

High Performance in Product Development: An Agenda for Senior Management

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By now it is commonly recognized that creating a High Performance Business requires the commitment and active leadership of senior management. Part of that leadership consists of achieving concerted thrust, balance, and integration of the organization's resources so that they align with its key processes. The resources in question include people, facilities, information, technology, and supplier capabilities. In this article we suggest important considerations for senior managers aligning their organizations' human resources with the vitally important process of product development.

Making the Process „Real“

The balanced management of product development is actually an outgrowth of process requirements. Unless product development managers have a clear understanding of the process of new product development, that process will almost certainly be „out of balance,“ and therefore wasteful and ineffective. Balanced management of product development rests on a willingness to treat the entire process „as though it really existed.“ This means that everyone involved must share a common – and comprehensive – description of the process. Otherwise, people can easily work at cross-purposes, as evidenced in the following real-life examples.

Isolation and Secrecy. Divisional management of a firm manufacturing small appliances decided to develop a new model of a highly successful appliance. The new product was intended to meet a major competitive threat: a recently introduced product with attractive new features that had previously been judged unfeasible. This new product thoroughly filled an entire set of distribution channels – the channels in which the division's distribution was weakest. This new product was offered by a deep-pocketed company with vaunted technological prowess. Although Marketing soon drafted a preliminary product positioning statement, it had not yet analyzed existing market information in terms recognizing the new threat, and it had gathered no information specific to the new competitive situation. Nonetheless, the Engineering Department immediately – and secretly – began product design. Although no definite product concept had been agreed to, and no one had proposed one for senior management to review, the product engineers and designers quickly reached the working drawing stage.

Engineering management justified its secret project-within-a-project as necessary to its own survival. In this company schedule was everything, and the announced schedule for formal product introduction could not be met if Engineering waited for Marketing to provide definite product positioning.

Conflicting Standards. In a formulated products business, Marketing framed all the product specifications for several major product lines in terms of product superiority. However, these performance specs almost never indicated a definitive product positioning against which to interpret the performance requirements. Marketing did not actually delineate, let alone quantify, the performance desired of a given product. Marketing did expect a statistically reliable consumer preference for any new product, as demonstrated by a direct head-to-head comparison between the new product and the leading product in that particular market. Marketing believed that its practices were clearly founded on the corporate vision and accompanying business strategy, which committed the company to superior value.

Sensory Evaluation, which was located in the R&D division, organizationally separate from Marketing, used a completely different standard, screening new products for parity performance rather than product superiority. The management of Sensory Evaluation believed that the firm could not meet the objectives for new product growth to which the CEO was committed if it introduced only the relatively few superior products it could develop during the five years of the company's growth plan.

Counterproductive Management. A major office equipment company had subdivided its product development process into many sequential steps. Within Engineering, which had responsibility for about half the steps in the overall process, the Engineering Design Section had developed its own internal performance standards by which to measure the draftsmen's output: They judged solely on the basis of the number of drawings produced. Furthermore, budget requests, claims of success, and staffing plans were all based on numbers of drawings completed or anticipated for the next budget period, thus basing resource requirements directly on the proliferation of drawings, with no regard for either the value of the drawings or their purpose.

In these examples, none of the people in charge of key aspects of new product development were thinking about the product development process as a whole. In fact, these examples show how easy it is for people engaged in product development to treat a small part of the product development process as the only reality they need to contend with.

Two of these companies asked Arthur D. Little consultants for assistance. After assessing the situation in each case, we convened small groups of middle managers and senior individual contributors who collectively „knew“ the entire product development process as carried out in each company. Our purpose was to develop or verify a description of the process.

All participants quickly acknowledged that hardly anyone understood the entire process. Even those few who claimed awareness of the process from beginning to end saw it from very particular viewpoints and could not describe the overall process acceptably to the group as a whole.

All three of the examples chosen are companies with deservedly good reputations for the basic quality of their product designs. None, however, has a reputation for superiority in new product introductions and only one has yet achieved product development cycle times even close to its world-class competitors.

All three companies have five amazing conditions in common.

- In none of the three was there an accepted description of the product development process or how it was supposed to work.
- Prior to our work with them, senior management had no awareness of the attitudes and issues described here. They recognized only that engineering, marketing, and manufacturing seemed to fight a lot, particularly regarding new products.
- The middle managers closest to product development were either oblivious to or misinformed about what was going on.
- After we discovered the situations outlined above, it required considerable effort to convince company managers of the accuracy of our observations.
- Despite the clear importance and urgency of product development to each of these companies, corrective action has been slow. Senior management in all these companies took product-development problems seriously enough to hire management consultants to address them. But, in the five years since the root causes of their problems came to light, only one of the companies has taken any definitive action. In the two other companies, management has been „thinking about doing something“ or has resigned itself to doing nothing until certain key players retire, four or five years from now.

How can responsible senior managers tolerate situations of this kind? Senior managers all too often do not see that they have a direct, personal responsibility for making major business processes work. They see themselves as strategists, as decision-makers, and sometimes as leaders – but not as key enablers of basic business processes that inevitably cross functional boundaries. Furthermore, they are inhibited by organizational traditions that they inherit and take as given, rather than recognizing an obligation and capability to create the operating environment required for high performance.

The Problem of Functional Organization

In many organizations, the principal barrier preventing senior management from creating an effective operating environment is the functional organization of its people. In a functional organization, nobody is in charge of new product development. Because a lot of people have a stake in each such process, management cannot easily give one function precedence over the others. In fact, appointing any individual functional leader to head development is often the kiss of death for at least one of the following: the functional leader thus recognized (whose colleagues unite to subvert him or her in the belief that one function has been unfairly elevated above the others); product development itself (because the functional leaders have neither credibility nor capability to represent the whole process of product development); or the principle of functional organization (which will lose its primacy to business processes as the organizing concept for the company). Within a traditional organizational structure, there is no natural candidate for the job of heading up the product development process. All existing management roles are either too high or too low, too narrow or too broad, too concentrated on only one function or too tied to a particular range of product lines. Despite the fact that the basic organization structure of most companies in much of the industrialized world remains primarily functional, the functional approach is not well suited to the product development process nor to the integrated management of any other major business process.

What Needs To Change

Organizations must rethink their key processes and then align their structures and resources to promote collaboration, concurrence, and effective leadership.

Collaboration. The product development process needs to be interfunctional, not multifunctional. The multifunctional approach can all too easily lead to the isolation and secrecy, conflicts, and counterproductivity outlined in the three examples above. Functional managers make sequential hand-offs from one function to another; they excel at clean delineation of independent tasks. However, anything „handed over the wall“ is „not invented here.“ Product development in big companies requires wholehearted sharing and clear focus on a common goal, which must be expressed as both outcome and process. The outcome should be described as a very specific product specification to meet a well understood strategic requirement. The process to achieve that goal is collaboration.

In many companies, the most senior levels of management do not perceive their own vital role in actually bringing about the collaboration they need to make their businesses work. They fail to understand that such collaboration must start at the top – with their own teams of top managers. In many cases, they allow other considerations to take precedence:

- „There’s no point in getting my senior managers together. It’s frustrating and wasteful; they just quarrel among themselves, even though I’ve told them that I want them to work as a team.“
- „These are strong people. They want to be measured by the results of their efforts. That means everyone for himself. That’s the price we have to pay for having strong people.“
- „I feel silly, like I’m wasting their time and mine by lecturing them when time is so short and we have so much to do that we know is important.“
- „They know what they’re supposed to do; I’m not going to tell them.“

These positions are evasions of responsibility. In companies where these attitudes prevail at the top, middle managers ask us, „If those guys aren’t together, how can we be expected to be?“ They’re right. Top management must get its own team working together, to serve as a model for collaboration throughout the firm.

Concurrence. To be effective, product development should be not a series of sequential hand-offs, but a concurrent process. We mean „concurrent“ in two senses: everybody whose input will or should shape the outcome must in some sense be „present“ in the project from beginning to end, working together in parallel; and, everybody with knowledge or skill to impart will then also have ample opportunities to „concur.“

How is concurrence accomplished? Every significant project in product development should be headed by a team leader and an interdisciplinary core team. Their collective role is fivefold:

- To ensure that everyone crucial to a particular new product understands the need for and the contributions of all the others. This shared understanding is essential to interfunctionality. Those who are crucial include direct participants and their managers, as well as managers of the business.
- To ensure that key participants and decision-makers have a specific shared understanding and commitment to the goals of the project.
- To ensure that key participants and decision-makers share an understanding of how the project’s desired outcomes relate to the strategy of the business.
- To ensure concurrent understanding among key participants and decision-makers of all key issues and the information needed to resolve those issues.
- To ensure that none of the work done by any group or individual will have to be discarded later because it is „off-track.“ This is more a matter of communication than of restriction or control. It is not intended to prevent members of the development team from taking risks, but to make sure that they have all the relevant information.

How many senior managers charter teams to promote concurrence? In our experience, many high-ranking managers feel comfortable only about creating committees and not about creating strong teams that embody and promote concurrent, horizontal communications, even in support of a major business process.

Effective Team Leadership. To be successful, the new product development process requires top management effort to ensure that effective team leadership skills are available. Here top managers can pursue one of two strategies. They can create and sustain strongly motivated interdisciplinary product development teams, or they can nurture and grow individual managers, each skilled in all the principal disciplines, in sufficient number to head up the firm's principal product development activities. The latter approach can succeed only if the firm has very strong individual product developers who can function almost like one-person teams, working among groups of specialists whom they coordinate, mutually interpret, and substantively evaluate. Such individuals become living embodiments of the entire product development process.

Generally, we prefer the team solution: it is more flexible, easier to get started, and less risky in the long run, because strong team-building skills are easier to replace than strong multidisciplinary skills. (However, there is the drawback that we mentioned earlier. Strong, interfunctional teams are not popular in functionally organized businesses, so some managers will demand an alternative.) Functional heads continue to regard teams not completely under the control of individual functions as disruptive and subversive to good order. Streetwise

managers and their subordinates take their bosses' attitudes as adverse signals – warnings that could imply negative career impact for unwary teamwork enthusiasts. Senior and top managers, streetwise middle managers themselves only a few years back, instinctively react to the same sort of awareness.

The Senior Management Agenda

If the product development process isn't „real“ to senior management, it won't be real to anyone. Senior management should ensure that management owns a detailed understanding of the product development process – and that this understanding is shared by its major participants.

At a minimum, senior management must convincingly demonstrate its belief that the process is „real“:

- By consistently acting as though it is
- By asking its practitioners lots of questions about it
- By ensuring that major participants all share a common understanding of the process
- By requiring that participants in product development use the overall process consistently

Second, only senior management can provide the leadership necessary to overcome functional or departmental parochialism. Only senior management can decide what combination of matrixing, project management, culture change, and teamwork enhancement will be required to permit the product development process to proceed in a balanced fashion. If major business processes, including product development, are actually to be put into the hands of so-called „process stewards,“ senior management has to legitimate the choices it makes and support those choices vigorously. If process stewardship is to be collective, top management has no choice but to effect serious teamwork among senior managers.

Third, senior management must promote, demonstrate, and support teamwork. Top management needs to project its own substantive understanding of teamwork. It must demand that talented people be well-trained and available to carry out team leadership roles. Most important, it must ensure that career development and performance appraisal really work in support of the project team leaders and members, many of whom will be seconded to demanding full-time roles that will keep them away from their „regular“ jobs for many months at a time.

Fourth, top management must insist on the principle of concurrence; otherwise, it will not be applied. In most companies, concurrence requires a significant revision in rules and customs regarding access to information, decision-making processes, and relationships among individuals in different departments. Only top management can bring about product development team charters that enable these teams to become major vehicles for concurrence. Only top management can create or verify the required policies.

The senior managers of a company cannot themselves get new products out, nor can they directly cause the product developers to achieve world-class product quality or cycle time. What they can do is to create the working environment needed for the new product strategy to be effective.

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