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## Three Principles for CEOs to Improve Product Innovation

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**Napoleon’s** armies didn’t win because they had better weapons technology or more dedicated soldiers. They won because Napoleon had built a better military operation.

You might not want to copy Napoleon’s management style, but there’s a lesson here for CEOs of technology companies: New product business results depend not only on advanced technology and creative engineering, but also on a competitive new product operation. Improving the business operation that generates new products is a powerful tool to improve financial performance, but it’s often hidden by the mistaken idea that product innovation is only about technology and engineering. Furthermore, the CEO, not the Engineering VP, is the right person to drive the enterprise-wide changes needed to improve results.

Technical and engineering skills determine new product performance, features, quality, and delivery cost, all of which impact profits, to be sure. But the problems that limit new product profits for most companies are in new product operations, not technology. Product development capabilities like speed to market, agility, dependable delivery, and expense efficiency are operational skills that provide significant competitive advantages, increasing new product profits and driving shareholder value.

For CEOs who sense an opportunity to improve their company’s new product capabilities, three principles are central to getting results.

### **Principle 1: Product Innovation is a Business Operation**

As a business operation, product innovation converts a company’s knowledge of technologies, markets, applications, and delivery systems into products that can be delivered economically to fill a market need. Unlike a manufacturing operation, the new product operation never produces the same thing twice, but fundamental operations principles apply to product innovation none the less. Outcomes depend on the effort of individual people and departments interacting within the

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company’s organizational structure, all working to generate long term profits from new products.

With any operation, structure and interactions determine capabilities and capacity as much or more than the separate skills of individuals and departments. It is structure and interactions that determine whether a new product operation is flexible, if it is cost efficient, how short cycle times are, and how dependable deliveries will be. All too often, lasting performance improvement is elusive because executives fail to understand the operation and focus on symptoms, rather than operational causes of problems. Without understanding the underlying operation and making systemic improvements, symptomatic remedies usually cause counterproductive side effects elsewhere in the operation.

### **Overview**

Do you know a small, growing company – perhaps yours? – that has to fill the same key position over and over again?

One after another, a potential new hire’s skills and experience look so good on paper, but his/her first few weeks on the job are very disappointing, and the company’s whole operation seems to stumble and slow down.

The underlying cause could be “the culture issue.”

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For example, a symptomatic approach to improving speed to market may be to simply exert pressure for shorter schedules during project planning. But then projects are started with overly optimistic schedules that will only slip later. If executives react by insisting that projects will finish on schedule, developers may begin to cut corners, resulting in poor initial product shipments. Overall business results actually deteriorate through this kind of cycle.

A better approach is to understand and fix the operational factors that are causing long schedules. Projects may be under resourced, work queues may be causing delays, or collaboration with other departments may be poorly timed. Improving these operational issues will improve speed to market without causing side effects.

### **Principle 2: Operational Skills Impact Business Results**

Improving the new product operation requires an investment of executive energy and organizational resources. In return, improvements can be expected to provide two major benefits. First, a capable, high-performing operation prevents many of the product development crises that so often usurp management energy. Schedule slips, the need for fast competitive response, and clumsy releases can require continual crisis management. Improving operational capabilities frees executives from the tyranny of constant fire fighting, allowing them more time to focus on their primary job – building the company's future.

The second, more concrete, benefit of strengthening operational capabilities is financial -- new product ROI is improved. Although new product business cases often fail to expose it, the financial impact of operational capabilities in product innovation can be significant.

Speed to market and flexibility provide powerful competitive advantages in dynamic markets. Quantitative models show that in very dynamic markets, getting a new product to market one week sooner can impact the product's lifetime profit by as much as 3%. Companies that can couple speed with the operational agility to respond quickly to changing customer needs create a self-reinforcing cycle of competitive advantage: With each successive product generation that beats competitors to market, the agile company starts its own market learning sooner to accelerate the next development cycle.

*As a business operation, product innovation extends beyond the borders of the engineering department.*

Dependable new product delivery is another important competitive strength. A company with a reputation for dependable new product schedules and initial shipments can boost a product's lifetime profit by locking competitors out even before their own development is complete. A market reputation for

dependable new product delivery must be carefully guarded, though, because it can be completely eroded by a single release failure.

The financial impact of expense efficiency in new product operations seems clear, but this clarity can be deceptive. Reducing development expense seems to increase ROI, but only if the savings do not reduce a product's lifetime profit. For example, skimping on staffing for test development may save development expenses, but overall ROI will suffer if queues in the test group cause project delays. To optimize ROI, expense efficiency must be balanced against other operational goals.

### **Principle 3: The New Product Operation Spans the Enterprise**

All too often, new products are considered the sole responsibility of the engineering department. It's important to recognize that, as a business operation, product innovation extends beyond the borders of the engineering department, depending on knowledge, information, resources, and commitment from across the enterprise. Timely, effective collaboration on product technologies, customer needs, market trends, quality requirements, and manufacturing cost are all essential to the operation's functioning.

Speed to market provides an important example of enterprise-wide dependencies. Most companies measure speed to market as an engineering issue, the time from project start to completion. But in fact, speed to market should be measured from the time a new opportunity becomes "knowable" in the market until the company can confidently begin to capture customers and deliver a solution. In this broader sense, speed to market is a company-wide issue, involving the abilities to spot upcoming opportunities early, launch new products effectively, and ramp delivery quickly.

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Because the new product operation spans the enterprise, the whole executive team is collectively responsible for making it function effectively. Only they, led by the CEO, have the perspective, authority, and control to drive desired improvements. Although some improvement opportunities are contained within the engineering department, the most significant opportunities often lie in interactions among departments and in the workings of the executive team itself.

It's important to emphasize here that the executive team taking collective responsibility does not mean micromanaging the engineering department. Rather, the executives must share a common understanding of how the operation works and the balance of capabilities needed to drive the company's success. Based on this understanding, each executive must accept responsibility to provide the resources and collaboration necessary to improve capabilities and optimize results.

### **Making Improvements**

The CEO, as the person responsible for leading the executive team, has not only the opportunity, but also the responsibility for improving the business operation that generates new products. A few straightforward ideas can be the basis for effective, lasting changes.

- *Engage the whole executive team.* Envision the business value of better product development capabilities, and establish collective responsibility for improvement. This can be done at an off site meeting, or with the help of an impartial consultant to assess the current operation and suggest improvements.
- *Understand your operation.* To collaborate on improvements, the executive team needs a shared understanding of the new product operation. Process mapping or an analysis of telling recent incidents will uncover how the operation works. Facilitation by an unbiased consultant may be needed to keep the discussions focused on operational issues and avoid finger pointing.
- *Don't copy "best practices."* Other successful companies have new product operations that suit their own enterprises, not yours. Since it's too expensive to maximize all operational goals at once, your task is to build the operation with the balances and tradeoffs that best support your goals, strategy, and culture.
- *Shun symptomatic fixes.* Fixing symptoms seems to provide immediate improvements but usually creates worse problems in the long term. Instead of symptomatic fixes, look for systemic changes that will provide lasting improvements.