

Benchmarking Best Practices Performance Results and the Role of Senior Management*

By

Dr. Robert G. Cooper and Dr. Scott J. Edgett

*The information in this report represents a sample of the results presented in the main report entitled *Best Practices in Product Innovation: What Distinguishes Top Performers* by Drs. Cooper, Edgett and Kleinschmidt.

Introduction: The Quest for Best Practices in Product Innovation

Product innovation – the development of new and improved products – is crucial to the prosperity of the modern corporation. New product launches within the last three years account for about 30% of corporate sales, and there is a strong connection between successful product development and business valuation.

Developing a steady stream of winning new products is no easy task, however. New products fail at an alarming rate, with only one-in-four development projects becoming a commercial success¹. Thus many managers, researchers and pundits have sought answers to the age-old question: Why are some businesses so much more successful at product development than the rest?

The Benchmarking Study

The new products benchmarking study (see box, right) examined 17 best-practice topic areas, ranging from new product strategy through to climate and culture. In this report summary highlights are presented on several key topics – NPD performance results achieved and the impact and role of senior management.

New product performance was measured in a number of ways in the study – see Exhibit 1. (Use these performance data to benchmark your business's NPD performance versus the average and top

performers.) We also identify a sub-set of Best Performing businesses, and focus on their practices: these are the “benchmark businesses” that one should strive to emulate. In this mini-report and subsequent reports, we probe what drives performance

How the APQC Research Was Undertaken

This benchmarking research was undertaken by the APQC (American Productivity and Quality Center) with the authors as subject matter experts. The study used the APQC's standard methodology, including both qualitative and quantitative methods.

Quantitative: A detailed quantitative questionnaire was also constructed. A total of 113 measures were used to capture the existence and proficiency of NPD practices and approaches within businesses, as well as questions to gauge businesses' new product performance.

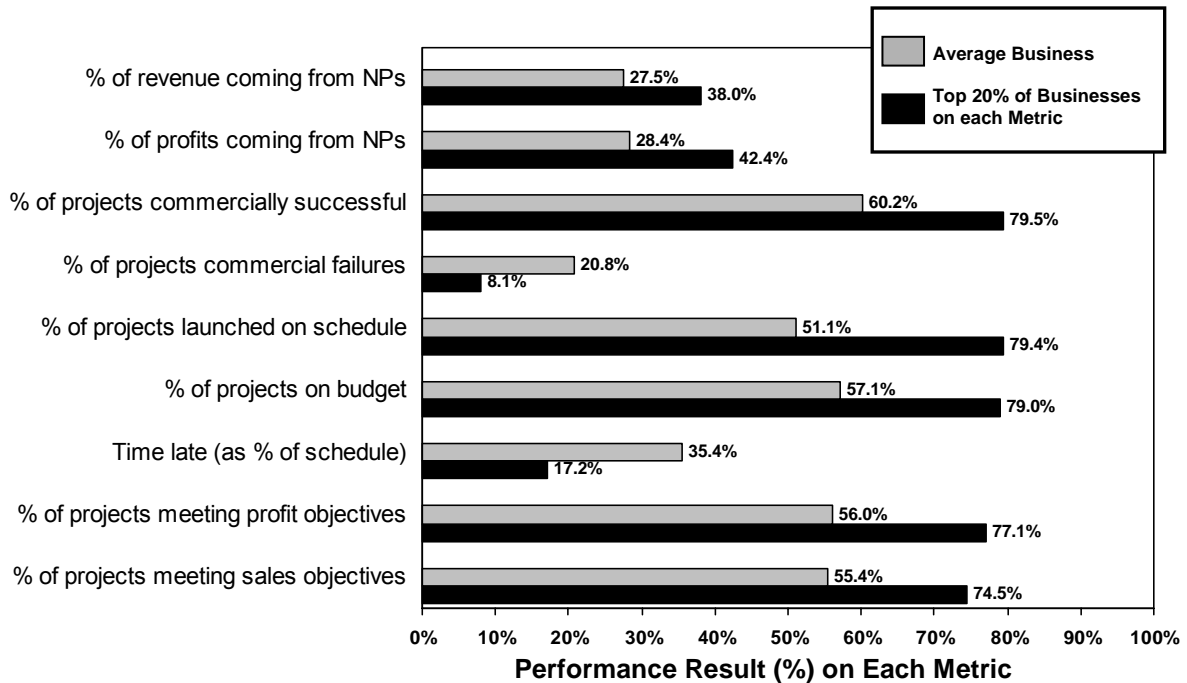
The quantitative sample: 105 business units responded to the detailed quantitative questionnaire:

- Businesses are in a number of different industries, with 51% in the manufacturing sector.
- The size of the businesses – average sales: \$2.5 billion (median: \$400 million); average employees: 4,711 (median: 1,500).
- R&D spending – average: \$58.4 million per business or 5.2% of sales; of this, the proportion going to NPD is 52.3% on average, for a NPD spending rate of 2.89% of sales.

Qualitative: Site visits were organized with five businesses identified as having best practices in NPD. The APQC research team, consisting of the subject matter experts, a number of sponsor companies, and APQC personnel, conducted the meetings. The five companies visited are:

- Air Products and Chemicals Inc.
- Bausch & Lomb
- EXFO Electro-Optical Engineering Inc.
- ExxonMobil Chemical Company
- Kraft Foods Inc.

Exhibit 1: NPD Performance Results: The Top 20% vs. the Average Business



Reads: The average business has 27.5% of sales from 3-year new products; but the top 20% of businesses on this metric see 38% of sales revenue from new products.

and what distinguishes the Best Performers from the rest.

Performance Results Achieved

How well did the sample of businesses perform in NPD is the first question in any benchmarking study. Exhibit 1 shows how the businesses fare on each of the performance metrics, along with the *distribution of results* – the top 20% of businesses on each metric.

Percentage of Revenues and Profits from New Products: The most popular performance metric is “percentage of sales revenue derived from new products”. Overall, the average percentages are impressive for three year new products – about 27.5% of sales and profits. But most impressive are the results of the top 20% on these two metrics: *38% of sales* and an *even*

higher percentage of profits (42.4%) coming from new products. Note that profit performance appears somewhat higher than sales performance for these top 20% businesses!

Success, Fail and Kill Rates: Another key metric is the NPD success rate: what proportion of NPD projects entering the Development stage become commercial successes – meet or exceed financial standards? Or become commercial failures? The success rate is a respectable 60.2%, on average. But note the huge difference between the top 20% of businesses and the average on this Success Rate metric: the top 20% has *an almost a 20% higher success rate* at 79.5% and *less than half the failure rate* of the average business. These are huge differences, and raise the questions: what separates the best from the rest; and why do the top businesses do so exceptionally well?

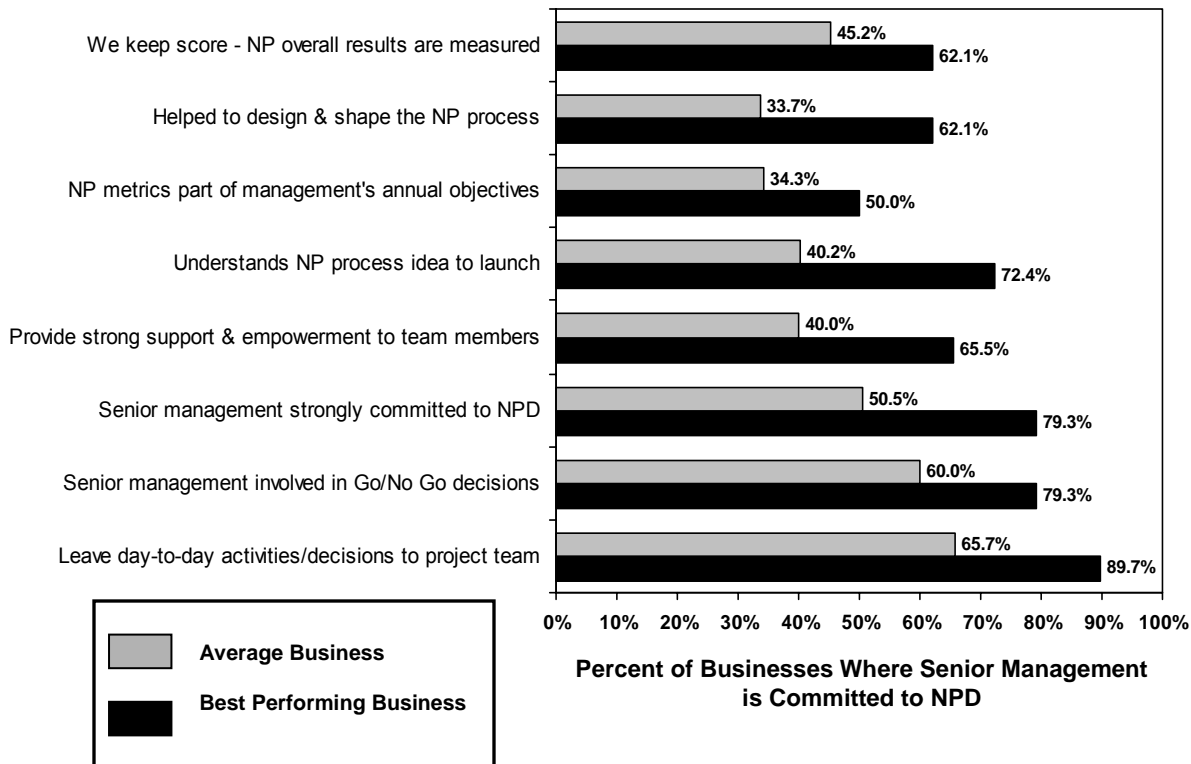
On Time and On Budget: Yet another pair of performance metrics is the proportion of NPD projects hitting their launch dates on time and on budget. The fact that, on average, almost half the projects are behind schedule (miss their scheduled launch date) and that a considerable percentage are over budget raises serious concerns about scheduling, resource management, project management and commitments to time-lines. Admittedly, there is *a small group of businesses doing much better* than these average businesses: 79.4% of projects on schedule and 79.0% on budget. The significant differences between the top 20% and the rest indicate that many firms have yet to achieve acceptable on-time and on-budget results, but that a handful of firms demonstrate that this goal can be achieved.

But how late is late? The “slip rate” measures how late a project is as a

percentage of its total scheduled time to market. On average, when a project is late to market, it misses its time schedule (the “slip rate”) by 35.4%. That’s the data for the average business; the top 20% drive their slip rates down to 17.2% – *half the average!*

NPD Projects Meeting Objectives: Management measures the performance of NPD projects against profits and sales objectives. But just how do businesses rate on these metrics? The fact that, in the average business, just better than 50% of projects meet their objectives means that *a sizable proportion of projects are falling short*. This result should be unacceptable for most senior executives. Consider the distribution of results: the top 20% of businesses on these metrics obtain much better results, with three-quarters of their projects meeting objectives.

Exhibit 2: Senior Management Practices, Roles and Commitment to NPD



Identifying the Best Performers

Which businesses are the best performers? And which are the worst? These are important questions, and lie at the basis of a valid benchmarking study. By comparing the practices used in Best Performers versus the average or low performers, one can zero in on best practices. We identified a group of Best Performers that excelled in terms of the overall profitability of their NPD effort; met its business objectives, was successful versus competitors, and had time-efficient initiatives. Their NPD efforts also opened up new markets, technologies and product categories to the business. (The “worst performing businesses” were also identified – results not shown).

The following section presents the results on one of the 17 best-practice topic areas studied, and how the Best Performing companies handle these differently from the average business.

Senior Management Practices, Roles and Commitment to NPD

Senior management must lead the way in NPD by providing both the leadership and commitment of the necessary resources. The topic of senior management commitment and the role of senior management in NPD contains a number of critical best practices (see Exhibit 2):

1. **Keeping score:** The majority of Best Performers keep score (62.1%) – they measure their new product results (e.g., percentage of sales or profits achieved; percent success versus failures; on-time performance, etc.). Overall, however, this is a moderately weak area with less than half (45.2%) of businesses on average keeping score. Keeping score is the one practice that distinguishes the Best Performers most strongly of all senior management practices in Exhibit

2, and must be considered a best practice: what gets measured gets done!

The average business relies on 2.85 different metrics to gauge how well its NPD efforts are performing: the most popular metric is “percentage of sales derived from new products launched in the last X years”, where X is usually 2-3 years (68.6% of businesses using), followed by “percentage of growth coming from new products” (50.5%), and “overall profits generated from new products” (40.0% of businesses).

2. **Senior management engaged in the design of the business’s new product process:** Again this is a weak area (occurs in only 33.7% of businesses), but apparently it is an important one – the number two driver of NPD performance in Exhibit 2. Note that in 62.1% of Best Performers, senior management was very engaged in the design of their new product process.

As one senior person put it: “Our leadership team [of the business] helped to design our new product process. Our Senior VP of Marketing actually chaired the Task Force, and got the rest of us [the executives] involved in designing gate criteria, agreeing on a set of ‘rules of engagement’ around our behaviors, and even how we were going to run gate meetings. So it became very much ‘our process’ too – we bought in.”

3. **NP metrics an explicit part of senior management’s personal and annual objectives:** This area was rated weakly in Exhibit 2, with only 34.3% of businesses using this practice – the weakest of all senior management practices. But it is *the number three driver of NPD performance* of all practices listed in Exhibit 2, with 50% of Best Performers having such senior

management metrics (and only 14.3% of worst performers).

4. **Senior management understanding of the business's NPD process:** For management to play an effective role in NPD, they must understand their business's NPD process, and particularly be aware of their own role and responsibilities in the process. This is not always the case (true for only 40.2% of businesses), but is clearly a best practice – a major discriminator between Best Performing businesses and the rest, with 72.4% of Best Performers scoring very high here. Indeed, in 48% of worst performers, senior management does not understand the NPD process at all!
5. **Senior management providing strong support,** empowerment and authority to the people working on new product projects: This is also a key driver of performance, but an area of some weakness. In only 40% of businesses overall, and in 65.5% of Best Performers, top management provides strong support and empowerment to people working on project teams. By contrast, strong senior management support for NPD teams is evident in only 7.7% of worst performers, and 42.3% provide no support whatsoever.
6. **Senior management strongly committed to new products and product development:** This is the second strongest rated area of all items in Exhibit 2 among the Best Performers. Top management commitment exists in 50.5% of the businesses, and 79.3% of Best Performers. By contrast, strong senior management commitment exists in only 26.9% of worst performers.
7. **Senior management involved in the Go/No Go and spending decisions for new products:** They have a central role

in the project review process – with top management in 60% of businesses overall, and in 79.3% of Best Performers, very involved in these Go/No Go decisions. This practice does not significantly discriminate between Best Performers and the rest. However, because involvement in Go/No Go decisions is such a prevalent practice among Best Performers, we include it as a best practice.

8. **Senior management not micro-managing NP projects:** Rather, they tend to leave the day-to-day activities and decisions in a new product project to the project's leader and team. Most businesses score very strongly here – in 65.7% of businesses overall, and in 89.7% of Best Performers, senior people do not micro-manage projects.

Conclusions: The role of senior management in leading the NPD effort of the business cannot be understated. This topic area proved to strongly discriminate between Best Performers and the rest. While all eight practices listed above are important – either they distinguish the Best Performers, or they are widely practiced in the Best Performers – several stand out and should be part of your senior management practices, notably:

- Keeping score (e.g., percentage of your business's sales or profits derived from new products), and then using these metrics as part of senior management's personal and annual performance objectives.
- Engaging senior management in the design (and/or periodic overhauling) of your business's NPD process, and making sure that they understand it. Some best practice businesses provide extensive gatekeeper and senior management training on their NPD process.

- Making sure that senior management provides the necessary support, empowerment and authority to project team leaders and members. This transfer of power or authority usually takes place at the gates or Go/No Go meetings, where senior management meets the project team, reviews their project, and if Go, approves the resources. Along with resource approval should go some degree of power transfer as well.

More to Come

This research mini-report provides a sampling of the results from the total benchmarking study. In addition to the topic areas reported above – business performance results and senior management’s role and commitment – 16 other best-practice areas were investigated, including:

- ✓ the business’s product innovation and technology strategy, and which elements are most critical to success
- ✓ metrics that businesses use to gauge NPD performance
- ✓ resource allocation and the breakdown (types) of projects undertaken by Best Performers
- ✓ portfolio management methods and their impact
- ✓ the idea-to-launch new product process, and critical but pivotal weaknesses in the process
- ✓ cross-function NPD teams, and how to organize for NPD
- ✓ and impact of specific techniques, such as voice-of-customer research, obtaining solid market information, gaining competitive advantage via a unique superior product, and securing sharper product definition.

The full report can be ordered on-line at www.stage-gate.com and is entitled: *Best Practices in Product Innovation: What Distinguishes Top Performers*.

Endnotes & References:

¹ Cooper, R.G., *Winning at New Products: Accelerating the Process from Idea to Launch*, 3rd edition. Reading, Mass: Perseus Books, 2001.