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Making R&D work better

Is Friction Dragging Down Your New Product Results?

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We are frequently asked about dealing with organizational friction. Here's a typical problem: "My company seems to have a lot of friction surrounding new products, but I can't put my finger on what's causing it. As the company has grown, this has become a real headache. How can I fix a problem like this?"

Enlist key employees at all levels of the organization to support the change, particularly in demonstrating a positive attitude.

John:

"Friction" surrounding new product development is very common in growing companies, and executives need to address the problem, even though it may seem vague and hard to pin down. In addition to causing management headaches, friction has a

negative impact on new product ROI because it leads to unclear product definitions, erratic development schedules, and clumsy releases.

Product innovation is a critical business operation that spans the whole enterprise, using resources and skills from across the company to convert technical and market knowledge into economically valuable products. As the company grows, interactions among people and groups become more important than the skills of a few individuals. Friction in the organization indicates that something is wrong with these interactions.

Mary:

This kind of friction is a symptom of lack of alignment among functions or individuals in the company – like a car with its wheels going in different directions. The first step on the road to alignment is to be sure that everybody has a clear and common understanding of company goals.

Executives can use financial models to set goals and define improvements that are realistic and mutually consistent.

In a growing company, some relative old-timers may still be guided by out-dated goals; newer employees may be making assumptions based on companies where they used to work. In addition, many small company CEOs have shared information about company goals only in informal and somewhat piecemeal ways.

So, the friction and the headaches show that it is time to get to work on a straightforward statement of company goals that is understandable and meaningful to all.

John:

A good way to set goals is to start with a model of new product financials. The model is based on an appropriate measure of ROI, such as new revenue generated per dollar of development cost.

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."

Two additional inputs – product life span, and R&D funding as a percent of sales – are enough to calculate long term growth in revenue, gross margin, and net profit with a simple spreadsheet.

A high level model like this isn't precise, but it shows the quantitative links among the key parameters of a new product program. For example, it shows how much you can improve growth by increasing R&D funding and what ROI would be needed to meet growth targets. It will also give an ROI threshold value for selecting new product opportunities.

Mary:

Thinking of critical business operations as horizontal, company-wide flows in which the interfaces are as important as the functions is a great habit for a growing company to adopt early and keep forever. When product innovation drives company success, the entire executive team needs to be actively involved in building the NPD model and owning the result.

The benefits of the "executive team approach" are significant. It brings together and dynamically balances the interests, expertise, viewpoints, and learning experiences from all the knowledge domains in your company. (Be sure that those who interact with the "external world" of suppliers, customers, markets, channels, etc. inject those viewpoints into the mix.) Every time the executive team works together like this, members increase their understanding of each other's mental models, improving their ability to collaborate.

Specifically, the collaborative work of developing the product innovation model will help all members of the executive team understand that NPD is not about just the engineering function. This is the first step toward connecting – and aligning – the work done in every function to earn superior innovation ROI.

John:

After company goals are set using a high level financial model, it's important to line implementation up behind the goals. Many decisions and tradeoffs during the life of a product impact financial results, and differing perspectives are a common source of friction. Typical tradeoffs might involve sacrificing manufacturing margins to release early or delaying the release to add a product feature. Project financial models not only reduce disagreement on questions like these, but they also keep the resolutions closely aligned with company goals.

Project level models have to be consistent with the high level ones – ROI metrics should be identical, and product revenue profiles should reflect those used in the high level models. Project models should cover the whole life span of the product and include all the factors with significant ROI impact, such as manufacturing and support costs and sales life.

Many companies use project level financial models as business cases to evaluate new opportunities, but they don't revisit the model after the development starts. By keeping the models current and using them to compare tradeoffs throughout the product's life, everyone involved with the project can make more consistent decisions with better financial results.

Mary:

A set of financial and project models produced and owned by the entire executive team is a good beginning, but it can only bring the desired results when it is communicated throughout the organization – another leadership task for the executive team. Executives must prepare and deliver messages to both motivate every employee and help them understand corporate goals, particularly how they impact decisions and change the way work is done.

Implementing new practices that support enterprise-wide thinking and workflow is a significant change effort, even for a company whose culture is already open, participatory, and flexible. If the existing culture won't support the new practices, the change effort will be more complex. In any case, don't underestimate the planning, coaching, and training needed to accomplish this step, and don't miss the opportunity to incorporate employee and stakeholder feedback.

Executives have three very effective tools to use in implementing necessary organizational changes. First, key employees at all levels of the organization should be enlisted to support the change, particularly in demonstrating a positive attitude. Second, the company should provide plenty of classroom and on-the-job training, so that all employees know how to do their jobs in new ways. Finally, company leaders must be sure that formal and informal reward systems both motivate and reinforce the behavior that not only brings the company into alignment, but also drives it to higher profits.