

Contextualized Analysis of New Product Development Success Factors

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ISSUE:

More research funding agencies are requiring grantees to produce outputs in the form of products.

- Many researchers are not familiar with the New Product Development (NPD) process, nor the barriers which manufacturers face.



If only it were this easy to make a product!

OVERALL PROJECT GOAL:

To provide NPD professionals and researchers clear, customized and necessary information to move research findings (discoveries) and prototypes (inventions) out into the market as products or services (innovations).

RESPONSE:

1. Developed a NPD guide, named the Need to Knowledge (NtK) model geared towards applied researchers. NtK consists of 9 Stages and 9 Gates.
2. Validated the NtK model with a scoping review of relevant NPD literature.
3. Extracted and cataloged excerpts and tools from the literature.
4. Extractions and tools entered into a searchable online knowledge base.
5. Secondary thematic analysis performed on excerpts to summarize important and reoccurring themes. Stage 1 results are presented here.



FOUR TOOLS IDENTIFIED WITHIN STAGE 1 - STEPS 1.1 TO 1.5:

1. The Delphi method is used to identify future or unrealized customer needs.
2. Market Structure Maps can be used to provide a visual representation of the competitive environment, including competitors and their products, market segments, and external forces affecting markets.
3. Wildest Idea, Morphological Analysis, or Metaphor Use are often used to generate innovative ideas.
4. Net Present Value can be used when evaluating the potential financial success of a new product development project.

Visit <http://kt4tt.buffalo.edu> to view and search the NtK Model and Knowledgebase for **FREE!**

STAGE 1 RESULTS: 5 THEMES REVEALED

People and Teams

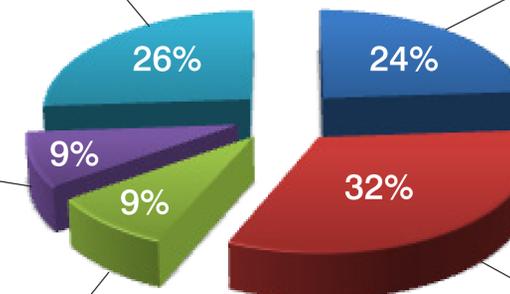
- Cross-Functional Integration generally leads to success with new product development.
 - Integrate Manufacturing personnel into early stages of the NPD process to avoid bottlenecks in production later on. Tips to ensure smooth integration include; Understanding all team members' expectations and long range plans, using a common knowledge base and holding regular team meetings.
 - Assign personnel to project areas based on skill, not just on seniority or title. Involve people with creative minds and business training in the early stages of the NPD process.
 - Project managers should possess management skills, high cognitive ability and decision making power, leading the project from beginning to end.

Stakeholder Involvement

- Include customers early and often throughout the new product development process.
 - Customer input will lead to need identification, new product opportunities, purchase intentions, and the importance of product functions and features.
- Experts may assist with go/no-go decisions and suppliers can provide necessary cost, quality and availability information for potential product components.

Employ Structured Models for New Product Development

- Streamline the NPD process by eliminating non-value adding activities.



Upfront Homework/ Due Diligence

- Identify a problem; propose a solution; determine the scope of the project.
- Conduct thorough market and business analysis early on in the NPD process.
 - Clearly define value proposition, target market, positioning strategy and product concept.
- Secure adequate resources and map out team member responsibilities early on.

Outcome Measurement Considerations

- Objective measures are preferred over subjective measures when determining the success of a new product development project.
 - Example metrics include product effectiveness, marketplace performance, and productivity.

