoppers, and prioritizes procedures for resolving them. This permits minimizing investment and commitment to a specific design until there is reasonable assurance of developing a competitive, cost-effective product.
- Prepare estimates of prototype development costs, and time schedules

## **STEP 3 - Collateral Product and Marketing Material**

- Prepare analyses of marketing, legal, collateral and engineering issues
- Gather collateral materials and issues related to the product. Background research determining if a product having similar cost/performance capability is being developed elsewhere.
- Gather existing product data for avoiding patent infringement and other legal liability.
- Gather budgetary costs for producing and marketing the product in various quantities
- Preliminary estimates of sales volumes as a function of price and performance

## **STEP 4 - Product Planning**

- Technical, experimental, and other activity necessary to resolve the most significant uncertainties identified in the Development Diagram.
  - Prioritize potential show stoppers.
  - Resolve or modify the product design configuration until they can be resolved, or re-evaluate the project.
- Incorporation of all the previous results into a comprehensive development plan, which has a high probability of producing a well-defined product, under a well defined cost schedule.
- Identify and estimate the significant factors impacting the cost and reliability of the product and its performance.
- Prepare detailed Development Diagrams for the product design, prototype development, and production quality control activities.
- Prepare time, manpower and cost estimates for each milestone and completion date.

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