

Best Practices for New Product Development

A White Paper for Innovative Organisations

Stanski Consulting & Ventures

1. Introduction

The purpose of this white paper is to highlight the risks, opportunities and best practices that are associated with new product development activities.

In doing so, it is anticipated that Stanski Consulting will guide Ventures customers to gain an initial awareness into the necessary product development activities associated with a successful new product delivery through to ultimate product launch.

2. New Product Development Areas of Work

There are approximately 28 high levels of contributing factors that are involved in New Product Development (NPD).

In studying past successful NPD projects, only by focusing on all these factors simultaneously can a successful delivery of a new product be achieved.

Thus it is insufficient to purely focus on only some aspects of the following NPD areas of work and expect a successful delivery, launch and commercial success for a new product.

The following factors are listed below and do not have a priority assigned to them due to equal importance in the NPD life cycle:

- Business and Product Strategy
- Product and Pipeline Management
- Technology Management
- Management and Leadership
- Early Involvement

- Product Development Teams
- Organizational Environment
- Process Management
- Process Improvement
- Understanding the Customer
- Requirements and Specifications Management
- Development Process Integration
- Supplier/Subcontractor Integration
- Configuration Management
- Design Assurance
- Project & Resource Management
- Design for Manufacturability/Delivery
- Product Cost Management
- Robust Design
- Integrated Test Design and Program
- Design for Operation and Support
- Product Data
- Design Automation
- Simulation and Analysis
- Support Technology
- Knowledge Management
- Product Launch
- Ongoing Operations
- Ongoing Product Innovation

3. New Products Categories

There are many different types of new products. Their "Newness" can be defined as two types:

1. New to the company, in the sense that the business has never made or sold this type of product before, but other firms might have;

2. New to the market or “innovative” – the product is the first of its kind on the market.

These two types of newness can be further broken down into six classes of products and their frequency in the market place:

4.1 New to the World Products

First of their kind and create an entirely new market. These NPD lines make up approximately 10% of new products.

4.2 New Product Lines

Not new on the market but new to the business. They allow the business to enter a completely new market segment. These NPD lines make up approximately 20% of all new products.

4.3 Additions to existing Product Lines

These are new items to the business, but they fit within an existing product line that the business already produces. They may represent a fairly new product to the market. These NPD lines make up approximately 26% of new products.

4.4 Improvements and Revisions to Existing Products

These “not so new” products are replacements of existing product lines. These “new and improved” product lines are incremental innovations and make up approximately 26% of new products.

4.5 Repositioning

These are new applications for existing products. They involve the retargeting of an old product to a new market segment. These improvement product lines make up approximately 7% of new product developments.

4.6 Cost Reductions

These are the least “new” of all new product categories. Essentially these NPD lines are

designed to replace existing product lines while providing similar benefits and performance but at significantly lower costs to the business. These product innovations make up approximately 11% of new products.

5 NPD Successes & Risks

By assessing new product development activities into the above mentioned classes, projects can be classified into high or low risk success categories.

The percentage breakdowns listed above represent the likelihood of successful NPD line in the market place. These numbers represent successful products lines that were completed and successfully launched by the organisation.

According to industry research [1], on average, new product lines (less than 5 years old) currently account for a staggering 33% of company sales.

While these numbers are encouraging and do promote the need for new product development efforts within growth hungry organisations, it is important to realise that the survival rate of new products is also very low.

According to further research [1, 2], for every 7 developed concepts/ideas, only 1 becomes successful, and for every 4 development projects trying to create the envisioned concept, only 1 becomes a commercial success.

While the rewards associated with successful product lines are great the chances of betting on a commercial winner are slim.

6 Best Practices for NPD Projects

Since there are so many contributing factors that lead to a potentially successfully

product, studies [2, 3] have identified that there are only two fundamental ways at winning at the new product innovation game.

These are primarily achieved by “doing projects right” and engaging by “doing the right projects”.

6.1 Doing Projects Right

The common denominators of successful new product development projects include:

- doing the planning homework up front prior to commencement of product development
- getting an early, sharp and stable product definition
- building in the voice of the customer into the product (an actual tested and validated customer need)
- employing true cross functional teams
- facing up to mandatory project costs (invest in the necessary infrastructure)
- avoid unnecessary project haste by understanding the likely schedules
- and eliminate the “Load, Fire, then Aim” mentality resulting from cutting corners.

6.2 Doing the Right Projects

Equally important but often missed is the issue of doing the right projects. Project selection for Go, Halt and Kill decision points becomes very important to the overall success of new products.

Since there are usually windows of opportunity during which a product may become successfully in the market, such external factors must also be considered during project decision points.

6.3 Empowering the Product Manager

The act of project selection and Go/Halt/Kill decisions should exclusively be handled by the portfolio management team.

Within portfolio management, the assigned product manager (PM) is responsible for their respective project.

Their energies must be skilfully invested within the organisation and the project team by “speaking in the customer’s voice”.

The PM must also internally champion and rally around the NPD project, while connecting outside of the business with partners, channels and the ultimately with the customer/market segment.

7 What Usually Goes Wrong

Some of the most common pitfalls associated with new product development (NPD) include the items listed below.

Through their awareness it is anticipated that Stanski Customers may successfully avoid these during their NPD projects.

7.1 Lack of Market Orientation

Inadequate market analysis, a failure to understand customer needs and wants, and insufficient attention to the marketplace are consistently cited as major reasons for NPD failure.

7.2 Poor Quality of Execution

New product development processes are deficient, omitted, ignored, or erroneous. For instance, when key actions often considered central to success are arbitrarily omitted, these are usually indicative signs of poor execution.

7.3 Moving Too Quickly

Many of these errors include failure to do certain key tasks and short-cutting of others - usually made in the interest of saving time. When these corners are cut, mistakes are made, the project moves off target, and activities have to be repeated, all at great time and money expense.

Bypassing a needed market study or cutting corners on a pilot trial often lead to a product disaster.

7.4 Not Enough Up Front Homework

Inadequate market analysis, poor quality of execution and moving too quickly – all converge on the homework phase being very fuzzy and ill defined. A poor definition of the product and market, combined with organisational bravado is a recipe for failure.

7.5 Lack of Product Value for Customer

Moving ahead into product development with vague understanding of customer requirements leads to too many ill defined products. These new products add no value or minimal benefit to customers, thus resulting in poor market adoption.

7.6 No Focus, Too Many Projects, and Lack of Resources

This is one of the most common new product development scenarios that plague organisations. The lack of time, money, and people is the root cause of many errors of omission and poor quality of execution.

This in turn has serious consequences on product development as scarce resources are dissipated across many fronts and the truly deserving projects are under resourced.

8 Summary

The portfolio management and new product development teams are key groups that contribute to keeping an organisation competitive in the market place. Most start-up organisations are generally not familiar with Product Management concepts and how these influence the new product development lifecycle.

Furthermore, strong Executive support must exist for new ventures and a demand for

adequate levels of investment in resources, infrastructure, and schedule commitment. While technical challenges can be frequently overcome, business and cultural issues can stall or halt some of the most innovative NPDs.

While organisational investments do not guarantee a successful new product in the marketplace, they do ensure that projects are done right and the right projects are undertaken by the teams.

Only through such investments can an organisation leverage the potential benefits that new products can deliver. While the risks are high, so are the returns on investment.

Through the engagement of Stanski Consulting & Ventures, many of the new product development challenges can be overcome. By bringing experienced people that deeply understand these challenges, many of the roadblocks and pitfalls can be overcome before they become NPD show stoppers.

References

- [1] Cooper R.G, "Winning at New Products – Accelerating the process from idea to launch", Third Edition, Basic Books, 2001.
- [2] Booz-Allen & Hamilton, "New Product Management for the 1980s" study.
- [3] A. Griffith, "Drivers of NPD Success: The 1997 PDMA Report", Product Development and Management Association.