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OnPoint

ARTICLE

Your most potent weapon
in the accelerating drive
for corporate innovation?

Middle managers who push
beyond their ordinary
responsibilities—to fuel
extraordinary change.

*New sections to
guide you through
the article:*

- *The Idea in Brief*
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- *Exploring Further...*

The Middle Manager as Innovator

by Rosabeth Moss Kanter

PRODUCT NUMBER 7885

THE IDEA

IN BRIEF

The Middle Manager as Innovator

You know your company's long-term success hinges on innovation—creating new products, services, markets, and methods. But did you also know that it's your middle managers who can best identify *and* drive the potent ideas that will define your firm's future?

Yes, innovation is difficult: It disrupts the status quo and cuts across all your organiza-

tion's boundaries. That's why you need *entrepreneurial* middle managers—leaders who go *beyond* the limits of their formal job descriptions to acquire the informal power and resources that really make change happen.

Here's how the most effective middle managers "push the envelope" during the innovation process.

THE IDEA

AT WORK

ANY innovation consists of three major phases: 1) defining a potential project, 2) building a coalition to support the project, and 3) taking action to implement the project.

Entrepreneurial middle managers stretch themselves beyond the boundaries of their formal job responsibilities in distinct ways during each of these three phases.

Defining a Project

In identifying a potentially valuable innovation, middle managers:

- Gather information (both political and technical) broadly and deeply from varied sources.
- Translate that information into a manageable and salable project.
- Identify what needs to get done beyond the scope of the assigned task.

EXAMPLE:

Charged with improving cost efficiency, manufacturing head Heidi Wilson physically followed goods as they traveled through her company, sought line managers' insights, identified vested interests, compiled data, and packaged her ideas in punchy presentations that persuaded critics. Result? Her project won approval and netted impressive cost savings.

Building a Coalition

Here's where middle-manager entrepreneurs truly shine. These leaders:

- Build consensus by stepping out of the usual chains of command.

- Gather top-level support by giving higher-ups compelling presentations to persuade *their* constituencies.
- Pull in needed resources and support by developing a broad and strong network of peers and higher level backers ("cheerleaders").

EXAMPLE:

To shape a major policy decision about the choice of a product-demo model, manager George Putnam leveraged long-term relationships. Through informal meetings and one-on-one "horse-trading" (showing managers how much support others chipped in), he got needed testing materials, funding, staff—and the engineering VP's blessing. His demo model won—and became a very strong money-maker.

Taking Action

To implement an innovation, middle managers:

- Mobilize key players to carry out the project—and forge them into a unified team.
- Protect the team from interference to the project.
- Counter any criticism with clear facts and reminders of the project's benefits.
- Maintain momentum and enthusiasm for the project in the face of competing demands.
- Make needed midcourse corrections to redouble any effort that's bogging down.
- Communicate progress to key constituencies to secure credibility.

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The Middle Manager as Innovator

Rosabeth Moss Kanter

If there's one thing that most U.S. executives agree on, it's the need for higher productivity in American workplaces. So far most efforts at raising performance have concentrated on factory and office employees—partly, one assumes, because their output is easily measured. However, the increases in productivity at the shop or office level will mean nothing in the long run, if, for instance, new products aren't designed, new structures aren't put in place to accommodate change, or new equipment isn't conceived to improve product quality. In other words, a company's productivity depends to a great degree on how innovative its middle managers are.

In this article, the author describes a study she conducted of 165 middle managers in five companies to determine what managers contribute to innovation and what factors the most innovative companies have in common. She found that, among other things, innovative managers tend to be visionary, comfortable with change, and persistent. Innovation flourishes in companies where territories overlap and people have contact across functions; information flows freely; numbers of people have excesses in their budgets; many managers are in open-ended positions; and reward systems look to the future, not the past.

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ration (Basic Books, 1977) and numerous other books and articles. This is her second article for HBR; the first was "Power Failures in Management Circuits," which appeared in our July-August 1979 issue and was an HBR McKinsey Award winner for that year. This article is based on research for her new book, The Change Masters: Innovation for Productivity in the American Mode, which Simon & Schuster will publish in February 1983.

□ When Steve Talbot, an operations manager, began a staff job reporting to the general manager of a product group, he had no line responsibility, no subordinates or budget of his own, and only a vague mandate to "explore options to improve performance."

To do this, Talbot set about collecting resources by bargaining with product-line managers and sales managers. By promising the product-line managers that he would save them having to negotiate with sales to get top priority for their products, he got a budget from them. Then, because he had the money in hand, Talbot got the sales managers to agree to hire one salesperson per product line, with Talbot permitted to do the hiring.

The next area he tackled was field services. Because the people in this area were conservative and tightfisted, Talbot went to his boss to get support for his recommendations about this area.

With the sales and service functions increasing their market share, it was easy for Talbot to get the product-line managers' backing when he pushed for selling a major new product that he had devised. And, to keep his action team functioning and behind him, Talbot made sure that "everyone became a hero"

when the senior vice president of engineering asked him to explain his success to corporate officers.

□ Arthur Drumm, a technical department head of two sections, wanted to develop a new measuring instrument that could dramatically improve the company's product quality. But only Drumm thought this approach would work; those around him were not convinced it was needed or would pay off. After spending months developing data to show that the company needed the instrument, Drumm convinced several of his bosses two levels up to contribute \$300,000 to its development. He put together a task force made up of representatives from all the manufacturing sites to advise on the development process and to ensure that the instrument would fit in with operations.

When, early on, one high-level manager opposed the project, Drumm coached two others in preparation for an officer-level meeting at which they were going to present his proposal. And when executives argued about which budget line the money would come from, R&D or engineering, Drumm tried to ease the tension. His persistence netted the company an extremely valuable new technique.

□ When Doris Randall became the head of a backwater purchasing department, one of three departments in her area, she expected the assignment to advance her career. Understandably, she was disappointed at the poor state of the function she had inherited and looked around for ways to make improvements. She first sought information from users of the department's services and, with this information, got her boss to agree to a first wave of changes. No one in her position had ever had such close contacts with users before, and Randall employed her knowledge to reorganize the unit into a cluster of user-oriented specialties (with each staff member concentrating on a particular need).

Once she had the reorganization in place and her function acknowledged as the best purchasing department in the region, Randall wanted to reorganize the other two purchasing departments. Her boss, perhaps out of concern that he would lose his position to Randall if the proposed changes took place, discouraged her. But her credibility was so strong that her boss's boss—who viewed her changes as a model for improvements in other areas—gave Randall the go-ahead to merge the three purchasing departments into one. Greater efficiency, cost savings, and increased user satisfaction resulted.

These three managers are enterprising, innovative, and entrepreneurial middle managers who are part of a group that can play a key role in the United States' return to economic leadership.

If that seems like an overly grand statement, consider the basis for U.S. companies' success in the past: innovation in products and advances in management techniques. Then consider the pivotal contribution middle managers make to innovation and change in large organizations. Top leaders' general directives to open a new market, improve quality, or cut costs mean nothing without efficient middle managers just below officer level able to design the systems, carry them out, and redirect their staffs' activities accordingly. Furthermore, because middle managers have their fingers on the pulse of operations, they can also conceive, suggest, and set in motion new ideas that top managers may not have thought of.

The middle managers described here are not extraordinary individuals. They do, however, share a number of characteristics.

Comfort with change

They are confident that uncertainties will be clarified. They also have foresight and see unmet needs as opportunities.

Clarity of direction

They select projects carefully and, with their long time horizons, view setbacks as temporary blips in an otherwise straight path to a goal.

Thoroughness

They prepare well for meetings and are professional in making their presentations. They have insight into organizational politics and a sense of whose support can help them at various junctures.

Participative management style

They encourage subordinates to put in maximum effort and to be part of the team, promise them a share of the rewards, and deliver on their promises.

Persuasiveness, persistence, and discretion

They understand that they cannot achieve their ends overnight, so they persevere—using tact—until they do.

What makes it possible for managers to use such skills for the company's benefit? They work in organizations where the culture fosters collaboration and teamwork and where structures encourage people to "do what needs to be done." Moreover, they usually work under top managers who consciously incorporate conditions facilitating innovation and achievement into their companies' structures and operations.

These conclusions come from a study of the major

accomplishments of 165 effective middle managers in five leading American corporations (for details on the research, see the ruled insert on page 97). I undertook this study to determine managers' contributions to a company's overall success as well as the conditions that stimulate innovation and thus push a business beyond a short-term emphasis and allow it to secure a successful future.

Each of the 165 managers studied—all of whom were deemed "effective" by their companies—told the research team about a particular accomplishment; these covered a wide range. Some of the successes, though impressive, clearly were achieved within the boundaries of established company practice. Others, however, involved innovation: introduction of new methods, structures, or products that increased the company's capacity. All in all, 99 of the 165 accomplishments fall within the definition of an innovative effort.

Basic accomplishments differ from innovative ones not only in scope and long-run impact but also in what it takes to achieve them. They are part of the assigned job and require only routine and readily available means to carry them out. Managers reporting this kind of accomplishment said they were just doing their jobs. Little was problematic—they had an assignment to tackle; they were told, or they

already knew, how to go about it; they used existing budget or staff; they didn't need to gather or share much information outside of their units; and they encountered little or no opposition. Managers performing such activities don't generate innovations for their companies; they merely accomplish things faster or better than they already know how to do.

In contrast, innovative accomplishments are strikingly entrepreneurial. Moreover, they are sometimes highly problematic and generally involve acquiring and using power and influence. (See the ruled insert on page 99 for more details on the study's definitions of *basic* and *innovative* accomplishments.)

In this article, I first explore how managers influence their organizations to achieve goals throughout the various stages of a project's life. Next I discuss the managerial styles of the persons studied and the kinds of innovation they brought about. I look finally at the types of companies these entrepreneurial managers worked in and explore what top officers can do to foster a creative environment.

The Role of Power in Enterprise

Because most innovative achievements cut across organizational lines and threaten to disrupt existing

The research project

After a pilot study in which it interviewed 26 effective middle managers from 18 companies, the research team interviewed, in depth, 165 middle managers from five major corporations located across the United States. The 165 were chosen by their companies to participate because of their reputations for effectiveness. We did not want a random sample: we were looking for "the best and the brightest" who could serve as models for others. It turned out, however, that every major function was represented, and roughly in proportion to its importance in the company's success. (For example, there were more innovative sales and marketing managers representing the "market-driven" company and more technical, R&D, and manufacturing managers from the "product-driven" companies.)

During the two-hour interviews, the managers talked about all aspects of a single significant accomplishment, from the glimmering of an idea to the results. We asked the managers to focus on the most significant of a set of four or five of their accomplishments over the previous two years. We also elicited a chronology of the project as well as responses to a set of open-ended questions about the acquisition of power, the handling of roadblocks, and the doling out of rewards. We supple-

mented the interviews with discussions about current issues in the five companies with our contacts in each company.

The five companies represent a range of types and industries: from rather traditional, slow-moving, mature companies to fast-changing, newer, high-technology companies. We included both service and manufacturing companies that are from different parts of the country and are at different stages in their development. The one thing that all five have in common is an intense interest in the topic of the study. Facing highly competitive markets (for the manufacturing companies a constant since their founding, for the service companies a new phenomenon), all of these corporations wanted to encourage their middle managers to be more enterprising and innovative.

Our pseudonyms for the companies emphasize a central feature of each:

CHIPCO: manufacturer of computer products
FINCO: insurance and related financial services
MEDCO: manufacturer of large medical equipment
RADCO (for "R&D"): manufacturer of optical products
UTICO: communications utility

What is an innovative accomplishment?

We categorize the 165 managers' accomplishments according to their primary impact on the company. Many accomplishments had multiple results or multiple components, but it was the breadth of scope of the accomplishment and its future utility for the company that defined its category. Immediate dollar results were not the central issue; rather, organizational "learning" or increased future capacity was the key. Thus, improving revenues by cutting costs while changing nothing else would be categorized differently from improving revenues by designing a new production method; only the latter leaves a lasting trace.

The accomplishments fall into two clusters:

Basic. Done solely within the existing framework and not affecting the company's longer-term capacity; 66 of the 165 fall into this category.

Innovative. A new way for the company to use or expand its resources that raises long-term capacity; 99 of the 165 are such achievements.

Basic accomplishments include:

Doing the basic job—simply carrying out adequately a defined assignment within the bounds of one's job (e.g., "fulfilled sales objectives during a reorganization").

Affecting individuals' performance—having an impact on individuals (e.g., "found employee a job in original department after failing to retrain him").

Advancing incrementally—achieving a higher level of performance within the basic job (e.g., "met more production schedules in plant than in past").

Innovative accomplishments include:

Effecting a new policy—creating a change of orientation or direction (e.g., "changed price-setting policy in product line with new model showing cost-quality trade-offs").

Finding a new opportunity—developing an entirely new product or opening a new market (e.g., "sold new product program to higher management and developed staffing for it").

Devising a fresh method—introducing a new process, procedure, or technology for continued use (e.g., "designed and implemented new information system for financial results by business sectors").

Designing a new structure—changing the formal structure, reorganizing or introducing a new structure, or forging a different link among units (e.g., "consolidated three offices into one").

While members of the research team occasionally argued about the placement of accomplishments in the subcategories, we were almost unanimous as to whether an accomplishment rated as basic or innovative. Even bringing off a financially significant or flashy increase in performance was considered basic if the accomplishment was well within the manager's assignment and territory, involved no new methods that could be used to repeat the feat elsewhere, opened no opportunities, or had no impact on corporate structure—in other words, reflected little inventiveness. The manager who achieved such a result might have been an excellent manager, but he or she was not an innovative one.

arrangements, enterprising managers need tools beyond those that come with the job. Innovations have implications for other functions and areas, and they require data, agreements, and resources of wider scope than routine operations demand. Even R&D managers, who are expected to produce innovations, need more information, support, and resources for major projects than those built into regular R&D functions. They too may need additional data, more money, or agreement from extrafunctional officials that the project is necessary. Only hindsight shows that an innovative project was bound to be successful.

Because of the extra resources they require, entrepreneurial managers need to go beyond the limits of their formal positions. For this, they need power. In large organizations at least, I have observed that

powerlessness "corrupts."¹ That is, lack of power (the capacity to mobilize resources and people to get things done) tends to create managers who are more concerned about guarding their territories than about collaborating with others to benefit the organization. At the same time, when managers hoard potential power and don't invest it in productive action, it atrophies and eventually blocks achievements.

Furthermore, when some people have too much unused power and others too little, problems occur. To produce results, power—like money—needs to circulate. To come up with innovations, managers have to be in areas where power circulates, where it

1. See my book *Men and Women of the Corporation* (New York: Basic Books, 1977); also see my article, "Power Failure in Management Circuits," *HBR* July-August 1979, p. 65.

can be grabbed and invested. In this sense, organizational power is transactional: it exists as potential until someone makes a bid for it, invests it, and produces results with it.

The overarching condition required for managers to produce innovative achievements is this: they must envision an accomplishment beyond the scope of the job. They cannot alone possess the power to carry their idea out but they must be able to acquire the power they need easily. Thus, creative managers are not empowered simply by a boss or their job; on their own they seek and find the additional strength it takes to carry out major new initiatives. They are the corporate entrepreneurs.

Three commodities are necessary for accumulating productive power—information, resources, and support. Managers might find a portion of these within their purview and pour them into a project; managers with something they believe in will eagerly leverage their own staff and budget and even bootleg resources from their subordinates' budgets. But innovations usually require a manager to search for additional supplies elsewhere in the organization. Depending on how easy the organization makes it to tap sources of power and on how technical the project is, acquiring power can be the most time-consuming and difficult part of the process.

Phases of the Accomplishment

A prototypical innovation goes through three phases: project definition (acquisition and application of information to shape a manageable, salable project), coalition building (development of a network of backers who agree to provide resources and support), and action (application of the resources, information, and support to the project and mobilization of an action team). Let us examine each of these steps in more detail.

Defining the project

Before defining a project, managers need to identify the problem. People in an organization may hold many conflicting views about the best method of reaching a goal, and discovering the basis of these conflicting perspectives (while gathering hard data) is critical to a manager's success.

In one case, information circulating freely about the original design of a part was inaccurate. The manager needed to acquire new data to prove that the problem he was about to tackle was not a manufacturing shortcoming but a design flaw. But, as often happens, some people had a stake in the popular view. Even hard-nosed engineers in our study ac-

knowledged that, in the early stages of an entrepreneurial project, managers need political information as much as they do technical data. Without political savvy, say these engineers, no one can get a project beyond the proposal stage.

The culmination of the project definition phase comes when managers sift through the fragments of information from each source and focus on a particular target. Then, despite the fact that managers may initially have been handed a certain area as an assignment, they still have to "sell" the project that evolves. In the innovative efforts I observed, the managers' assignments involved no promises of resources or support required to do anything more than routine activities.

Furthermore, to implement the innovation, a manager has to call on the cooperation of many others besides the boss who assigned the task. Many of these others may be independent actors who are not compelled to cooperate simply because the manager has carved a project out of a general assignment. Even subordinates may not be automatically on board. If they are professionals or managers, they have a number of other tasks and the right to set some of their own priorities; and if they are in a matrix, they may be responsible to other bosses as well.

For example, in her new job as head of a manufacturing planning unit, Heidi Wilson's assignment was to improve the cost efficiency of operations and thereby boost the company's price competitiveness. Her boss told her she could spend six months "saying nothing and just observing, getting to know what's really going on." One of the first things she noticed was that the flow of goods through the company was organized in an overly complicated, time-consuming, and expensive fashion.

The assignment gave Wilson the mandate to seek information but not to carry out any particular activities. Wilson set about to gather organizational, technical, and political information in order to translate her ambiguous task into a concrete project. She followed goods through the company to determine what the process was and how it could be changed. She sought ideas and impressions from manufacturing line managers, at the same time learning the location of vested interests and where other patches of organizational quicksand lurked. She compiled data, refined her approach, and packaged and repackaged her ideas until she believed she could "prove to people that I knew more about the company than they did."

Wilson's next step was "to do a number of punchy presentations with pictures and graphs and charts." At the presentations, she got two kinds of response: "Gee, we thought there was a problem but we never saw it outlined like this before" and "Aren't there better things to worry about?" To handle the critics,

she "simply came back over and over again with information, more information than anyone else had." When she had gathered the data and received the feedback, Wilson was ready to formulate a project and sell it to her boss. Ultimately, her project was approved, and it netted impressive cost savings.

Thus although innovation may begin with an assignment, it is usually one—like Wilson's—that is couched in general statements of results with the means largely unspecified. Occasionally, managers initiate projects themselves; however, initiation seldom occurs in a vacuum. Creative managers listen to a stream of information from superiors and peers and then identify a perceived need. In the early stages of defining a project, managers may spend more time talking with people outside their own functions than with subordinates or bosses inside.

One R&D manager said he had "hung out" with product designers while trying to get a handle on the best way to formulate a new process-development project. Another R&D manager in our survey got the idea for a new production method from a conversation about problems he had with the head of production. He then convinced his boss to let him determine whether a corrective project could be developed.

Building a coalition

Next, entrepreneurial managers need to pull in the resources and support to make the project work. For creative accomplishments, these power-related tools do not come through the vertical chain of command but rather from many areas of the organization.

George Putnam's innovation is typical. Putnam was an assistant department manager for product testing in a company that was about to demonstrate a product at a site that attracted a large number of potential buyers. Putnam heard through the grapevine that a decision was imminent about which model to display. The product managers were each lobbying for their own, and the marketing people also had a favorite. Putnam, who was close to the products, thought that the first-choice model had grave defects and so decided to demonstrate to the marketing staff both what the problems with the first one were and the superiority of another model.

Building on a long-term relationship with the people in corporate quality control and a good alliance with his boss, Putnam sought the tools he needed: the blessing of the vice president of engineering (his boss's boss), special materials for testing from the materials division, a budget from corporate quality control, and staff from his own units to carry out the tests. As Putnam put it, this was all done through one-on-one "horse trading"—showing each manager how much the others were chipping in. Then Putnam

met informally with the key marketing staffer to learn what it would take to convince him.

As the test results emerged, Putnam took them to his peers in marketing, engineering, and quality control so they could feed them to their superiors. The accumulated support persuaded the decision makers to adopt Putnam's choice of a model; it later became a strong money-maker. In sum, Putnam had completely stepped out of his usual role to build a consensus that shaped a major policy decision.

Thus the most successful innovations derive from situations where a number of people from a number of areas make contributions. They provide a kind of checks-and-balances system to an activity that is otherwise nonroutine and, therefore, is not subject to the usual controls. By building a coalition before extensive project activity gets under way, the manager also ensures the availability of enough support to keep momentum going and to guarantee implementation.

In one company, the process of lining up peers and stakeholders as early supporters is called "making cheerleaders"; in another, "preselling." Sometimes managers ask peers for "pledges" of money or staff to be collected later if higher management approves the project and provides overall resources.

After garnering peer support, usually managers next seek support at much higher levels. While we found surprisingly few instances of top management directly sponsoring or championing a project, we did find that a general blessing from the top is clearly necessary to convert potential supporters into a solid team. In one case, top officers simply showed up at a meeting where the proposal was being discussed; their presence ensured that other people couldn't use the "pocket veto" power of headquarters as an excuse to table the issue. Also, the very presence of a key executive at such a meeting is often a signal of the proposal's importance to the rest of the organization.

Enterprising managers learn who at the top-executive level has the power to affect their projects (including material resources or vital initial approval power). Then they negotiate for these executives' support, using polished formal presentations. Whereas managers can often sell the project to peers and stakeholders by appealing to these people's self-interests and assuring them they know what they're talking about, managers need to offer top executives more guarantees about both the technical and the political adequacies of projects.

Key executives tend to evaluate a proposal in terms of its salability to *their* constituencies. Sometimes entrepreneurial managers arm top executives with materials or rehearse them for their own presentations to other people (such as members of an executive committee or the board) who have to approve the project.

Most often, since many of the projects that originate at the middle of a company can be supported at that level and will not tap corporate funds, those at high levels in the organization simply provide a general expression of support. However, the attention top management confers on this activity, many of our interviewees told us, makes it possible to sell their own staffs as well as others.

But once in a while, a presentation to top-level officers results in help in obtaining supplies. Sometimes enterprising managers walk away with the promise of a large capital expenditure or assistance getting staff or space. Sometimes a promise of resources is contingent on getting others on board. "If you can raise the money, go ahead with this," is a frequent directive to an enterprising manager.

In one situation, a service manager approached his boss and his boss's boss for a budget for a college recruitment and training program that he had been supporting on his own with funds bootlegged from his staff. The top executives told him they would grant a large budget if he could get his four peers to support the project. Somewhat to their surprise, he came back with this support. He had taken his peers away from the office for three days for a round of negotiation and planning. In cases like this, top management is not so much hedging its bets as using its ability to secure peer support for what might otherwise be risky projects.

With promises of resources and support in hand, enterprising managers can go back to the immediate boss or bosses to make plans for moving ahead. Usually the bosses are simply waiting for this tangible sign of power to continue authorizing the project. But in other cases the bosses are not fully involved and won't be sold until the manager has higher-level support.

Of course, during the coalition-building phase, the network of supporters does not play a passive role; their comments, criticisms, and objectives help shape the project into one that is more likely to succeed. Another result of the coalition-building phase is, then, a set of reality checks that ensures that projects unlikely to succeed will go no farther.

Moving into action

The innovating manager's next step is to mobilize key players to carry out the project. Whether the players are nominal subordinates or a special project group such as a task force, managers forge them into a team. Enterprising managers bring the people involved in the project together, give them briefings and assignments, pump them up for the extra effort needed, seek their ideas and suggestions (both as a way to involve them and to further refine the project), and promise them a share of the rewards. As one

manager put it, "It takes more selling than telling." In most of the innovations we observed, the manager couldn't just order subordinates to get involved. Doing something beyond routine work that involves creativity and cooperation requires the full commitment of subordinates; otherwise the project will not succeed.

During the action phase, managers have four central organizational tasks. The technical details of the project and the actual work directed toward project goals are now in the hands of the action team. Managers may contribute ideas or even get involved in hands-on experimentation, but their primary functions are still largely external and organizational, centered around maintaining the boundaries and integrity of the project.

The manager's first task is to *handle interference* or opposition that may jeopardize the project. Entrepreneurial managers encounter strikingly little overt opposition—perhaps because their success at coalition building determines whether a project gets started in the first place. Resistance takes a more passive form: criticism of the plan's details, foot-dragging, late responses to requests, or arguments over allocation of time and resources among projects.

Managers are sometimes surprised that critics keep so quiet up to this point. One manufacturing manager who was gearing up for production of a new item had approached many executives in other areas while making cost estimates, and these executives had appeared positive about his efforts. But later, when he began organizing the manufacturing process itself, he heard objections from these very people.

During this phase, therefore, innovative managers may have to spend as much time in meetings, both formal and one-to-one, as they did to get the project launched. Managers need to prepare thoroughly for these meetings so they can counter skepticism and objections with clear facts, persuasion, and reminders of the benefits that can accrue to managers meeting the project's objectives. In most cases, a clear presentation of facts is enough. But not always: one of our respondents, a high-level champion, had to tell an opponent to back down, that the project was going ahead anyway, and that his carping was annoying.

Whereas managers need to directly counter open challenges and criticism that might result in the flow of power or supplies being cut off, they simply keep other interference outside the boundaries of the project. In effect, the manager defines a protected area for the group's work. He or she goes outside this area to head off critics and to keep people or rules imposed by higher management from disrupting project tasks.

While the team itself is sometimes unaware of the manager's contribution, the manager—like Tom West (head of the now-famous computer-design

group at Data General)—patrols the boundaries.² Acting as interference filters, managers in my study protected innovative projects by bending rules, transferring funds “illicitly” from one budget line to another, developing special reward or incentive systems that offered bonuses above company pay rates, and ensuring that superiors stayed away unless needed.

The second action-phase task is *maintaining momentum* and continuity. Here interference comes from internal rather than external sources. Foot-dragging or inactivity is a constant danger, especially if the creative effort adds to work loads. In our study, enterprising managers as well as team members complained continually about the tendency for routine activities to take precedence over special projects and to consume limited time.

In addition, it is easier for managers to whip up excitement over a vision at start-up than to keep the goal in people’s minds when they face the tedium of the work. Thus, managers’ team-building skills are essential. So the project doesn’t lose momentum, managers must sustain the enthusiasm of all—from supporters to suppliers—by being persistent and keeping the team aware of supportive authorities who are clearly waiting for results.

One manager, who was involved in a full-time project to develop new and more efficient methods of producing a certain ingredient, maintained momentum by holding daily meetings with the core team, getting together often with operations managers and members of a task force he had formed, putting out weekly status reports, and making frequent presentations to top management. When foot-dragging occurs, many entrepreneurial managers pull in high-level supporters—without compromising the autonomy of the project—to get the team back on board. A letter or a visit from the big boss can remind everyone just how important the project is.

A third task of middle managers in the action phase is to engage in whatever *secondary redesign*—other changes made to support the key change—is necessary to keep the project going. For example, a manager whose team was setting up a computerized information bank held weekly team meetings to define tactics. A fallout of these meetings was a set of new awards and a fresh performance appraisal system for team members and their subordinates.

As necessary, managers introduce new arrangements to conjoin with the core tasks. When it seems that a project is bogging down—that is, when everything possible has been done and no more results are on the horizon—managers often change the structure

or approach. Such alterations can cause a redoubling of effort and a renewed attack on the problem. They can also bring the company additional unplanned innovations as a side benefit from the main project.

The fourth task of the action phase, *external communication*, brings the accomplishment full circle. The project begins with gathering information; now it is important to send information out. It is vital to (as several managers put it) “manage the press” so that peers and key supporters have an up-to-date impression of the project and its success. Delivering on promises is also important. As much as possible, innovative managers meet deadlines, deliver early benefits to others, and keep supporters supplied with information. Doing so establishes the credibility of both the project and the manager, even before concrete results can be shown.

Information must be shared with the team and the coalition as well. Good managers periodically remind the team of what they stand to gain from the accomplishment, hold meetings to give feedback and to stimulate pride in the project, and make a point of congratulating each staff member individually. After all, as Steve Talbot (of my first example) said, many people gave this middle manager power because of a promise that everyone would be a hero.

A Management Style for Innovation . . .

Clearly there is a strong association between carrying out an innovative accomplishment and employing a participative-collaborative management style. The managers observed reached success by:

- Persuading more than ordering, though managers sometimes use pressure as a last resort.
- Building a team, which entails among other things frequent staff meetings and considerable sharing of information.
- Seeking inputs from others—that is, asking for ideas about users’ needs, soliciting suggestions from subordinates, welcoming peer review, and so forth.
- Acknowledging others’ stake or potential stake in the project—in other words, being politically sensitive.
- Sharing rewards and recognition willingly.

A collaborative style is also useful when carrying out basic accomplishments; however, in such endeavors it is not required. Managers can bring off many basic accomplishments using a traditional, more autocratic style. Because they’re doing what is assigned, they don’t need external support; because they have all the tools to do it, they don’t need to

2. Tracy Kidder, *The Soul of a New Machine* (Boston: Little, Brown, 1981).

get anyone else involved (they simply direct subordinates to do what is required). But for innovative accomplishments—seeking funds, staff, or information (political as well as technical) from outside the work unit; attending long meetings and presentations; and requiring “above and beyond” effort from staff—a style that revolves around participation, collaboration, and persuasion is essential.

The participative-collaborative style also helps creative managers reduce risk because it encourages completion of the assignment. Furthermore, others’ involvement serves as a check-and-balance on the project, reshaping it to make it more of a sure thing and putting pressure on people to follow through. The few projects in my study that disintegrated did so because the manager failed to build a coalition of supporters and collaborators.

. . . and Corporate Conditions that Encourage Enterprise

Just as the manager’s strategies to develop and implement innovations followed many different patterns, so also the level of enterprise managers achieved varied strongly across the five companies we studied (see the *Exhibit*). Managers in newer, high-technology companies have a much higher proportion of innovative accomplishments than managers in other industries. At “CHIPCO,” a computer parts manufacturer, 71% of all the things effective managers did were innovative; for “UTICO,” a communications utility, the number is 33%; for “FINCO,” an insurance company, it is 47%.

This difference in levels of innovative achievement correlates with the extent to which these companies’ structures and cultures support middle managers’ creativity. Companies producing the most entrepreneurs have cultures that encourage collaboration and teamwork. Moreover, they have complex structures that link people in multiple ways and help them go beyond the confines of their defined jobs to do “what needs to be done.”

CHIPCO, which showed the most entrepreneurial activity of any company in our study, is a rapidly growing electronics company with abundant resources. That its culture favors independent action and team effort is communicated quickly and clearly to the newcomer. Sources of support and money are constantly shifting and, as growth occurs, managers rapidly move on to other positions. But even though people frequently express frustration about the shifting approval process, slippage of schedules, and continual entry of new players onto the stage, they don’t complain about lost opportunities. For one thing,

because coalitions support the various projects, new project managers feel bound to honor their predecessors’ financial commitments.

CHIPCO managers have broad job charters to “do the right thing” in a manner of their own choosing. Lateral relationships are more important than vertical ones. Most functions are in a matrix, and some managers have up to four “bosses.” Top management expects ideas to bubble up from lower levels. Senior executives then select solutions rather than issue confining directives. In fact, people generally rely on informal face-to-face communication across units to build a consensus. Managers spend a lot of time in meetings; information flows freely, and reputation among peers—instead of formal authority or title—conveys credibility and garners support. Career mobility at CHIPCO is rapid, and people have pride in the company’s success.

RADCO, the company with the strongest R&D orientation in the study, has many of CHIPCO’s qualities but bears the burden of recent changes. RADCO’s once-strong culture and its image as a research institute are in flux and may be eroding. A new top management with new ways of thinking is shifting the orientation of the company, and some people express concern about the lack of clear direction and long-range planning. People’s faith in RADCO’s strategy of technical superiority has weakened, and its traditional orientation toward innovation is giving way to a concern for routinization and production efficiency. This shift is resulting in conflict and uncertainty. Where once access to the top was easy, now the decentralized matrix structure—with fewer central services—makes it difficult.

As at CHIPCO, lateral relationships are important, though top management’s presence is felt more. In the partial matrix, some managers have as many as four “bosses.” A middle manager’s boss or someone in higher management is likely to give general support to projects as long as peers (within and across functions) get on board. And peers often work decisions up the organization through their own hierarchies.

Procedures at RADCO are both informal and formal: much happens at meetings and presentations and through persuasion, plus the company’s long-term employment and well-established working relationships encourage lateral communication. But managers also use task forces and steering committees. Projects often last for years, sustained by the company’s image as a leader in treating employees well.

MEDCO manufactures and sells advanced medical equipment, often applying ideas developed elsewhere. Although MEDCO produces a high proportion of innovative accomplishments, it has a greater

Exhibit Characteristics of the five companies in order of most to least "entrepreneurial"

	CHIPCO	RADCO	MEDCO	FINCO	UTICO
Percent of effective managers with entrepreneurial accomplishments	71%	69%	67%	47%	33%
Current economic trend	Steadily up	Trend up but currently down	Up	Mixed	Down
Current "change issues"	Change "normal"; constant change in product generations; proliferating staff and units.	Change "normal" in products, technologies; recent changeover to second management generation with new focus.	Reorganized about 3-4 years ago to install matrix; "normal" product technology changes.	Change a "shock"; new top management group from outside reorganizing and trying to add competitive market posture.	Change a "shock"; undergoing reorganization to install matrix and add competitive market posture while reducing staff.
Organization structure	Matrix	Matrix in some areas; product lines act as quasi-divisions.	Matrix in some areas.	Divisional; unitary hierarchy within divisions, some central services.	Functional organization; currently overlaying a matrix of regions and markets. Centralized
	Decentralized	Mixed	Mixed	Centralized	
Information flow	Free	Free	Moderately free	Constricted	Constricted
Communication emphasis	Horizontal	Horizontal	Horizontal	Vertical	Vertical
Culture	Clear, consistent; favors individual initiative.	Clear, though in transition from emphasis on invention to emphasis on routinization and systems.	Clear; pride in company, belief that talent will be rewarded.	Idiosyncratic; depends on boss and area.	Clear but top management would like to change it; favors security, maintenance, protection.
Current "emotional" climate	Pride in company, team feeling, some "burn-out."	Uncertainty about changes.	Pride in company, team feeling.	Low trust, high uncertainty.	High certainty, confusion.
Rewards	Abundant. Include visibility, chance to do more challenging work in the future and get bigger budget for projects.	Abundant. Include visibility, chance to do more challenging work in future and get bigger budget for projects.	Moderately abundant. Conventional.	Scarce. Primarily monetary.	Scarce. Promotion, salary freeze; recognition by peers grudging.

degree of central planning and routinization than either CHIPCO or RADCO. Despite headquarters' strong role, heads of functions and product managers can vary their approaches. Employers believe that MEDCO's complex matrix system allows autonomy and creates opportunities but is also time wasting because clear accountability is lacking.

Teamwork and competition coexist at MEDCO. Although top management officially encourages teamwork and the matrix produces a tendency for

trades and selling to go on within the organization, interdepartmental and interproduct rivalries sometimes get in the way. Rewards, especially promotions, are available, but they often come late and even then are not always clear or consistent. Because many employees have been with MEDCO for a long time, both job mobility and job security are high. Finally, managers see the company as a leader in its approach to management and as a technological follower in all areas but one.

The last two companies in the study, FINCO (insurance) and UTICO (communications), show the lowest proportion of innovative achievements. Many of the completed projects seemed to be successful *despite* the system.

Currently FINCO has an idiosyncratic and inconsistent culture: employees don't have a clear image of the company, its style, or its direction. How managers are treated depends very much on one's boss—one-to-one relationships and private deals carry a great deal of weight. Though the atmosphere of uncertainty creates opportunities for a few, it generally limits risk taking. Moreover, reorganizations, a top-management shake-up, and shuffling of personnel have fostered insecurity and suspicion. It is difficult for managers to get commitment from their subordinates because they question the manager's tenure. Managers spend much time and energy coping with change, reassuring subordinates, and orienting new staff instead of developing future-oriented projects. Still, because the uncertainty creates a vacuum, a few managers in powerful positions (many of whom were brought in to initiate change) do benefit.

Unlike the innovation-producing companies, FINCO features vertical relationships. With little encouragement to collaborate, managers seldom make contact across functions or work in teams. Managers often see formal structures and systems as constraints rather than as supports. Rewards are scarce, and occasionally a manager will break a promise about them. Seeing the company as a follower, not a leader, the managers at FINCO sometimes make unfavorable comparisons between it and other companies in the industry. Furthermore, they resent the fact that FINCO's top management brings in so many executives from outside; they see it as an insult.

UTICO is a very good company in many ways; it is well regarded by its employees and is considered progressive for its industry. However, despite the strong need for UTICO to be more creative and thus more competitive and despite movement toward a matrix structure, UTICO's middle ranks aren't very innovative. UTICO's culture is changing—from being based on security and maintenance to being based on flexibility and competition—and the atmosphere of uncertainty frustrates achievers. Moreover, UTICO remains very centralized. Top management largely directs searches for new systems and methods through formal mechanisms whose ponderousness sometimes discourages innovation. Tight budgetary constraints make it difficult for middle managers to tap funds; carefully measured duties discourage risk takers; and a lockstep chain of command makes it dangerous for managers to bypass their bosses.

Information flows vertically and sluggishly. Because of limited cooperation among work units, even

technical data can be hard to get. Weak-spot management means that problems, not successes, get attention. Jealousy and competition over turf kill praise from peers and sometimes from bosses. Managers' image of the company is mixed: they see it as leading its type of business but behind more modern companies in rate of change.

Organizational Supports for Creativity

Examination of the differences in organization, culture, and practices in these five companies makes clear the circumstances under which enterprise can flourish. To tackle and solve tricky problems, people need both the opportunities and the incentives to reach beyond their formal jobs and combine organizational resources in new ways.³ The following create these opportunities.

- Multiple reporting relationships and overlapping territories. These force middle managers to carve out their own ideas about appropriate action and to sell peers in neighboring areas or more than one boss.
- A free and somewhat random flow of information. Data flow of this kind prods executives to find ideas in unexpected places and pushes them to combine fragments of information.
- Many centers of power with some budgetary flexibility. If such centers are easily accessible to middle managers, they will be encouraged to make proposals and acquire resources.
- A high proportion of managers in loosely defined positions or with ambiguous assignments. Those without subordinates or line responsibilities who are told to "solve problems" must argue for a budget or develop their own constituency.
- Frequent and smooth cross-functional contact, a tradition of working in teams and sharing credit widely, and emphasis on lateral rather than vertical relationships as a source of resources, information, and support. These circumstances require managers to get peer support for their projects before top officers approve.
- A reward system that emphasizes investment in people and projects rather than payment for past services. Such a system encourages executives to move

3. My findings about conditions stimulating managerial innovations are generally consistent with those on technical (R&D) innovation. See James Utterback, "Innovation in Industry," *Science* February 1974, pp. 620-626; John Kimberly, "Managerial Innovation," *Handbook of Organizational Design*, edited by W.H. Starbuck [New York: Oxford, 1981]; and Goodmeasure, Inc., "99 Propositions on Innovation from the Research Literature," *Stimulating Innovation in Middle Management* (Cambridge, Mass., 1982).

Building a team

There was, it appeared, a mysterious rite of initiation through which, in one way or another, almost every member of the team passed. The term that the old hands used for this rite—West invented the term, not the practice—was “signing up.” By signing up for the project you agreed to do whatever was necessary for success. You agreed to forsake, if necessary, family, hobbies, and friends—if you had any of these left (and you might not if you had signed up too many times before). From a manager’s point of view, the practical virtues of the ritual were manifold. Labor was no longer coerced. Labor volunteered. When you signed up you in effect declared, “I want to do this job and I’ll give it my heart and soul.” It cut another way. The vice president of engineering, Carl Carman, who knew the term, said much later on: “Sometimes I worry that I pushed too

hard. I tried not to push any harder than I would on myself. That’s why, by the way, you have to go through the sign-up. To be sure you’re not conning anybody.”

The rite was not accomplished with formal declarations, as a rule. Among the old hands, a statement such as “Yeah, I’ll do that” could constitute the act of signing up, and often it was done tacitly—as when, without being ordered to do so, Alsing took on the role of chief recruiter.

The old hands knew the game and what they were getting into. The new recruits, however, presented some problems in this regard.

From *The Soul of a New Machine* by Tracy Kidder.
Boston: Little, Brown and Company, 1981.
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into challenging jobs, gives them budgets to tackle projects, and rewards them after their accomplishments with the chance to take on even bigger projects in the future.

Some of these conditions seem to go hand in hand with new companies in not-yet-mature markets. But

top decision makers in older, traditional companies can design these conditions into their organizations. They would be wise to do so because, if empowered, innovative middle managers can be one of America’s most potent weapons in its battle against foreign competition.

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ARTICLES

"Introducing T-Shaped Managers: Knowledge Management's Next Generation" by Morten T. Hansen and Bolko von Oetinger (*Harvard Business Review*, March 2001, Product no. 6463)

T-shaped managers—those who share ideas and expertise across the company (the horizontal part of the "T") while also focusing on their own unit performance (the vertical part of the "T")—exemplify what Kanter means by "stepping beyond formal job descriptions." In the T-shaped model, it's the cross-unit collaboration that most requires managers to "push the envelope," and such collaboration fuels their power to innovate. Hansen and von Oetinger outline the day-to-day activities by which managers create "horizontal value"—including transferring best practices, gathering peer advice, growing revenue through shared expertise, developing new opportunities through cross-pollination of ideas, and making bold strategic moves through well-coordinated implementation of projects. All of these activities are essential as middle managers navigate through the three stages of innovation that Kanter describes: defining a project, building a coalition of support, and mobilizing implementation.

"The Necessary Art of Persuasion" by Jay A. Conger (*Harvard Business Review*, May–June 1998, Product no. 4258)

In driving innovation, middle managers must know how to persuade key constituencies to support their ideas. This skill is particularly crucial as managers "sell" project ideas, garner needed resources and top-level support, and mobilize key players to carry out the project as a unified team. This article outlines four powerful steps to persuasion: 1) establish credibility through pertinent expertise and positive relationships, 2) clarify the shared benefits of a potential innovation project, 3) vividly reinforce one's position through compelling examples, stories, and metaphors, and 4) connect emotionally with one's listeners. Taken together, these skills enable middle managers to influence others—not to manipulate them, but to arrive at a shared solution to a problem through learning and negotiation.

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