

# Controlling Change

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At this point, you have gained an appreciation of why it is so hard to initiate, sustain, and complete change. You even have a handle on how to identify profitable change objectives and test whether you are making headway. But opportunities for change present themselves almost every day. You cannot react to low-level disconfirming information in an ad hoc way. You have to have a rational way to process those opportunities. Otherwise, disconfirming information boiling up from below either will go unnoticed or will create a management team with a firefighter mentality. That is not a healthy way to run a company. You need a system that anticipates potential sources of disconfirming information, categorizes them, and has planned responses depending on your own criteria. But how do you do that?

### 6.1 CONTROLLED VERSUS UNCONTROLLED CHANGES

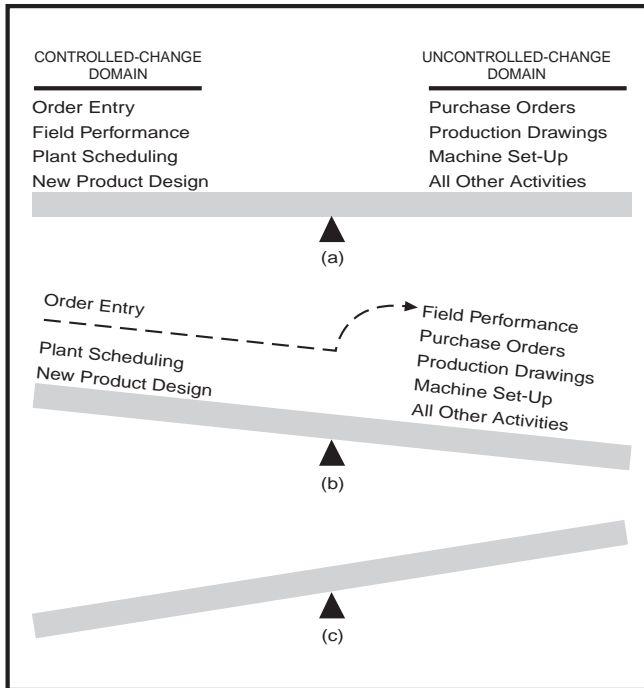
To understand the variety of changes companies struggle with every day, the first thing you need to do is group change opportunities into two domains, controlled and uncontrolled. A *controlled change* is one that is guided by well-defined and (one would hope) written procedures. The fruits of our labor on controlled changes are newly defined or revised activities that are established and maintained as part of the accepted standard operating procedures of the company. The resulting procedures are controlled by planned review process and become part of our competitive advantage. An *uncontrolled change* is one that happens without the benefit of systemic awareness. That is, the resulting procedures are seldom reviewed by anyone other than the instigator, and

few if any records are made of the newly designed activity. (Some observers refer to uncontrolled change as *naturally occurring change*.)

These two types of change can be envisioned as loads on a balance scale (Figure 6.1). When a good balance between controlled and uncontrolled change is struck, the company's change processes are themselves under control. Whenever either side of the balance is overloaded, the company's change processes are out of control. In the simplified example in Figure 6.1, a fictitious company has defined order entry, field performance feedback, plant scheduling, and new product design as activity domains for which controlled change will be enforced. Likewise, it has decided that purchase orders, production drawings, and machine setup are activities that are best left outside the controlled domain. This example is near-reality for companies producing low-grade, loose-tolerance commodity machined parts. Order entry is controlled by use of a preprinted order entry form; plant scheduling is posted on a whiteboard; all customer complaints are logged, reviewed, and resolved; and new product design is reserved for the chief engineer. On the other hand, they rely on verbal purchase orders to get their needed materials, on penciled changes applied to production drawings to take care of customer change orders or production floor problems, and machine setup by 20-year veteran craftsmen to ensure an adequate level of quality.

While this may not be the split in your company, every company establishes its own division between controlled and uncontrolled domains, depending on its own understanding of the costs and benefits of over- and undercontrol. In practice, what is considered the controlled domain is usually well defined and widely acknowledged, while everything else is by default dumped into the uncontrolled domain. The wide differences between how competitive companies are organized can be traced to their individual decisions about which areas need control and which are better left alone to "empowered employees."

Suppose the company in Figure 6.1 decides that it is spending too much money on maintaining its field performance system and getting too little in return. Every week they sit in a meeting and review the failure reports, and nothing seems to get done. Each week the same failures are reported, once in a while a new one is posted, and eventually the older ones die of neglect. The general manager decides to scrap the field failure reporting system and tells the service personnel to take their problems directly to the plant manager to get them resolved. He figures that those people working together, empowered to make "necessary changes," will whip this pup into shape. He has made a conscious decision to remove the systematic field performance reporting and resolution from the controlled domain. If the division between controlled changes and uncontrolled changes is near balance, a significant change like this will upset the company's control systems and lead to an undercontrol situation [see Figure 6.1(b)].



**Figure 6.1** The balance scale of change: (a) balanced, (b) under-controlled, and (c) over-controlled.

On the other hand, suppose this same general manager decides to pull machine setup into the controlled domain. He has studied the field service reports and decides that too much leeway in machine setup has led to an unacceptably wide variation in product attribute. His solution is to get control on how machine operators set up their equipment. Analogous to the decision to remove controls over a significant element of company operations, putting controls over heretofore uncontrolled elements can cause systemic constipation and overcontrol [see Figure 6.1(c)]. Unless well planned and executed, with appropriate attention to increased cost of control, plant production could easily slow to a crawl, thereby discrediting the change initiative and putting the company in a worse situation than before the change was attempted.

Neither decision by itself was necessarily wrong. They were wrong in the sense that the company was in balance in light of the control assets it had. If failure trends and disconfirming information had indicated that the company was undercontrolled, management obviously had to apply control in the appropriate areas and vice versa. If the company is in control, then

adding or removing elements from the control system, without changes elsewhere, will lead to an out-of-control situation.

This example assumes that change opportunities present themselves one at a time and that management knows how far in or out of balance its control system is. Neither assumption is valid in the real world. The key to overcoming the reality of change is to ensure that all change opportunities are at least put in the right domain. If you put too many change opportunities into the controlled change arena, then you certainly will overload management and stifle front-line personnel. If you relegate too many change opportunities to the uncontrolled arena, you will be overwhelmed by suboptimum solutions and long-term dysfunction. While an overbalance in either direction leads to declining profitability, most American management teams today tend to put their faith in the liberating world of uncontrolled change, thereby ensuring that companies operate in undercontrolled states most of the time.

## **6.2 TWO REAL-LIFE EXAMPLES**

To understand the consequence of inappropriate reliance on uncontrolled change, let us look at two real-life stories of lost opportunity. In the first story, Vern is responsible for moving semifinished product from station to station for a company that designs and builds large processing vessels, the kind that have to be transported horizontally on flatbed trucks, by train, or on barges. One day, Vern gets a move ticket telling him to move a newly built shell from the welding shop to the head joining shop. Vern takes his crew over to the welding shop. They soon realize that the fabrication drawing did not include lift eyes. This has been happening quite a bit lately. The first few times they ran into this problem, the production foreman told Vern to have a welding crew tack on some lift eyes. So Vern does the same thing this time. Two months later, the completed tower rips the bottom off a highway underpass when a lift eye does not quite clear.

Vern's change process was uncontrolled. Vern found that the method for moving material was consistently unreliable. It had to be changed for him to do his job more efficiently. To solve the problem, he initiated an unplanned and therefore uncontrolled change. He took responsibility for attaching lift eyes when they were not available.

That type of uncontrolled change occurs all the time in business. People are continuously subjected to internal and external disconfirming information that demands attention and resolution. Certain types of problems will not go away unless they are addressed: billing problems, payment problems, inspection problems, equipment problems, sales problems, every type of problem that has to be solved for the company to move forward, to

complete a sale. Uncontrolled, naturally occurring changes are those that people make “naturally.” Over time, people learn which problems are considered their domain and which must be left to others. Seldom are the boundaries of those domains described formally because there is no formal, recognized process for reviewing disconfirming information, generating creative alternatives, or communicating proposed solutions to people who work at the boundaries of decisions. Uncontrolled change domains can exist totally within one person’s job or can involve people in several departments. The missing ingredient is that formal (i.e., written) change procedures are not engaged when they are appropriate to the problem at hand.

In Vern’s case, he was given the responsibility for doing a job. He did it the best he knew how with the best intentions. In fact, he had faced the problem of lift eyes so often that he changed his work routine. He now was ordering out welding work. No one seemed to mind. In fact, the foreman was happy that Vern was showing initiative. The weakness in the system was that Vern had no way of communicating the need for a systemic change, no tools to direct the change itself, nor any method for analyzing the potential effects of his solution. When the vessel got wedged beneath the overpass, Vern was the one left holding the bag. Maybe the final inspection person caught some heat, too. However, it was not Vern’s job to care and feed the system that ensured controlled change kicks in at the appropriate time, nor was it the foreman’s. It was job of the general manager, the person who was supposed to manage the boundaries between functions and build the company’s business systems. Unfortunately, many general managers ignore that dimension of their jobs because they do not have a clue how to direct systematic change, a fundamental management skill.

### **6.2.1 It Is Not Always Vern**

Management always likes to point to Vern as an example of how things can get screwed up, not realizing that Vern seldom is the problem. Management is solely responsible for Vern’s predicament. Another true-life example will show that management regularly reacts to disconfirming information with uncontrolled change, too, in situations that absolutely demand controlled change.

Irving was recently recruited by the chairman of a Fortune 500 company to head one of its manufacturing subsidiaries. About three months into his tenure, Irving got a call from the chairman. “Bud,” the chairman said, forgetting Irving’s name. “I’ve just been talking to Lynn (another division manager) at the Triple D division. They’ve come up with a great idea to save money on their manifolds. They’ve reduced the number of weld passes and really increased throughput.” Irving realized he had to get with the program. His disconfirming information came from an external source and was not so

easily ignored. The information was loud and clear: "Irving, you are not doing your job as well as your peers. Show some initiative." The disconfirmation was all the more pointed by the chairman having already forgotten his name. Irving was the kind of guy who does not need as much psychological safety as some people. He had gotten his job by being hard-driving, taking risks, and generally bulling through any problem that got in his way. By God, he was going to make some changes around here.

Irving thundered down to the production line, talked to the welding foreman, and told him to make the changes that the Triple D division had made. Sure enough, after they made the change, overall throughput soared. That was where the production bottleneck was. Irving was more than eager to share his triumph with the chairman, especially because he was able to make the change so quickly. He might not have seen the opportunity as soon as his peers had, but once on the job he got it done immediately!

This story has two possible endings (telling the actual result would spoil it). In the first ending, manifolds begin to fail at a higher rate than before. In fact, the trend is not recognized for a year or so. It seems they have developed a nasty habit of blowing up in the field. Of course, it takes at least a year for anyone in the company to accept the externally generated disconfirmation ("Your manifolds are failing..."); even then it only gets the attention of the sales organization. After all, as far as the engineers know, nothing has changed. Why should their manifolds be failing? The last time they thought they had a problem, they found that those crazy customers were misusing them. Everyone seems satisfied with the answer, except the customer. Time marches on, and Irving's manifold sales start to drop. "Just a bad market," everyone says. That is true, the market is shrinking. Unfortunately for Irving, the excuse of a declining market masks the effects of the uncontrolled change Irving had made a year before. When the market does revive two years later, Irving's manifolds do not. Triple D's, however, do. Eventually, Irving's division is sold off. One of the first things the new owners do is to increase the number of weld passes.

The problem was that, while the Triple D division was building the same manifolds that Irving's division was, Triple D was selling them into a less demanding market. Triple D could lower the shock-design safety factor without any negative consequences. Their manifolds never saw service anywhere near their nameplate performance. But Irving's division sold manifolds into markets that operated them near their operating limits. Irving's replacement called for the engineers to perform a full-blown failure analysis. They quickly discovered the problem but could not explain how such a design change could have been implemented without verification and validation reviews. No one left over from the previous regime could remember how the change was made since there were no records. The lesson remained unlearned.

The second possible ending to this story starts back on the same day Irving directs his uncontrolled change. Robbie the engineer is wandering the shop floor the same afternoon Irving tells the welding foreman to change the design. But Robbie does not witness the directive. Instead, she notices that the pipe fitters are not preparing the material as they usually do. She does a little digging. When she gets to the welding foreman, she finds out that Irving ordered the change. She tries to get the foreman to rescind the change since she realizes that the manifold's capacity to withstand shock load has been compromised. The foreman says there is no way he is going to tell Irving. So Robbie decides to call Irving directly and let him know the consequences of his uncontrolled change. Irving rescinds his change, but for two years Robbie's career goes nowhere.

Irving acted with the best intentions on external disconfirming information by forcing through an uncontrolled change, the same as Vern. The difference is that Irving should have known better. He knew that the type of change he wanted to make is typically addressed by a systematic and planned change process. Furthermore, anyone familiar with manufacturing knows that production facilities are organized to anticipate design changes and that a well-run shop has systems in place that exclusively handle the type of change Irving had unilaterally imposed. Vern was only doing his job; Irving was derelict in his.

### **6.2.2 Going Outside the System**

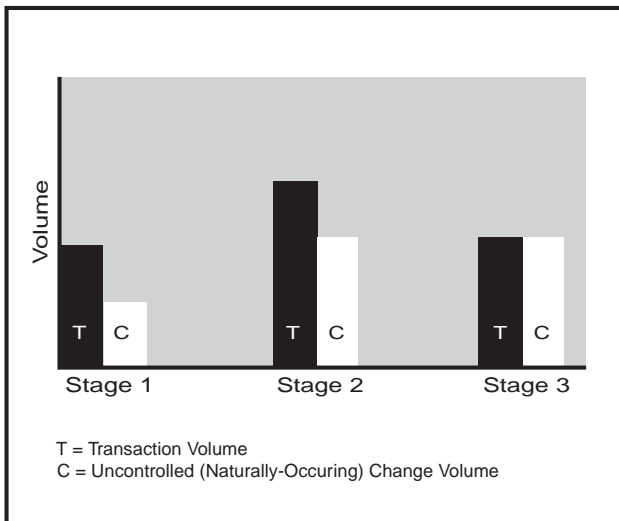
Irving's reaction to disconfirming information is typical of many managers who have expensive control systems already in place. They ignore them. They think that the systems are too burdensome for people of action like themselves. Besides they do not have time to learn them. They have things to do. Heaven help the employee who orders a pencil without going through channels, but if the boss wants to buy a new, \$10-million building, he need not follow protocol. The boss is empowered, can get things done. "The guy who had this job before me is not here, so he must have been doing things wrong. I'm going to make some changes." The reason policy and procedure manuals fall into disuse is not because workers ignore them but because management does. Because they have the raw power to affect uncontrolled change with far-reaching effects, they do so to the detriment of the whole company.

### **6.2.3 The Long-Term Effect of Relying on Unplanned, Natural Changes**

Over time, companies like Irving's and Vern's go bankrupt in spite of the best intentions of their people. Figure 6.2 shows the relative volume of trans-

actions (T) and uncontrolled-change volume (C) that a typical company sees during the three stages of a business cycle. During the first stage, the company enjoys a certain level of activity. We will assume that it is profitable. Behind the scenes is a set of problems, represented by the companion bar labeled C, that are held in check by uncontrolled, naturally occurring changes put into place by the people who do the real work at Vern's company. Those problems are solved episodically. Some solutions are better than others, but the company manages to get by. Unfortunately, the inefficiency resulting from that problem-solving mode is hidden by the continuing profitability of the company. Lucky for them, their competitors' approach to running their own businesses is about the same. As problems come up, management empowers lower levels to work out those problems as they see fit.

During the second stage of the business cycle, company sales increase rapidly, as does transaction volume. Maybe the market is good; maybe the company develops a competitive product advantage. In any case, debt is increased so that production facilities can be added. More people are hired to handle the increasing number of problems inherent in growth. Profitability is maintained. There is an uneasy feeling that the marginal profit on the increased sales should be higher than it is, but, for the most part, people are satisfied with performance. Behind the financial numbers is a policy of solving problems by relying on uncontrolled, naturally occurring changes. Management rarely gets involved in problem solving. After all, they believe they hire "good" people to work out problems on their own. The volume of



**Figure 6.2** Typical business cycle (effect of uncontrolled change).



problems kept in check by naturally occurring changes increase as transaction volume increases. No one notices anything wrong.

The third stage of the business cycle is the downturn. Eventually, all businesses experience a downturn; as they do, transaction volume falls. But naturally occurring changes only hold the root cause of the underlying problem in check; they do not permanently resolve them. The solutions usually are so frail that any change in the environment will tear them to shreds. So the number of problems do not fall as fast as sales fall. In fact, the volume of problems may actually grow. As the third stage in Figure 6.2 dramatically indicates, neglected problems can overwhelm the company, driving down the profit to critical levels. Management rationalizes the company's failure by claiming that the drop in sales was so overwhelming that no one could have stopped the inevitable failure. But they conveniently omit the fact that some players in their market are still in the game. If they do consider that fact, they assign survival to luck when, in fact, the ones who do survive are the ones who used planned, controlled change effectively to solve their systemic problems when they had the luxury of a good market.

### **6.3 KEEPERS OF THE SYSTEM**

*Policy* is the device managers are supposed to use to decide which problems should be solved through systematic review and controlled change versus which ones should be left for empowered employees. A management prerogative, policy guides which activities are addressed by the systemic procedures of the company and which are reserved for craft and skilled workers. That is why policy is the friction point between all disputes between business owners and organized labor. Policy says not only where but how the assets of the company will be applied.

With benevolent company leadership and employee empowerment being all the rage, traditional management seems to be on the defensive, always apologizing for exercising its prerogatives and running for cover under the latest business fad. But regardless of all the apologists and the real and legitimate influence of organized labor, managers continue to have a crucial responsibility to their company. It cannot be delegated, ignored, or wished away. Managers are the keepers of the system. They have to ensure that the company's control systems are well developed, well fed, and well understood because everyone relies on the system to answer critical questions of survival and growth.

What we call *the system* is shorthand for the collection of actions and reactions each company goes through when facing a problem. The problems can be as simple as getting the product out the door the afternoon your foreman is out sick or as complex as answering a price cut by a competitor. It can

be as visible as the obvious division of labor between the front and back offices or as veiled as the corporate culture. Nonetheless, the system exists, and management exists to run it.

#### **6.4 UNCONTROLLED CHANGE: THE ROOT OF ALL FAILURE**

In the 1970s, the word *control* took on an almost evil, exploitative connotation. Business gurus invented fads popularizing the notion that systemic chaos was preferable to control. Faced with the increasing chaos of the marketplace and perceived rebellion of the era, management fads embraced the idea that businesses were by nature unmanageable and that the role of management, therefore, was to emphasize flexibility by removing controls. Those pro-chaos fads rationalized their premise by using logic that ran something like this: American companies are in trouble. The common modus operandi consistent with the evidence strewn about these once-dominate American companies is that they all had massive, top-down control systems. Therefore, those control systems are at the root of American business failure.

We are amazed that those appeals had—and continue to have—such a wide following in the face of continued and colossal failures of companies led by managers following that prescription for profit. Few people questioned whether the apparent failure of the discredited control systems was caused by poor application of a sound theory. A similarly constructed argument would condemn Christianity or Islam because people claiming to act according to those religious precepts behave atrociously. Neither argument is logical.

The arguments supporting pro-chaos fads disintegrate when we admit that business systems are artificial systems. They are the antitheses of nature. By intention and design, they remove as many of the forces of nature as possible to improve our economic well-being. The history of Western business has been and will continue to be a struggle to form order out of chaos and use that order to build wealth. What makes pro-chaos faddism the grave of American business is that so many people have mistaken foolishness for wisdom.

If overcontrol is not the common source of business failure, what is? The root cause of all business failure in the Middle Ages as well as into the 21st century is uncontrolled change. All commercial failures can be traced directly to inappropriate uncontrolled change in an entity's systems. It goes like this every time: Management has ample internal and external sources of information disconfirming the current methods of doing business. They refuse to accept that information and therefore fail to act on it, because they lack the needed fundamental skills. Lacking those skills, they lack the security to move forward. Remember, to accept disconfirming information,

people need psychological safety, the feeling that they can handle bad news because they are confident they can find a way out. Instead, management hires someone hawking a canned management fad, which only camouflages the problem.

That is not to say that catastrophic economic failures do not occur in spite of well-constructed, dynamic operating systems. Catastrophes can shut businesses down even if management does a superb job of contingency planning. For instance, a fire in our data system may give our competitors a window of opportunity. An earthquake in California could immobilize our California brokers. Our investment in Labequam could be nationalized. Planning for such possibilities is prudent management, but no matter how much planning you do, you still could be overwhelmed. Just because you know that chaos may dictate the outcome of a future event is no reason to give your life over to the Dark Force. After all, in the end, we are all dead. Nevertheless, we overcome that ultimate and very personal chaotic event by making plans to improve ourselves in the brief time we are here. Likewise, it makes little sense to turn our productive business lives over to chance just because the cosmos operates on a random-number generator.

Finally, our theory that all business failures can be traced to inappropriate uncontrolled change has to explain activity at the margins—corporate death by natural causes, also known as unforced liquidation. Liquidation is a failure only if it is unplanned, and unplanned liquidation comes about because of inappropriate uncontrolled change of a company's systems. Conversely, planned liquidation or restructuring can be the most logical and fruitful action management can take, given that it is in response to an accumulation of facts. Accepting disconfirming information pointing toward liquidation is a difficult step for most managers. Nonetheless, even the best run company can find itself on the wrong end of a bad bet that must be covered. A management team that understands the fundamentals of controlled change fully debates and understands such bet-the-company risks before undertaking those risks. Since liquidation can be a planned response to a risky outcome, such liquidation is not, per se, the mark of failure. Our claim that all business failures result from inappropriate uncontrolled change still holds.

## **6.5 THE RELUCTANCE TO WRITE POLICY**

If controlled change is real, it has to occupy physical or mental space and leave a trail. The primary evidence that controlled change exists is the existence of company policy. Policy, whether written or just understood, cradles the proven and essential rules for operating the company successfully over a long period of time. Those rules embody the institutional memory and have

stood the test of time. Many times, they were established or expanded when the company suffered episodic near-catastrophes. Suppose you want to change the way something is done in your company and the anticipated change violates policy. By definition, you are talking about something the company's upper management and institutional memory consider substantial and significant. Otherwise, your change would affect only those procedures that upper management leaves to you anyway. When your idea is implemented, the company's policy will have to change to accommodate your idea. That change process represents the role of policy making: to ensure that significant changes are brought to the attention of appropriate people. How policy is changed separates good systems from bad.

Whenever we begin an assignment with a company looking to increase profitability, the first tool we help develop is an up-to-date operations policy manual. Typically, upper management pawns the responsibility for writing policy on some unfortunate middle-management person. With such an inauspicious start, the project seldom gets anywhere until the middle manager finds a way to reengage the boss. Why is it so hard to get upper management to do its job in setting policy? And why is policy setting basic to improving profit?

By now, you know the answer to why upper management resists writing policy. Writing a policy manual or updating an old, forgotten one represents significant change. Any change is difficult, especially one that exposes people to great uncertainty and provides little safety. Besides being leery of the consequences of systematic attention to policy writing, top managers do not want to write policy because they are uncertain where to start, how to write it, why it is needed, and when to stop. Should they finish writing a manual, they have no idea what to do with it anymore than their subordinates do. But the fact remains that every company has a multitude of policies on everything from how long to hold accounts payable to how many vacation days can be taken to who gets a key to the office and a parking space. Unfortunately, the only time policy is written down is after a problem arises from its being unwritten.

Another reason general managers are reluctant to write policy is that they feel that if they reduce policy to writing they will lose flexibility. All managers believe that their company's business is different, and to a great extent they are right. When asked what makes their business unique, they usually point to intangibles: the maturity of their work force, the quality of their product, the superiority of their management. Up to this point, they may have operated with policy manuals that cover personnel issues, but they have had no reason to write a manual covering operational aspects.

That is the very reason they need to write one. They are ready to take the next step toward improved profitability, and a policy manual is the first

step. A policy manual builds the psychological safety necessary to get the management team to move forward.

Last, some top managers resist writing operating policy because they have turned their company over to their lawyers and do not even know it. In the case of writing policy, some attorneys believe they can see into the future. They will tell you that you should avoid writing policy because it could come back to haunt you in an as-yet unfiled but conjured lawsuit. In a later chapter on decision theory, we will show why that kind of “scenario thinking” is bad technique. For now, let us just accept that any advice given by any specialist concerning business practice has to be examined thoroughly by management experts, that is, by people like you. In the case of advice from attorneys concerning policy, use it to help you reduce risk; however, never let an attorney tell you that you should not have a policy manual. If you find yourself getting business advice too often from an attorney, get a new one who spends time helping you get something done instead of giving you reasons why not to do it.

## **6.6 PLAN, POLICY, AND PROCEDURE**

While we might understand management’s reluctance to write policy, we will not be able to overcome that resistance unless we build a strong argument of how a well-written, cogent policy makes money. We need to explain why policy is crucial to profit improvement and why written policy is crucial to sustained improvement. To do that, we have to build a model of how all businesses operate. While we do that, keep in mind that this model is essential to understanding how change occurs in companies and therefore how policy functions as a change tool.

But before turning to business systems, let us look at an analogous system, a typical family. Families have policies and procedures. Typical policy statements might be “No child goes on an unescorted date before age 15”; “Every child will go to college or trade school”; “We marry within our faith and race.” Few of these policies are written down, but every family member knows that to change a policy requires a persuasive argument.

Suppose that one of the children takes a fancy to someone of a different faith or color and is entertaining marriage or that another child decides to quit high school and join a band. The consequences of those decisions go to the root of what the family had accepted as appropriate behavior. Those types of decisions require a complete review of the policy by the “managers” of the family. Father, mother, and maybe the grown children will debate them, and those wanting change will argue vigorously. Maybe the policy will change, maybe it will not. But there is little doubt as to the importance

attached to the decision. It will affect what it means to be *this* family. As for the procedures that implement family policy, they might include setting curfews for the children, requiring meeting the children's new friends and their parents, and setting aside certain times of the day for study. If one of the children habitually disregards a procedure, the reaction of the parents and the family as a whole is less intense than if the child jeopardized basic policy and values. An example of a written document backing up family procedure is the chart on the refrigerator door that lists everyone's whereabouts and weekly chore assignments.

The analogy of policy and procedure in a family fits well with business systems. While businesses are not families, they are collections of people who need to know the basic rules of conduct and operation. The first ingredient in any business operating system is the hierarchy of plan, policy, and procedure. Later we will make a distinction between procedures and instructions, but for now we will lump them both into procedures. All businesses have them, and you will realize that the distinctions are valuable tools to controlling change. Also for the moment, let us put aside the role of documentation in operating a company and assume we are looking at a pretty typical business that is marginally profitable.

At the highest point of any business operating system is its plan. While the business plan might be written, many times it is not. Whether written or just dwelling in the company's collective subconscious, the plan contains your assumptions about your market and your place in it. You have certain basic assumptions about the content of your base technology, your pricing relative to your competitors, the valuable features of your product or service, and your competitive advantage. Your plan sets the boundaries of your business. For example, suppose your primary product is made of plastic. You might define yourself as a specialty plastic molder or a commodity plastic molder. Or you might make no distinction about the process but concentrate on the product instead. You may believe that your competitive advantage is in cost-effective production, unique product features, or incredibly fast turnaround. Such elemental decisions are the type that reside in your plan.

Your *operating policy*, on the other hand, contains statements about what you are going to do to implement your plan. These "what" statements purposely avoid mentioning who is responsible for executing the policy or how it will be done. Suppose your plan emphasizes your competitive cost advantage. Your policy then would reflect that focus. For example, your company might have the following operating policy statements:

- Each and every incoming order is reviewed for opportunities to reduce costs. The results of the review are documented.

- Pricing is the responsibility of one department; its decisions are final, documented, and reviewed by management on a quarterly basis.
- Product development will focus exclusively on cost reduction. New-product innovation is the province of our customers, other higher-priced build-to-order competitors, and the marketplace.
- Distributors are relied on 100% for selling our product. Distributor contracts are reviewed and approved according to written procedures. The responsibility for distributor relations is assigned to one person (and staff, as appropriate). Distributor performance is reviewed and documented twice a year.

Whether policy is written or not, it still exists. Even if the policy shown in the preceding list were unwritten, you still would find evidence of it in the documents the company generated. The order files would have a sign-off from Industrial Engineering about their review of cost reduction, and there might be a fax to the customer asking for a variance in the specified requirements in order to reduce the price 30%. Over in Accounting, you would find records showing price and cost reviews. In the president's office, you might find all the distributor files and in them checklists documenting the review and approval of the contracts. You also would find records of the semiannual distributor meetings held at a downtown hotel. The fact is that the company has an operating policy that reinforces the business plan.

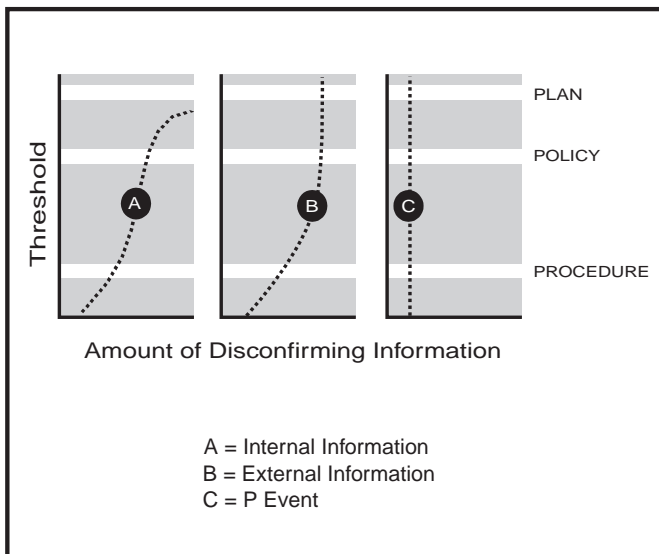
*Procedures*, on the other hand, tell you *how* the policy will be put into place, not what it is. They implement the policy. Continuing with our example, let us look at how the distributor relations policy might be implemented. The fourth bulleted item in our policy list says that the contracts are to be "reviewed and approved according to written procedures." The checklist we found in the president's distributor files is the written procedure that the company follows when it reviews a distributor contract. That is an important distinction between policy and procedure and has a profound effect on how well behaved your change control system will be. The policy says *what* was going to be accomplished, that is, that the review would be according to a written procedure, but it purposely does not say *how* that review is to be done. Look at what the policy says about reviewing distributor performance. It says that it will be reviewed and documented twice a year. It leaves the content of the review and the form of the documentation to the procedure. Again, this is not a trivial point, as you will see later.

## **6.7 THE EFFECT OF DISCONFIRMING INFORMATION ON OPERATING SYSTEMS**

Earlier we made reference to internal and external disconfirming information without defining our terms. Now those distinctions will become clear.

Figure 6.3 illustrates the effect of information on the company's plan, policy, and procedures. It distinguishes among three sources of information and how much may be necessary before your procedures, policy, or plan changes. The horizontal axis plots the relative amount of information being absorbed by the company. The vertical axis illustrates different thresholds for change. Anytime a line crosses any one of the three thresholds shown (plan, policy, procedure), that part of the control system will change.

In Figure 6.3, the line labeled A shows how internal information might influence a company's control system. It takes a considerable amount of internal information before procedures begin to change, but at some point enough information is readily available that the annoyance of working around a problem brings people together, and a procedure is changed. For our purposes, it is immaterial whether this is a planned change or not. (In fact, we have yet to define what a planned change is.) As a way of reinforcement, let us again revert to our sample policy and procedure list. Suppose the sales department continually finds skimpy historical information on the incoming-order cost review. This internally generated disconfirming information indicates that the cost review procedure is not working well, at least according to sales. Up to this point, the industrial engineers (IEs) have been solely responsible for the review. The sales department's solution to the problem of insufficient documentation is for them to be included in the cost review process. They do what they have to do to be included in the loop. The



**Figure 6.3** Change threshold model.



unwritten procedure is changed, and maybe a new form is developed, maybe not. Life goes on, but the procedure for incoming-order review has changed.

Now suppose that cost data continue to be inadequate as far as the sales department is concerned, while the IEs are concerned that sales' new role in cost review is making the process far too slow and costly. At some critical mass of internally generated disconfirming information, a policy change has to be made. This occurs in Figure 6.3 where line A crosses the policy threshold line. Note that the stated policy says nothing about *who* is responsible for the cost review; it just says that each order is subject to one. As a rule, you do not want to include responsibility statements in policy. To be effective, policy statements must be fairly stable, while work assignments can and do change, more often than you think. If you make too many responsibility statements in your written policy, you will constantly be issuing new policy revisions, that is, if you have a written operating policy.

Now you are gaining some respect for the reasons why we make distinctions between procedures and policy and why writing both of them has such value. Without a written procedure, no one will know whether the role of IEs as sole cost reviewers is a convenience of procedure or an artifact of policy. Does general management think that IEs should be the only ones in the loop? If so, that is a policy statement because it is a constraint with the force of policy. Policy is axiomatic thinking that is not easily changed; when it is changed, general management has to give its consent. If management assigns responsibility at the policy level, they are setting up a semipermanent gatekeeper. It usually means that the company has learned, over the years and the hard way, that a particular part of operations demands an unequivocal statement of responsibility. On the other hand, if general management believes that cost review should be a variable function that depends on the best currently available staff and ideas of the day, then they will keep responsibility assignment out of policy and instead leave it in the procedure domain.

Sometimes information overwhelms policy, and the business plan has to change. That event rarely occurs when internal information is the only driver. Insiders consider internal information as selective, full of built-in bias, and weighted with the hidden agendas of different departments. Even general management is reluctant to change business plans based solely on repetitive and overwhelming internal information. That is why Figure 6.3 shows internal information effects (line A) topping out before it reaches the plan threshold.

External information works the same way as internal information, but its effect on operational systems is quicker and more dramatic. External information by definition comes from outside the company even though an insider may present it. For example, suppose the sales department reinforces its internal information for better cost review with the fact that higher-

priced competitors are now beating the company on price alone. More functions will be interested in this new external information; no longer is it an intramural issue. The marketplace is offering up disconfirming information. If similar information continues to come in, procedures in many areas will be reviewed to ensure that the company is doing all it can to remain the low-price leader.

At some point, procedural changes are just window dressing if what you really need is a policy change. Suppose the root cause of losing orders on price is not your cost structure but distributor relations. Suppose external information says that your big distributors are getting into the production business, and to do so they have cut prices of their own lines to the bone. At this point, you need to review your policy of relying 100% on distributors. You may decide you need a policy concerning distributor-manufacturers. Or you may decide that you need a mixed distribution system in geographical areas where distributors are quasi competitors. Whatever your response, changing procedures will not solve the problem. Your policy has to change.

Another inherent function of written policy is now evident. When you are collating information and looking for the root cause of a problem, you need a way to categorize the seriousness of the problem. In the preceding example, pricing pressure in the marketplace is an obvious problem for top management. Or is it? It might be obvious to top management that they should be included in the loop, but what if it is not obvious to the people who actually get the information? Remember how Vern empowered himself to add a product feature (lift eyes)? Because Vern's company was unclear about how information should be classified and how changes should be made, Vern was not able to tell the "right" people about his problem because the right people were not identified. The right people may not even have known that they were the right people. The power of making a distinction between policy and procedure is that if the root cause of a problem requires a policy change, you know you are working with a significant issue.

At some point in the change threshold model, line B (external information), unlike line A (internal information), crosses the plan threshold. Over time, we may get irrefutable information that our business plan is suspect. We have changed procedures and we have rearranged our distribution channels, but we still are losing price leadership. Management has got to ask if the basic assumptions about the business are valid. If we change the business plan, then we have to revisit our policies and procedures. That is why categorizing an operating system along the lines of plan, policy, and procedure is so robust. The model demands discipline and consistency between levels. While not everyone may not be cognizant of those distinctions, they necessarily are affected by them.

The last classification shown in Figure 6.3 is line C, called the "P-event" (for all the Ps in the model: plan, policy, and procedure.) The source of

P-information is almost always external, although accompanying internal disconfirming information may have been building for quite some time. Nonetheless, dramatic and undeniable information tells management that the world has changed and that every part of the company's operating system has to change. In the case of a P-event it does not take a preponderance of information to force the issue, and the first place management effort needs to be applied is at the plan level. Change in policy and procedures will follow. Some recent examples include oil prices at \$40 a barrel in 1982 and \$10 a barrel in 1987, passage of the North American Free Trade Agreement, collapse of the Mexican peso, reunification of Germany, and liberalization of the Chinese economy.

## **6.8 PLANNED AND UNPLANNED CHANGE**

So far, we have made little distinction between planned and unplanned change. All companies have both explicit artifacts and implicit understanding of this operating model. All companies change in about the same way because the change dynamics introduced in Chapter 4 exist in all companies. But those companies that plan for change have a plan! That is, they must have a systematic way of changing their plans, policies, and procedures. To put emphasis where it needs to be, they have procedures for changing procedures. Everyone in those companies knows who is responsible for what work, and everyone knows when line A, B, or C is changing. Those routines ensure that appropriate levels of management are aware of procedural changes without excessive oversight while allowing appropriate personnel to be intimately involved when the situation demands it. Those companies accomplish that by sufficiently and explicitly defining their operating systems such that change opportunities systematically find their way to the right people.

We started this chapter by stating that all business failures could be linked to inappropriate uncontrolled change. It is not that uncontrolled change has to be avoided at all costs. A certain amount has to take place or you are in danger of overcontrolling, that is, spending inappropriate attention and money on identifying, documenting, and reviewing disconfirming information instead of relying on the efficiency of natural change. So how do you identify inappropriate uncontrolled change? When procedure, policy, or the business plan is changed without management reviewing the underlying disconfirming information. Whenever you cross one of the thresholds in Figure 6.3 and no systematic review of the changed plan, policy, or procedure involved takes place, then you have inappropriate uncontrolled change. Management's responsibility is defining those three thresholds and building a system that reinforces them. That is the essence of

controlling change in business. Now you know why effective use of policy and procedure is one of the fundamental manageering skills introduced in Chapter 1. Without that fundamental skill, you will not be able to use its companion skill of controlling change. Chapter 7 explains tactically how you can build a system of operating policy and procedure without having to reinvent the wheel.

## **6.9 EPILOGUE**

While we have built the case for written policies and procedures, some extremely profitable companies have very little documentation. But those are rare birds. Instead of explicit policy and procedures, they have exceptionally consistent and incredibly driven upper management, usually in the person of an owner or a significant shareholder. Such people are, by definition, freaks. Their powers of analysis are superb, and their understanding of policy and procedure is second nature. They intuitively know the difference and marshal their assets accordingly. They are the teachers to the rest of us. But most of us are nowhere near their equals, no more than we can defend against a Hakeem Olajuwon fake or hit a Nolan Ryan fastball. We have to use tools to make up for our shortcomings. To ignore that fact is to reduce the potential for profit and to lose your opportunity to have enduring impact on the companies, divisions, departments, and people who look to you for leadership.