

**Lean,
Rapid,
and
Profitable**

New Product Development

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CHAPTER 1

Understanding the Challenge

Effective Product Innovation – The Number One Management Challenge

Have you ever wondered why some companies make product innovation seem so easy ... one big winner after another? For most companies, developing a steady stream of successful new products is a real challenge: New product productivity – output for a given input – is lackluster. Why? What's going wrong? And how can you improve and seek real productivity gains in product development?

Here is a startling fact: Productivity in product innovation in the top performing businesses is *five times* what it is in the average business – they get five times as much new product output for the same investment!¹ And top performers get *12 times* the productivity as poor performers. How does your productivity rate by comparison? And how can you improve it by up to 12 times?

That's what this book is about: uncovering the keys to *maximizing your new product development (NPD) productivity*. In it, the results of our most

The Productivity Research That Underlies This Book

This book outlines Seven Key Principles that lead to higher productivity in NPD. Where did they come from? Since the 1970s, we have been undertaking studies of hundreds of new product projects, teams and companies, seeking the answers to the same question: Why are some so much more successful than the rest? These studies have been published in countless peer-reviewed scientific journals, and are probably the most complete set of investigations into new product success, failure and productivity anywhere. (Sources are in endnote 3.)

The most recent study, which is widely quoted in this book, is the study of best practices in product innovation undertaken with the American Productivity and Quality Center, and referred to as the CEK study. In it, a large number of businesses were investigated for both their NPD performance (measured in many ways) and the practices that lead to this performance. A select group of high-productivity businesses were identified, and their particular practices were investigated in more depth. From this, previous studies and numerous case studies, we are able to identify those factors that are most strongly correlated with productivity and performance in NPD. (See endnote 2.)

recent study into the drivers of new product performance² are presented (see box). This study builds on a long tradition of our NPD benchmarking studies.³ In this book the seven most important drivers of increased NPD productivity are identified – the *Seven Principles of Lean Rapid and Profitable NPD*. And the next generation or version of Stage-Gate^{®*} is outlined – an idea-to-launch process designed to drive winning new products to market quickly and efficiently.

* Stage-Gate[®] is the registered trademark of the Product Development Institute. See www.prod-dev.com.

Product innovation is vital to success

New products have a huge positive impact on company fortunes. New products currently represent about 30 percent of company sales in the U.S.⁴ That is, products on the market for three years or less now make up almost one-third of businesses' revenues. A *Fortune* magazine study found the common denominator across the most admired companies in America to be "a passion for new products and new ideas".⁵

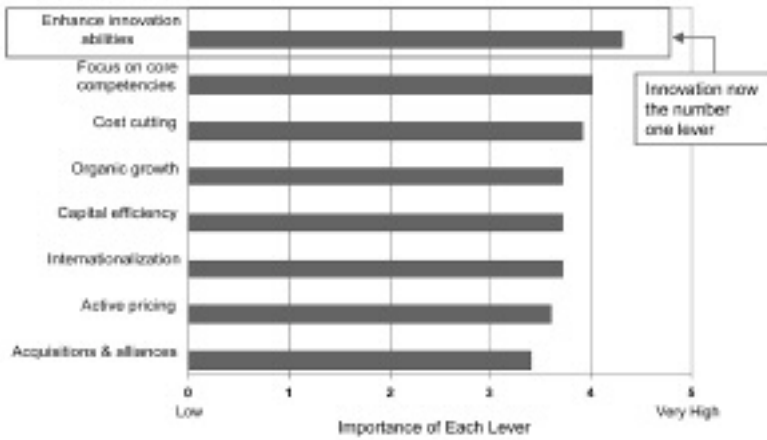
Product innovation is not only vital to success and prosperity, for some it's the only game in town. Look around: Companies that are doing well today – Procter & Gamble, 3M, Microsoft, Intel, Nokia, Toyota – invariably have an enviable stable of new products. P&G, for example, has become a veritable new product machine in recent years, in spite of the tough market situation often faced by consumer goods businesses. P&G occupied five of the top ten sales positions for new products in 2004.⁶

The message is getting through to senior management: A recent study by A.D. Little reveals "enhanced innovation abilities" to be the number one lever to increase profitability and growth among European companies, higher even than cost cutting and acquisitions-and-alliances (see Exhibit 1.1).⁷ Similarly, a recent study by the Boston Consulting Group found that 90 percent of the companies surveyed indicated that generating growth through innovation has become essential for success and 74 percent of these executives indicate they will be increasing spending on innovation in 2005.⁸

Achieving positive results is an elusive goal

Achieving positive results in product development is no easy feat. Indeed new product failures seem to be more common than big successes. Look at the facts: Only one product concept out of seven becomes a new product winner; and 44 percent of businesses' product development projects fail to achieve their profit targets!⁹ Here are some more statistics from our most recent benchmarking study:

Exhibit 1.1 Levers to Increase Profitability and Growth



Source: A.D. Little Innovation Excellence Study, 2005

- 32 percent of businesses rate their NPD speed and efficiency as “very poor”
- Only 27 percent rate their NPD productivity as high – their profitability relative to how much money they spend
- 28 percent of businesses do not even measure their NPD performance results!¹⁰

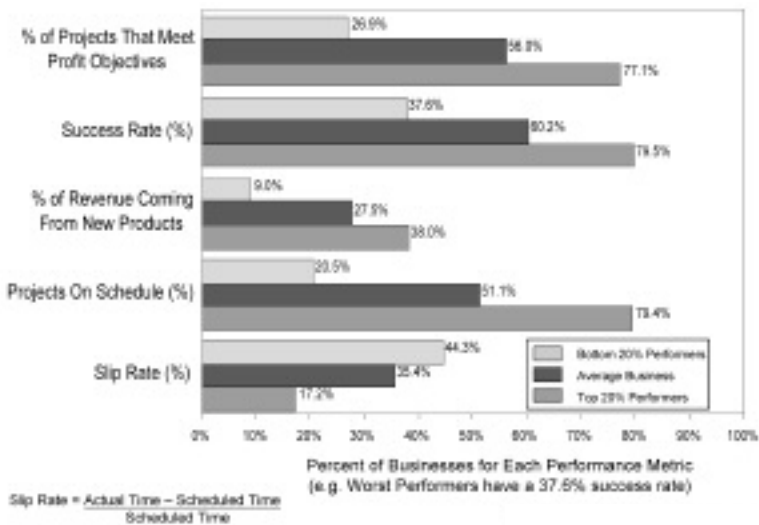
A comparison of the best NPD performing businesses to the average and worst reveals more insights into the challenges faced. Exhibit 1.2 shows performance results of the top, the average, and the poor performing businesses in NPD (here performance is judged on ten different criteria, including overall NPD profitability, impact on company sales and profits, on-time performance, and meeting sales and profit targets). Note that from Exhibit 1.2, *on every performance metric*, the top performers are doing exceptionally well – far better than the average and typically about 300 percent better than the poor performers. These are huge differences and they beg the question: What is it that separates the best from the worst – what are they doing so differently?

Another conclusion that can be drawn from Exhibit 1.2 is that, on many metrics, the average business is achieving very poor performance:

- Just better than half of NPD projects (56 percent) in the typical business meet their profit goals – 44 percent do not!
- Sixty percent of development projects are considered commercial successes, while 40 percent are either killed or fail commercially
- About half of the projects (51 percent) are launched on schedule, but 49 percent miss their launch date target
- And the slip rate – which captures how late projects are in reaching the marketplace as a percentage of scheduled time – is a dismal 35 percent on average.

The typical business, thus, faces major performance issues in product innovation. Much improvement in new product results and productivity is needed. Fortunately, the top performers provide a model for the rest of us. They show what is possible – that stellar results are within the grasp of any business and business leader – and they also provide insights into how to achieve these stellar performance results in product innovation.

Exhibit 1.2 How Businesses Perform in NPD



Source of data: CEK study, endnote 2