built in methods for this as well. Methods vary, but essentially, the ideas are first sorted into topic categories (by the software or by participants), duplications culled, rough evaluation/culling by participants, and then serious evaluation of the most worthwhile set. This step usually uses a weighted scoring system, ranking, and ultimate culling to the few that will be implemented immediately; evaluation judgments can also be weighted by the evaluator's professed judgment experience, or by the manager's assigned weights on each individual's scorings. The software even provides for this as well, using implementation boxes, name assignments, implementation steps and dates, and so on. At the end of the meeting (in the case of the insurance firm lasting from 9:00 to 4:30) a full plan of action has been developed to deal with the problem stated at the top of the meeting. And, anonymity has been maintained up to the point of action.

There is a down side, of course, and problems are: (1) the method may be oversold as a cure-all, (2) it requires some keyboarding skill (though this will be less as new entry technology advances), (3) there is loss of power for some senior people, (4) there is less social interaction (though more than one might expect), (5) there is overload during editing and evaluation, (6) the facilities and software are still relatively expensive, and (7) not all topics are suitable (though new product ideation is very suitable).

Controlling the Product Creation Process, Herman Vantrappen and John Collins, *Prism* (Second quarter 1993), pp. 59–73

Today's managements worry about their cross-functional new product team systems. How can they gain the team advantages without losing control over them? Will there be loss of functional excellence? What happens to individual accountability? How much wasted effort is there when tasks proceed in parallel?

The authors believe an appropriate control system should be modeled after the metaphor of mountain-climbers' nightly bivouacs. This means milestones, but definitely not those associated with border crossing points. A mountain-climbing team considers nightly whether its objective was met for that day, whether unanticipated problems appeared, whether supplies and equipment were ready for the next day, whether assistance should be called up from the base camp, and so on. The review is positive and designed to facilitate progress, not to inhibit or restrict it.

So the proposed system for controlling new products builds around those same issues. First, is there a project plan that identifies all milestone events? Second, are the deliverables for each milestone clearly defined in advance? Third, do the review meetings involve people appropriate to the issues, force action on each problem rather than letting it be overridden, and assure that all functional needs are being addressed?

The authors prefer standard frameworks for all projects, with common vocabulary, reduced start-up time spent in defining structures, and the use of benchmarking. But control structures must also reflect natural breaks unique to each situation. Milestone reviews are usually associated with times where functional roles change sharply, where deliverables come due, or where key resource decisions must be made.

No structure of milestones will accomplish much unless it has a clear statement of its deliverables— tangible, quantitative, assessable. It would appear that a mountain-climbing team might have a difficult bivouac meeting if a snowstorm keeps them from assessing just where they are.

The third issue, the proper review process to use at each review meeting, is difficult. "Most companies have far too many boards and committees to steer and supervise the product creation process .... As one board proves ineffective, another one is added." The authors call for a zero-based rethinking of the process.

The article goes on to show various control charts A.D. Little has worked with, and speaks to the traditional questions of controlling tightly enough but not too tightly. Their thoughts are in the new product construct.

Product Adaptability: Assessment and Strategy, Daryl O. McKee and Sid Konell, *Journal of Product and Brand Management* (1993, vol. 2, no. 2), pp. 33–47 (GPL)

Adaptability rather than predictability is emerging as a dominant issue in new product strategy. A product launch is only a tentative commitment to a malleable product, because after launch the item may be adapted to meet changing market conditions. This article presents a framework for systematically assessing product adaptability, which is a firm's ability to change products and their support systems.

The framework consists of two underlying dimensions: *product domain* (*single* versus *multiple* product

variations) and *performance criteria* (*internal*, e.g., production efficiency, versus *external*, e.g., market acceptance). The combination of these two 2-value dimensions yields four basic types of product flexibility, which can be used for planning products and alternative actions.

1. Modifiability

The efficiency with which an organization can make an internal change in a single product via R&D or production (e.g., the upgradeable computer). A few key factors affect modifiability:

- *Adaptable design*—building modification capabilities into the initial design (e.g., automobile steering column assemblies designed to accept airbags before they become required).

- *Skill congruence*—the ability to modify a product based on congruence between design, production, distribution, and/or service. This calls for skill generalization—increasing the range of tasks performed by individual employees to include new technologies. It is done by job rotation and other mechanisms, e.g., reducing the rigidity of work classification to enable development of multiple skills in marketing and R&D departments.

- *Interfunctional congruence*—the integrating and balancing of product research, development and engineering, marketing and selling, and delivery systems. This is accomplished by special top management emphasis or by leadership at the product management level.

2. Compatibility

The extent to which one product fits with other products produced by a company, as measured by the firm's ability to delete, modify, or add to product lines. The key factors that contribute to compatibility are:

- *Product synergies*—when the closeness of fundamental skills or resources permits efficient shifts between products. E.g., Vaseline Petroleum Jelly was expanded into a line of health- and beauty-related products such as Intensive Care Lotion and Vaseline Bath Beads.

- *Production and distribution compatibility*— achieved by generalizing them rather than

building separate systems for each product. E.g., BIB's products all move through grocery and drug stores.

- *R&D compatibility*—when technical capabilities can be stockpiled to meet particular types of customer demands. E.g., based on interactions with both customers and R&D, 3M's marketing personnel can match customer needs with techniques available at 3M.

3. Acceptability

The market acceptance of one product across customer groups or over time. It is a function of the following factors:

- *Product standardization*—when a single product is developed to satisfy a broad array of needs and segments, such as what Black & Decker has done with motor sizes.

- *Simultaneous enhancements*—when a new item is produced from the beginning to serve multiple segments, such as on a new Mattell doll.

- *Sequential enhancements*—when a core product is enhanced over time to serve an expanding infrastructure of user segments.

4. Leveragability

The linkage of one product with others in the firm's line through common brand names, promotion, and presentation. The key factors here are:

- *Brand extension*—such as when the various Ivory products fit well together.

- *Promotional linkage*—when a theme covers a whole line, such as with most Coca-Cola advertising.

Several managerial implications and recommendations are offered in the article. First, *all aspects of adaptability should be carefully assessed during product development.* Success may depend on adaptability analysis prior to commercialization. Second, *product adaptability should support the firm's overall strategy.* An efficiency-based high-volume effort requires considerable convertibility. Third, *managers should identify unique factors underlying product adaptability.* If adaptability needs focus on R&D-based compatibility, it might be useful to develop

interproduct involvement by research personnel. Fourth, *product adaptability analysis should be conducted for services too.*

3M's Sophisticated Formula for Teamwork, Michael K. Allio, *Planning Forum* (November-December 1993), pp. 19–21

At a recent Planning Forum Conference, a presentation on the use of empowered teams was made by two managers from 3M: Robert Hershock, a group vice president and David L. Braun, corporate scientist. They reported on what happened in the establishment of a high-speed new product team to develop a new gas/vapor/particle personal filtering mask and develop the appropriate process for their team and other teams to follow. Their story contained much that is widely known about the creation and management of new product teams, but several of their ideas may be surprising to some readers.

1. They used the phrase "bosses were to become leaders." It was not explained, but it suggests that leadership has a subtle meaning that extends beyond or within bossing.
2. They stressed that the team needs a charter. Mission is the term more commonly used, but charter has a demanding directional dimension. Among other things, the charter gives goals and objectives and lays out parameters within which the team has the freedom to operate. For example, they suspend some normal checks and balances, such as when they allowed this team to order a press from Austria, on their own, and with air shipment.
3. They said that the team should be interdisciplinary, but not necessarily cross-functional. Advisors are called in when necessary; not every area needs to be on the team.
4. A phrase "hierarchies are *suspended*" suggests an interesting way of telling functional managers how they will relate to the new team. This is especially critical at 3M because their teams are part-time assignments, not dedicated.
5. Facilitation was stressed as perhaps the central function of the team leader.
6. A sponsor was "established" and "assigned" to the team. Often thought to be a function of the team leader to find such a higher-level supporter, 3M thinks it is so important they see that one is provided.
7. A three-day team-participation training session was held.

8. The team was allowed to spell out when senior management would intervene.
9. They think that teams go through a three-phase life cycle. The first phase is the transitional phase, when teams "suffer from divisions of loyalty." When dedication occurs, they enter the operating phase where most of the work is done. The team may enter a final critical phase, if conditions get so tough that the team players create auto-networks, small groups who must handle tough issues on a zero-time basis. During a critical phase team members may be put full-time on the task, via "grace periods" for their regular assignments.
10. Team members are asked to set their own rewards, even straight money, and decide who participates. One team asked that all of the important players be permitted to attend the official product launch in Germany.
11. Groups are disbanded "after they have met their objectives." But, this is unclear because the subject team was told the item was to be a $10 million business in five years. Yet the inference was given that they were disbanded well before that time. (The new product exceeded this goal.)
12. The 3M managers "recommend that objective, outside consultants review the team's performance to understand its effectiveness and to gather lessons about the process."

Is National Design Dead?, Marilyn Stern, *Across the Board* (September 1993), pp. 32–37

The industrial designer is a key player on the product development team. Given that new product focus today is rapidly becoming transnational, or global, the question naturally arises: will design also become global? The answer varies—some say it already has, some say it is rapidly becoming so, some say no it just appears so, some say it may but should not, and some say it never will. Take your pick.

A group of top designers recently looked at twelve new products, and their average score was 16% correct national identification. This has especially happened in the industrial and business world, less so in fashion, textiles, and tableware.

Building blocks of style (where national "looks" appear) are being used in multicultural stews, or bouillabaisse. The Swatch watch, for example. Corporations are becoming globalized—production is being scattered all over the world, media are becoming more