

CHAPTER 18

THE FORK MODEL FOR QUALITY MANAGEMENT: PRONG 3, OR POLICY MANAGEMENT

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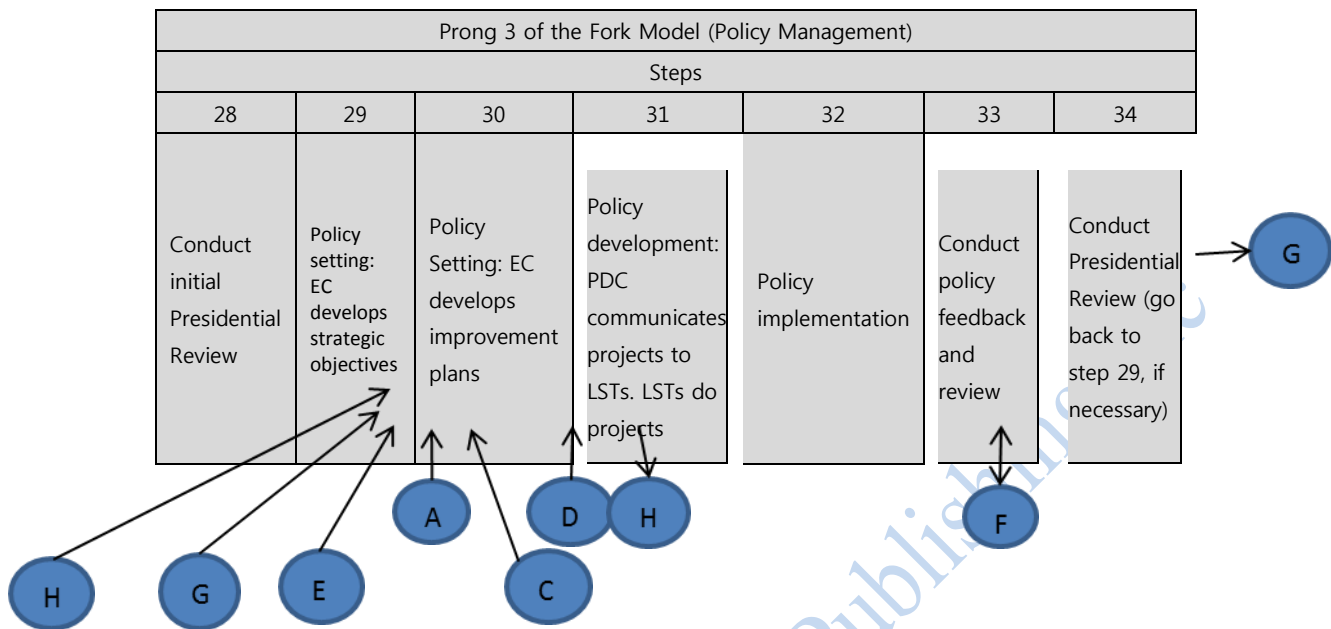
Chapter Objectives

- To describe the committees required to accomplish policy management
- To describe the steps necessary to conduct an initial Presidential Review
- To discuss the role of the Executive Committee in the development of a strategic plan, with objectives and indicators based on the organization's vision and mission statements, values and beliefs, organizational and environmental factors, crises, key processes, and technology
- To discuss the role of the Policy Deployment Committee in developing a set of integrated improvement plans
- To discuss the use of a dashboard in deploying the mission statement and the strategic and business presidential objectives
- To discuss the role of the Executive Committee and the Local Steering Teams in policy implementation
- To discuss the role of the Executive Committee, Policy Deployment Committee, and Local Steering Teams in conducting periodic reviews and obtaining necessary feedback for promoting process improvement efforts
- To discuss the relationship between policy management and daily management
- To provide a simple example of policy management

18.1 Introduction

In this chapter we explain what is required to set policy, deploy policy, implement policy, study policy, provide feedback to employees on policy, and conduct a presidential review of policy in an organization. Policy Management is Prong 3 of the quality management fork model, as shown in Figure 18.1.

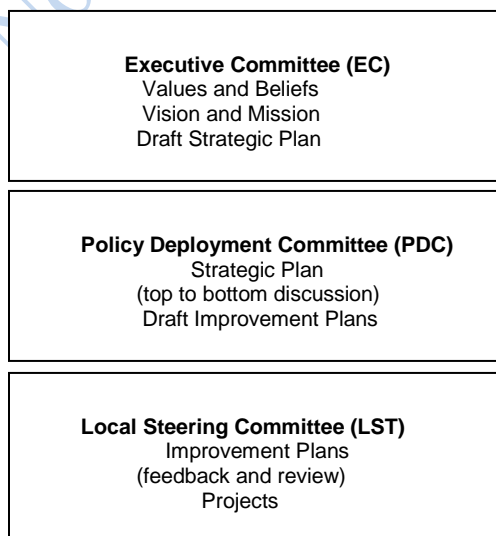
Figure 18.1
Prong 3 of the Fork Model: Policy Management



Policy Management is performed by turning the PDSA cycle to improve and innovate the methods responsible for minimizing the difference between corporate results and corporate targets, or to change the direction of an organization [Brunetti, 1993; Ishikawa, 1985, pp.59-71; King, 1989; Mizuno, 1988]. Corporate targets are set to allocate resources between corporate methods. Policy Management assumes that Daily Management and Cross-Functional Management are at work in the organization.

Policy Management is accomplished through an interlocking system of committees, as shown in Figure 18.2.

Figure 18.2
Committee Structure for Policy Management



Project Teams
Projects
(improvement and innovation of a process)

The Executive Committee (EC) is responsible for setting the strategic plan for the entire organization. This includes establishing values and beliefs, developing statements of vision and mission, and preparing a draft set of strategic objectives and indicators. The Policy Deployment Committee (PDC) is responsible for deploying the strategic objectives in the entire organization. This includes developing an improvement plan (set of short-term tactics) for each department. A Local Steering Team (LST) is responsible for implementing policy (short-term tactics) within a department by coordinating and managing project teams. Project teams implement policy through improvement and innovation of the processes highlighted for attention.

The Local Steering Teams conduct meetings with Project Teams, called Feedback and Review sessions, to learn about team activity, promote quality theory and tools, and manage and coordinate team activities to pursue company policy. The Policy Deployment Committee conducts meetings with Local Steering Committees, called Mini-SITCONS, to learn about team activity, promote quality theory and tools, coordinate and manage project teams to optimize company policy, and, if necessary, to reallocate resources between project teams (according to revised targets). Finally, the President meets with the leader of each department to understand the state of quality in the organization and to determine if policy (strategic objectives) is being implemented throughout the organization.

18.2 Initial Presidential Review

The President conducts an initial **Presidential Review**, as shown in step 28 of Figure 18.1, to determine the state of the organization and to develop a plan of action for the promotion of corporate policy. Presidential Reviews are high-level studies of an organization's departments by the President or Chief Executive Officer.¹

During Presidential Reviews, the leaders of the departments explain to the President their mission, objectives and indicators; as well as the status of projects emanating from the strategic and improvement plans. Normally, this information is conveyed through presentations. Much attention is devoted to the linkage between corporate and department strategies, and the progress toward the achievement of these strategies. Problems in planning and executing these strategies are discussed, and attempts are made to identify the causes of these problems. Through the Presidential Review, the President is able to evaluate the state of quality management in the organization.

18.2.1 Reasons for Conducting the Presidential Review

First, Presidential Reviews are conducted to determine the extent of achievement of organizational policy. Reviews are conducted to verify the implementation of improvement plans and to assess and improve the management process used to achieve the mission. In one company, the President found that one of his policies had been misinterpreted, and that the troops were marching in the opposite direction. The mistake was identified and quickly rectified to avert much wasted effort. This is not a

¹ This section of the chapter was rewritten from material prepared by Francisco "Tony" Avello of Florida Power & Light Company, Miami, FL, 1992.

rare occurrence in large organizations, because information is filtered by each layer of management. Second, Presidential Reviews are conducted to determine the cost to the organization of achieving its strategic and improvement plans. Third, Presidential Reviews are conducted to prevent deterioration in those processes which have not been highlighted for attention in **policy management** due to the reallocation of resources to methods which have been highlighted for attention. Finally, Presidential Reviews identify the major problems facing the organization. The President tries to discover those problems that affect functional performance, but cannot be solved at the functional level. Generally, these problems must be addressed at the company level since the causes of these problems cross many organizational boundaries. In this way, no single function has the authority to promote solutions. Most major company problems are cross-functional, and thus difficult to identify. The Presidential Review provides a significant opportunity to identify cross functional problems. Once identified, these problems are turned over to appropriate cross-functional teams.

18.2.2 Benefits of Presidential Reviews

One benefit of Presidential Reviews is that they create a dialogue between the President and mid-level management, encouraging an atmosphere of trust that helps bring out information about problems. The information provides an opportunity for the President to promote joy in work for all employees.

Another benefit is the insight they give to the President about the operations and culture of the organization. Frequently, this information is not available through normal channels of communication. Examples of information that can be gleaned by the President include the skill level of the managers and supervisors, the attitudes of employees toward improvement of processes, and employee morale. This information is necessary to promote the strategic and improvement plans.

The President will have a good understanding of the major problems facing the organization after a full round of Presidential Reviews. So, to a certain extent, he should have a good idea about the possible causes of problems. The President knows the areas that should be involved in the improvement activities, and should also know the attitudes and skills of employees in carrying out the strategic and improvement plans. Finally, he knows the level of training that will be needed throughout the organization to work on the strategic and improvement plans.

18.2.3 Barriers to the Presidential Review

Initially, the President may resist conducting a Presidential Review due to demands on his time. All too often, there is a desire to obtain information from an **executive summary**; however, the executive summary does not provide sufficient information to establish or change the direction of the company. One company President tells the story of how he went from opposing Presidential Reviews to so thoroughly embracing them that he began to conduct half-day reviews on a quarterly basis with each of his departments.

18.2.4 Selecting the Departments and Topics to Review

Departments and topics are selected for Presidential Review by examining the policies and projects that were not successful in previous years, or failures of the management system. These problems identify the departments that are candidates for Presidential Review. It is important that the President does not assign fault for problems: blame-fixing makes people defensive and unwilling to identify problems. It creates fear in the work place. The President must take responsibility for problems in the system.

Another way of selecting departments and/or topics for Presidential Review is to review all departments. This has the advantage of not singling out any departments' past failures, thus avoiding a threatening situation. One drawback to this approach is that a greater number of departments must be reviewed. Ultimately, the culture of the company and the existing organizational climate will dictate which alternative is best. The issue of not creating a threatening situation is an important one and should be weighed carefully before deciding which approach to take.

18.2.5 Informing the Departments to be Examined Presidential Review

Once the topics and functions have been identified, the next step is to announce the reviews. This is done through a meeting of senior managers, where the purpose of the reviews is explained, the names of the departments that will participate in the reviews are announced, and the format of the reviews is discussed. If necessary, the President should offer staff members help in further clarifying the objectives, guidelines, and manner of the reviews. This is also a good time to define the ground rules to follow during the reviews.

18.2.6 Ground Rules for the Presidential Review

Probably the most important ground rule for Presidential Review is that the presenter submits his department's report at least one week prior to the review. This rule is usually resisted, since most presenters will make changes to their presentation until the last minute. However, as will become apparent in the next section, it is important to enforce this rule. Another important ground rule is using data to support the points of the presentation. Since the reviewer will be using the presentation as a vehicle to acquire information for establishing company policies, the presentation must rely on facts.

The presenting department may bring and use as many presenters as needed to fully explain the principal issues or to answer questions. The President usually invites managers from related departments to the review, not only to make them aware of the important issues of that department, but also for them to get a glimpse of the review procedures, and thus, help them prepare for their own reviews. The atmosphere of the review should be informal but serious.

18.2.7 Preparing for the Review

Proper preparation for a Presidential Review is important. Many reviews fail before they begin because of poor preparation by the President. Good reviews are the result of careful prior study of the presenter's report, allowing the President to establish a focus for the review, identify issues needing clarification, and formulate questions.

It is critical to have a staff department help the President prepare for the reviews. Usually, this task is assigned to the Quality Department, but it may be any department knowledgeable about the Presidential Review process and quality management in general. The assigned department assists the President in fully understanding the present situation of the presenting department and in developing a list of topics or broad questions to ask the presenters. More specific questions will normally follow from the answers given by the presenters. The President conducts the review and should become knowledgeable enough to conduct future reviews without extensive help; therefore, a key task of the staff department assisting the President is to instruct and coach the President so that she can become a competent reviewer.

18.2.8 Conducting the Review

Usually, the review begins with a presentation by the management of a department, rather than by the team members who performed the work in the department. This structure is critical because it places management “in the line of fire” for quality improvement efforts. Management must be involved with, and learn about, quality management to effectively perform its responsibilities in a presidential review. The presentation is followed by a question and answer period that is led by the President. It is customary to allow the presenter to finish the presentation without interruption, except for clarifying questions.

When the presenter has concluded, the President begins the question and answer period. It is her opportunity to probe deeply into issues to determine the possible causes of problems. Often, the President will be persistent and ask the same question several times to get the appropriate answer. For critical issues or when the answers are not provided, action items with due dates are established. The presenters demonstrate the results of the action items at a later date.

The following questions are examples of the type of questions the President might ask a presenter:

1. What is the mission of your department?
2. Does your department's mission support the company's mission?
3. How do you know if you are pursuing company policy?
4. What procedures do you follow when you discover that you are not pursuing company policy?
5. Can you show me an example of a corrective action you have taken when your department was not pursuing company policy?
6. How did you analyze the failure to pursue company policy?
7. How did you know if the corrective action was effective?
8. What are the major problems/opportunities of your department?
9. How do these problems/opportunities manifest themselves?
10. Can you give me an example?
11. What effects do these problems/opportunities have on your department and/or on your customers?
12. Who are your customers?
13. What are your customers' needs and wants?
14. How, and how often, do you assess your customers' needs and wants?
15. Can you show me how you are ensuring the satisfaction of your customers' needs and wants?

The attitude of the President during the review is critical. Often, the President has to be persistent to obtain the answers she needs to make decisions. In some cases, the President pushes the presenters to obtain a desired performance level or behavior; this may be seen as judgmental or harsh by the presenters. The President's job is to establish an atmosphere of teamwork, providing constructive criticism, examples of ideas for improvement, and/or guidance on where to go for help.

The staff department members and consultant helping the President during the review should assume a low profile. They should ask questions only at the request of the President, after the President has finished her own questions.

After the reviews, the staff department and/or the consultant meet with the President to identify her successful and unsuccessful actions and behaviors during the review. The purpose of this meeting is to instruct and coach the President in improving her skills as a reviewer.

18.2.9 Keys to Successful Reviews

The most important determinant in a successful Presidential Review is whether the President can gain the trust of management. It is critical that presenters feel they will not be punished in any way if they disclose problems in their departments.

Another key to a successful review is the quality of the preparation by the President and his staff. If they learn all they can about the topic being reviewed, research and analyze the past accomplishments and failures of the department being reviewed, and focus on problem areas that offer good opportunities for improvement, they are more likely to create a positive review process.

Another important factor in a successful review is the assignment of action items to presenters when data is not provided as requested. Failure to assign action items when needed may communicate to the organization that mediocrity is acceptable.

It is important to concentrate on process and results, rather than only results, in Presidential Reviews. The President can help the presenter see how poor results are most likely due to a deficiency in a management process. Also, the President should set an example by identifying and working to improve deficiencies in the Presidential Review process.

18.2.10 Presidential Reviews and Daily Management

The early phases of **daily management** should include the Initial Presidential Review process, as shown in step 28 of the detailed fork model in Figure 18.1. This is important to ensure the active involvement of all levels of management in the quality management system.

18.3 Policy Setting

Once the initial Presidential Review is complete, the President has information critical to setting policy. Policy Management involves:

1. establishing statements of vision and mission
2. developing organizational values and beliefs
3. identifying organizational and environmental factors that affect policy
4. identifying crises facing the organization
5. determining key organizational processes that affect stakeholders
6. identifying technological issues facing the organization
7. establishing strategic objectives, as shown in step 29 of Figure 18.1
8. developing a set of integrated improvement plans, as shown in step 30 of Figure 18.1 for the departments

18.3.1 Executive Committee (EC)

The members of the **Executive Committee** (EC) work to understand the pros and cons for transformation of the organization from the perspective of each stakeholder group. The top management of an organization asks the question "Does my organization have the motivation and energy necessary to make quality happen?" The data from this question is collected, summarized, and analyzed through a **force field analysis**, a technique which lists the "forces for" and "forces against" a particular action or issue, as shown in Figure 18.3.

Figure 18.3
Generic Lists for a Force Field Analysis

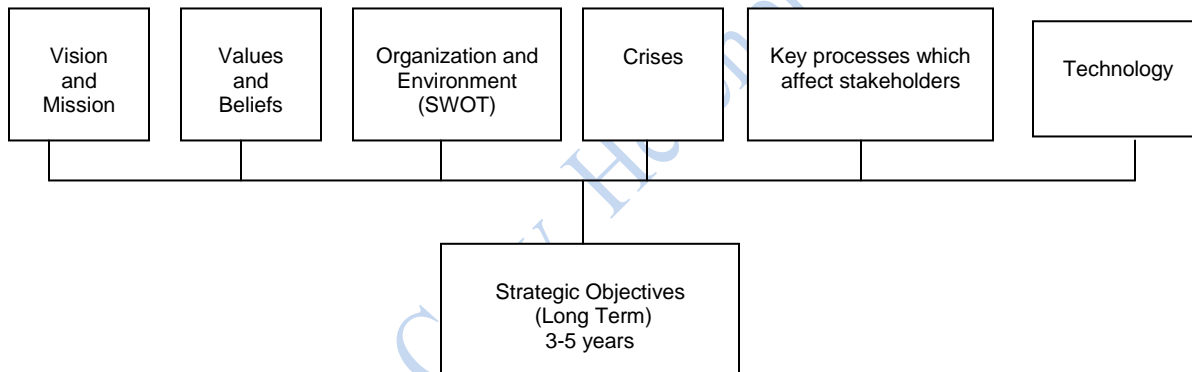
“Forces For” Action or Issue	“Forces Against” Action or Issue
Item 1	Item A
Item 2	Item B
Item 3	Item C

The comparative weight of the “forces for” transformation versus the “forces against” transformation is a subjective decision on the part of top management. After analysis, if the members of the EC determine that the “forces for” transformation outweigh the “forces against” transformation, they develop a strategic plan to accomplish this.

18.3.2 The Strategic Plan

A **strategic plan** lists the long-term strategic objectives of an organization. **Strategic objectives** are based on a thorough analysis of statements of vision and mission; values and beliefs; organizational and environmental factors; crises, if any; key processes that affect stakeholders; and technology. Figure 18.4 depicts the relationship between these six items and the strategic objectives.

Figure 18.4
Development of Strategic Objectives



Statements of Vision and Mission. Deming’s System of Profound Knowledge addresses the need to establish constancy of purpose toward improvement of product and service with a plan to become competitive, stay in business, and provide jobs, as articulated in Point 1 of Deming’s 14 points, discussed in Chapter 2. Statements of vision and mission are starting points for constancy of purpose.

A **vision statement** is developed by the top management of an organization. It defines the organization’s future state. It is a dream that comes from the “hearts” of top management; it should evoke emotion, be easily remembered, state a noble purpose, and create a rallying point for all concerned with the organization.

The **mission statement**, developed by top management, reveals the current reason for the existence of an organization, providing a rallying point for all stakeholders; it should be short and easily remembered by all stakeholders of the organization.

Values and beliefs. A statement of the **values and beliefs** that govern an organization's culture is necessary to provide predictable uniformity and dependability to the decision-making process. This statement forms the foundation for the decision-making process. Values and beliefs are theories about life and organizations which have been modified and improved by cultural, educational, familial, organizational, and personal experiences. Through the adoption of Deming's theory of management, an organization can develop a set of values and beliefs that form its foundation, and focus on creating a "win-win" environment for all stakeholders of an organization. These are discussed below.

- *Manage to optimize the entire system, not just your component of the system.* Local optimization creates sub-optimization of the entire system. For example, maximizing profit in one division of a company may decrease profit for the entire company.
- *Manage to create a balance of **intrinsic** and **extrinsic** motivation; do not just motivate people using extrinsic motivation.* Intrinsic motivation is the individual's desire to do something for its own value, as opposed to extrinsic motivation that relies on rewards or punishments for the individual. For example, empower people to promote joy in work, as well as using well-thought out pay plans.
- *Manage with a process and results orientation, not with a results-only orientation.* Process and results management promotes improvement and innovation of organizational processes. Highly capable processes facilitate prediction of the future and, consequently, a higher likelihood of achieving the organizational mission. For example, study a process, collect data, and develop ideas for improving the process to permanently remove problems, as opposed to simply demanding fewer problems.
- *Manage to promote cooperation, not competition, unless the aim of the system is to win.* In a competitive environment, most people lose. The costs resulting from competition are unknown and unknowable, but huge. Competition causes individuals, or departments, to optimize their own efforts at the expense of other stakeholders. This form of optimization seriously erodes the performance of the system of interdependent stakeholders. For example, get departments and divisions to work together for the common good, as opposed to working against each other for their individual good. The only time competition is the rational choice is if the aim of the system is to win; for example, when two pro football teams play each other, the aim is to win. When two men play tennis in a pickup game at a gym, they have to ask themselves, is the purpose to win, or is it to get a good work out, or to improve their game. The second and third options are not well served by competition.

Organizational and Environmental Factors. A **SWOT** (Organizational Strengths and Weaknesses, and Environmental Opportunities and Threats) **analysis** is used to assist the members of the EC in selecting the strategic objectives that ensure the best fit between the internal strengths and weaknesses of an organization and the external opportunities and threats that face an organization. The members of the EC identify strengths and opportunities that bypass weaknesses and threats. This information is then used as input in developing the strategic objectives of the organization.

An excellent method for performing a SWOT analysis is for the members of the EC to appoint a team of appropriate people to conduct four **brainstorming** sessions and to create four **affinity diagrams**. One brainstorming session is conducted on the organization's strengths and an affinity diagram is developed to bring out the underlying structure of the strengths. A similar analysis is conducted for weaknesses, opportunities and threats.

Portions of an affinity diagram from a SWOT analysis of a university are shown in Table 18.1. The items on the left side provide the structure of the strengths, weaknesses, opportunities and threats,

while the bracketed items on the right side provide the brainstormed ideas underlying the structure of the strengths, weaknesses, opportunities and threats.

Table 18.1
SWOT Analysis for a University

Strengths

Academic	faculty, research, library,...
Financial	management system,...
Diversity	multicultural,...
Business	continuous improvement process, ability to plan, training
Life Style	encourages holistic health, total fitness centers, ...

Weaknesses

Communication	ineffective,...
Infrastructure	space, parking, funding,...
Financial	tuition, budget,...
Reputation	local v. international, sports,...
Technology	insufficient use,...

...

Opportunities

Student Base	local, international, retrain downsizers,...
Resources	donations, local economy, alliances, media,...
International	sister universities world wide, globalization
Technology	easy access to potential students,...

...

Threats

Increased Costs	technology, salaries, tax changes, insurance,...
Corporate Support	employee tuition reimbursement, downsizing,...
Litigation	litigious society,...

...

Crises. The members of the EC determine if any crises currently face the organization. If so, the members of the EC communicate this information to all stakeholders to create the energy necessary to improve quality. Management uses the output from the brainstorming session and affinity diagram in step 1 of Figure 14.2 to highlight existing crises. Highlighting crises in this fashion is an important job of top management. Again, it is necessary for leadership to isolate a crisis to generate the energy necessary to improve quality.

Key processes that affect stakeholders. Data is collected to determine the requirements important to the customers served by an organization, called the **Voice of the Customer**, discussed in Appendix A18.1, and the requirements important to all levels of employees in the organization, called the **Voice of the Business**, discussed in Appendix A18.2. Determination of these will help the members of the

EC identify the key processes or methods, whose level of performance will affect the selection of strategic objectives.

Voice of the Customer and Voice of the Business data are summarized into a single prioritized list of the organizational processes to be highlighted for attention through the strategic objectives, called the **Table of Tables**, discussed in Appendix A18.3. There are many possible structures and scoring schemes for a Table of Tables; a generic Table of Tables is shown in Figure A18.5 in Appendix A18.3.

Table 18.2 shows sections of a Table of Tables for a university. The university Table of Tables has stakeholder groups and their needs/wants in the rows and university processes in columns 2 through 16. Column 1 shows the average total weight of each stakeholder need/want from a survey conducted in each stakeholder segment. Total weight is a measure of importance and severity to stakeholders. It ranges from 1 to 25, where 1 is not important and not severe and 25 is important and severe. The numbers in the cells indicate the strength of the relationship between a stakeholder need/want and a university process. Relationship values are measured on a 0 (blank) to 9 scale, where 0 (blank) indicates no relationship and 9 indicates a strong relationship. For each cell in a given row, the average total weight for the row is multiplied by the cell relationship value to yield a cell value. Finally, the cell values are summed up for each column. This assumes that all stakeholder groups are equally important when developing strategic objectives. The column totals provide a weighted value for each university process in satisfying important and severe stakeholder needs/wants. In this example, “Employee Training & Hiring” (weight =5244) and “Communication Systems” (weight=4066) are the university processes which are most critical to satisfying stakeholder needs and wants. These are the inputs from the Table of Tables to establishing strategic objectives for the university.

Table 18.2
Portions of the Table of Tables for a University

STAKEHOLDER GROUPS	University Processes															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Total Weight	Employee Hiring & Training	Communication Systems	Strategic Planning	Facilities Administration	Building & Expansion	Student Training	Grant Administration	Food Services	...
Students																
Value of education	18	9	9	9	1	3	9							0	0	
Quality of academic major	18	9	6	3	0	3	9							0	0	
Quality of instruction	16	9	6	3	3	3	9							0	0	
Availability of courses	14	3	3	1	0	1	0							0	0	
Accuracy of financial awards	16	1	1	3	0	9	0							0	0	
Career preparation	14	9	9	3	0	1	9							0	0	
Attitude of faculty	16	9	3	3	0	0	3							0	0	
Academic reputation	16	9	9	9	3	1	9							0	0	
Quality of academic advising	14	9	3	3	0	3	1							0	0	
Challenge offered by program of study	16	9	9	3	0	0	2							0	0	
Relationship with other students	9	3	3	3	3	0	2							0	0	
Class size	9	1	3	3	1	1	1							0	0	
Buildings and Grounds																
...																
Design new facilities to minimize life cycle needs	20	1	6	9	9	9	9							0	0	
Consolidate authority for buildings	9	0	3	1	9	3	0							0	0	
Schedule classrooms to minimize costs	8	1	0	1	9	9	1							0	0	
...																
Granting Agencies																
...																
Employers																
...																
Administration																
...																
Staff																
...																
Faculty																
...																
Board of Directors																
...																
Donors																
...																
State Government																
...																
Federal Government																

...																	
Etc.																	
...																	
Process Weights		5244	4066	3827	2704	2578	2244								865.5	386.5	

Technology. The members of the EC collect data on technological advances of products and services in the industry, substitute products and services, future products and services, and management technology. All forms of technology are considered when establishing policy via strategic objectives. The same procedure is used to analyze technology data as is used to analyze crisis and SWOT data.

Develop strategic objectives and a budget. The members of the EC utilize the information gathered in the above six areas to create a short list of three to five strategic objectives, and their associated indicators, which the organization will focus extra effort in the next three to five years, through policy management. Next, the members of the EC establish an initial budget to allocate resources between strategic objectives. It is important that strategic plans identify all available resources, such as financial, human, and plant and equipment. Resources are allocated to methods by setting targets. Targets may be reset at a later date to optimize the interdependent system of stakeholders of an organization. Strategic objectives must be accomplished in addition to the regular functioning of the organization.

18.3.3 Policy Deployment Committee (PDC)

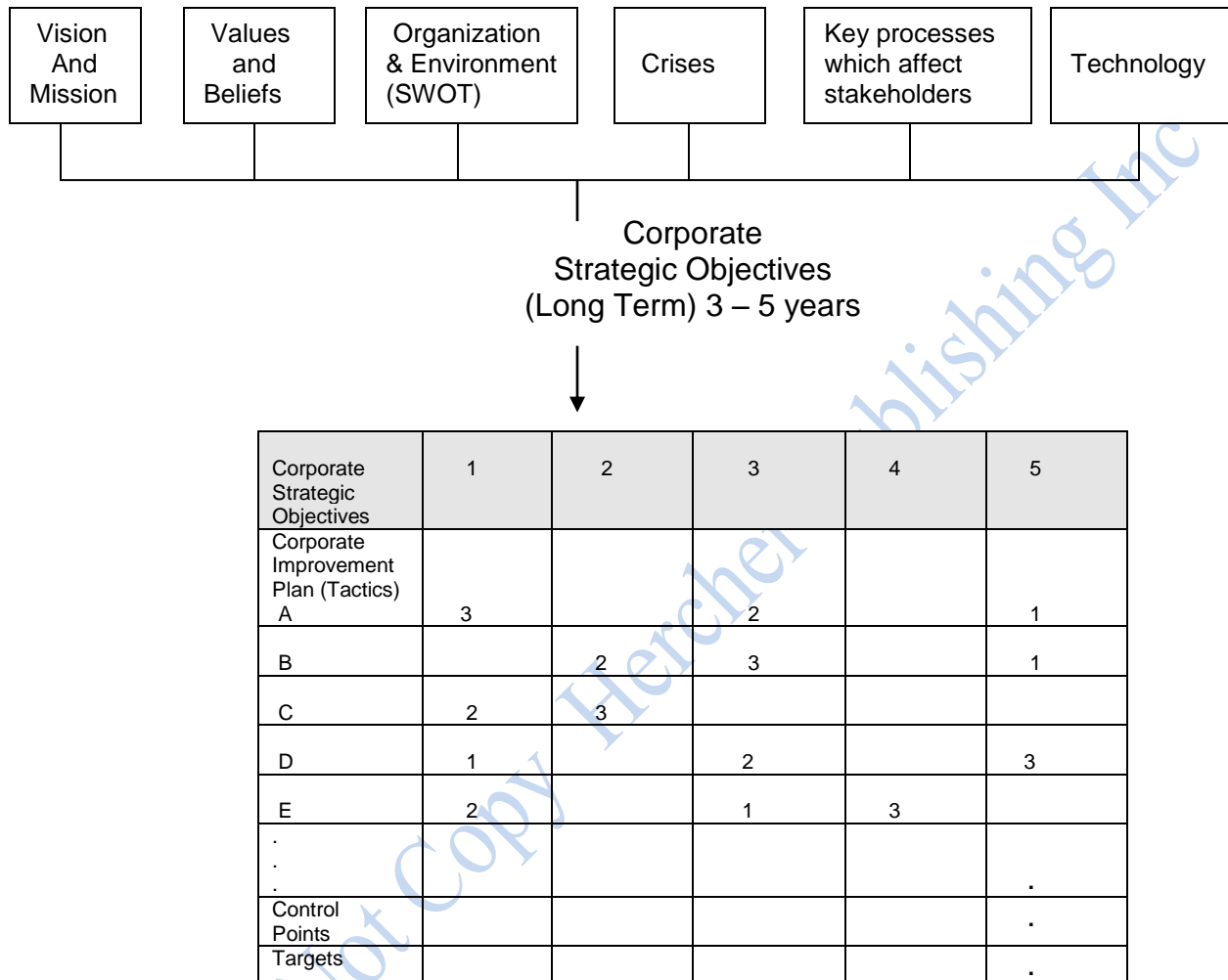
The members of the EC communicate to the members of the **Policy Deployment Committee (PDC)** the pros and cons for transformation, vision and mission statements, values and beliefs, and strategic objectives with their indicators.

The members of the PDC develop a set of **integrated improvement plans**, as shown in step 30 of Figure 18.1, to promote the strategic objectives. Improvement plans, or tactics, prioritize processes or methods, for attention through policy management. Resources are allocated between processes by setting targets. An improvement plan usually follows a one-to-two-year time horizon. The members of the PDC utilize the following steps to construct a set of integrated improvement plans.

Step 1a. Develop the **corporate improvement plans** needed to promote the corporate strategic objectives. **Gap analysis** is used to study the root cause(s) of the difference between customer and employee requirements, and organizational performance for each strategic objective. The members of the PDC assign a group of staff personnel to study the gap for a particular strategic objective. For example, the group might study the gap over time and determine that it is stable and contains only common variation. Next, they construct a **Pareto diagram** of the common causes of the gap, isolate the most significant common cause, and develop a **cause-and-effect diagram**, as discussed in Chapter 10. The staff personnel then study the relationship between the suspected root (common) cause and the size of the gap. If they determine the relationship to be significant, they recommend to the members of the PDC a tactic (change concept) for consideration as part of the organization's improvement plan.

The relationship between corporate strategic objectives and corporate improvement plans or tactics can be seen in Figure 18.5. Relationships are measured on the following scale: 3 = strong relationship, 2 = moderate relationship, 1 = weak relationship, and blank = no relationship.

Figure 18.5
Relationship Between Corporate Strategic Objectives
And Corporate Improvement Plans

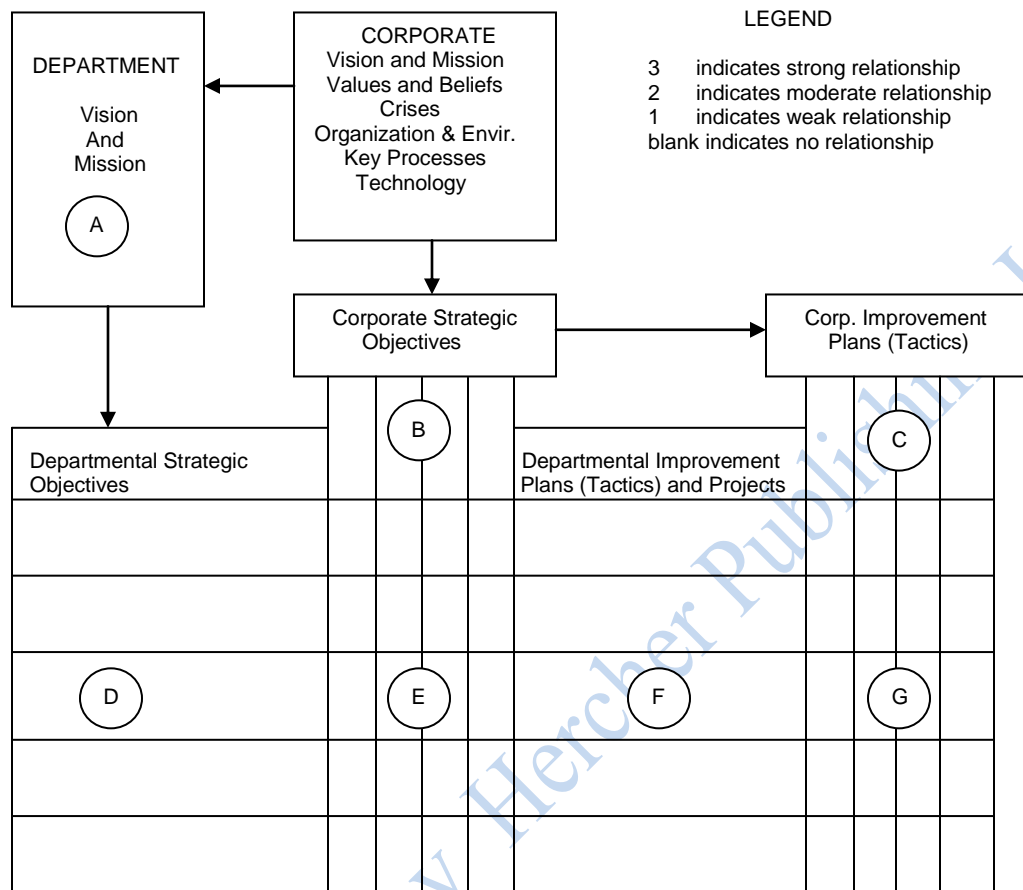


Every strategic objective should be adequately serviced by one or more tactics. If a strategic objective is not being serviced by any tactic, or not adequately serviced, one or more new tactics are developed to service the strategic objective. All columns of the matrix in Figure 18.5 should contain at least one score of two or three.

Step 1b. Develop the **departmental improvement plans** or tactics needed to promote the departmental strategic objectives.

Organizations need a mechanism for setting policy and allocating responsibility and resources in departments and divisions to promote corporate policy. Such a mechanism can be seen in Figure 18.6.

Figure 18.6
Setting Policy, and Allocating Responsibility and Resources



Objective of form: To show the relationship between corporate strategic objectives and improvement plans, and departmental strategic objectives and improvement plans.

Department _____ (H) _____ Signed _____ (I) _____ Date _____

Source: Abstracted from: Florida Power & Light Company, Description of Quality Improvement Program, Southern Division, 1988, p. 16.

Section A of Figure 18.6 provides departmental management with an opportunity to create departmental vision and mission statements that promote the corporate vision and mission statements. Section B of Figure 18.6 lists the corporate strategic objectives (the columns of Figure 18.5). Section C of Figure 18.6 lists the corporate improvement plans or tactics (the rows of Figure 18.4). Section D of Figure 18.6 lists the departmental strategic objectives. Departmental management considers all the information utilized in developing the corporate strategic objectives when developing the departmental strategic objectives. Section E of Figure 18.6 shows the strength of relationships between corporate strategic objectives and departmental strategic objectives. Relationships are measured on the following scale: 3 = strong relationship, 2 = moderate relationship, 1 = weak relationship, and blank = no relationship. Every corporate strategic objective must be adequately serviced by one or more departmental strategic objectives; if a corporate strategic

objective is not being adequately serviced by any departmental strategic objectives, then one or more departments must develop strategic objectives to service that corporate strategic objective. Section F of Figure 18.6 lists the departmental improvement plans or tactics required to promote the corporate improvement plans or tactics. The departmental improvement plans result in quality improvement projects. When entering this information, it is important to line up departmental improvement plans with their corresponding departmental strategic objectives. Section G of Figure 18.6 shows the strength of the relationships between corporate improvement plans and departmental improvement plans, using the same scale as above. Every corporate improvement plan must be adequately serviced by one or more departmental improvement plans; if a corporate improvement plan is not being adequately serviced by any departmental improvement plan, one or more departments must develop improvement plans to service that corporate improvement plan. Section H of Figure 18.6 indicates the name of the department or division filling out the form. Section I of Figure 18.6 shows the signature of the departmental manager responsible for setting policy.

Step 2. The members of the PDC select and operationally define **control points** (indicators) and targets for the corporate improvement plans, as shown in Figure 18.5. Control points (indicators) are measures about policies or results that are managed with data. Targets are the desired, or nominal, level for the control points set by management; they should be rational, not arbitrary. These control points and targets are deployed into departmental control points and targets. Targets are used to allocate resources for improvement projects to departments.

The members of the PDC ask the following questions [Mizuno, 1988, p. 106]:

1. Have the control points (indicators) used to monitor improvement plans been operationally defined?
2. Have rational targets been assigned to projects to optimize the corporate strategic objectives?

Step 3. The members of the PDC review and prioritize the projects called for in the improvement plans, as shown in section F of Figure 18.6. They reach consensus on the priorities, and then ask the following questions [Mizuno, 1988, p. 106]:

1. Are priority projects well defined?
2. Will taking care of these priority projects help achieve the strategic objectives?
3. Are there better ways to achieve the strategic objectives?
4. Have the costs associated with pursuing the strategic objectives been studied?
5. Have the most appropriate projects been highlighted for study in the improvement plans?
6. Are projects defined with enough specificity so that everyone understands them?
7. Were projects discussed with relevant people and groups?
8. Were constraints on methods considered by the PDC?
9. Has the effectiveness of the projects been studied?
10. Are sufficient resources available for the projects?

Step 4. The members of the PDC communicate the projects that emanate from corporate and departmental improvement plans to the **Local Steering Teams** (LSTs), including the allocation of resources. The members of the PDC and an LST come to consensus on projects, targets, and resources in meetings called **catchball** sessions.

18.3.4 Local Steering Teams (LSTs)

The members of the LSTs are responsible for coordinating and carrying out the projects set out in the corporate and departmental improvement plans. The members of the PDC and LSTs should reach consensus on the priorities assigned to methods via targets that allocate resources. The members of LSTs ask the following questions [Mizuno, 1988, p. 106]:

1. Are priority projects well defined?
2. Will taking care of these priority projects help achieve the improvement plans and strategic objectives?
3. Are there better ways to achieve the strategic objectives?

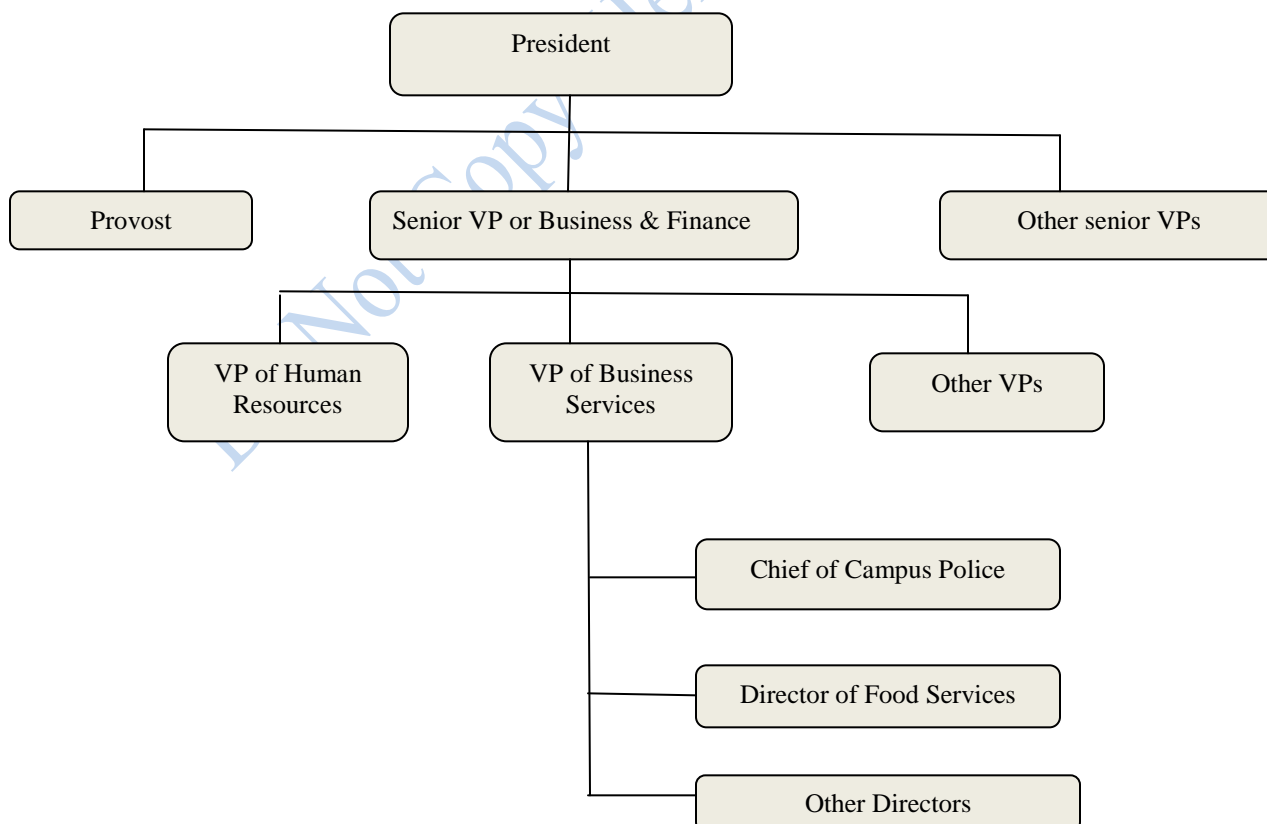
18.4 Policy Deployment

The mission statement and presidential objectives (both strategic and business) are deployed or cascaded throughout an organization using a tool called a **dashboard**. A dashboard is used by management to clarify and assign accountability for the “critical few” key objectives, and their corresponding key indicators and projects/tasks, that are needed to steer an organization toward its mission.

18.4.1 A Simple Dashboard

An example of an organizational chart from a University is shown in Figure 18.7. It highlights the relationship between a third tier manager and a fourth tier manager at the University.

Figure 18.7
Partial Organizational Chart of the University of Miami



The dashboard between the third (Vice President of Business Services) and fourth (Chief of Campus Police) tier manager in Figure 18.7 is shown in Table 18.3.

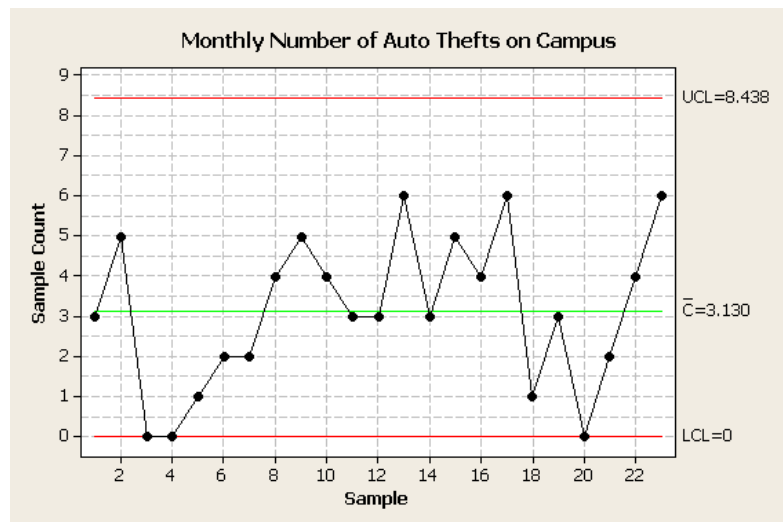
Table 18.3
Portion of a Dashboard from the Organizational Chart in Figure 18.7

Mission Statement for Business Services Department of the Business and Finance Division of the University of Miami: “ Optimum SAS. ”				
NOTE: SAS = Security, Assets and Services				
Vice President of Business Services		Chief of Campus Police		Tasks or Projects
Key Objectives	Key Indicators	Key Objectives	Key Indicators	
Improve Security on campus	SEC1: Number of murders, by month	No murders. No objective other than to continue with current processes	SEC1: List of murders, by month	No murders. No task or project
	SEC2: Number of rapes, by month	Detail not shown		
	SEC3: Number of Robberies, by month	Detail not shown		
	SEC4: Number of aggravated assaults, by month	Detail not shown		
	SEC5: Number of burglaries, by month	Reduce number of open doors on campus	SEC5A: Number of open doors, by department, by building, overall, by month	Chief of Police established a team to study SEC5. Team members determined that most burglaries occurred when doors were left open (SEC5A).
	SEC6: Number of larcenies, by month	Detail not shown		
	SEC7: Number of auto thefts by month. See SEC7 in Figure 18.7. SEC7 shows data prior to September 1999.	Optimize deployment of police patrols in parking lots	SEC7A: Number of auto thefts on campus by month. SEC7A includes a notation on the indicator chart of when the revised patrol schedule was begun by Police Chief. See SEC7A in Figure 18.1. SEC7A shows data from before and after the auto theft team's process change was put into effect.	Chief of Police established a team to study SEC7. Team members determined that most auto thefts occur in 2 parking lots between 7:00am and 7:00pm. Consequently, Chief redeployed the police force to heavily patrol the 2 problematic lots between 7:00am and 7:00pm. SEC7 showed a dramatic reduction after redeployment of the police force.
	SEC8: Number of arsons, by month	Detail not shown		
Protect University Assets	Detail not shown			
Improve University Services	Detail not shown			

The mission of the Business Services Department is “Optimum SAS” (Security, Assets and Services). The Vice President of Business Services promotes the Business Services department mission

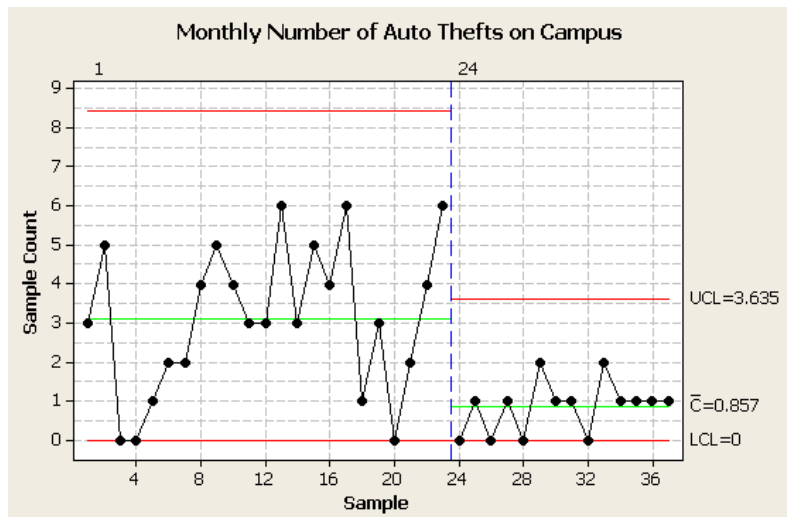
through three **key objectives**: (1) improve security on campus, (2) protect university assets, and (3) improve university services. The first key objective is measured through eight **key indicators**: (1) number of murders by month (SEC1), (2) number of rapes by month (SEC2), (3) number of robberies by month (SEC3), (4) number of aggravated assaults by month (SEC4), (5) number of burglaries by month (SEC5), (6) number of larcenies by month (SEC6), (7) number of auto thefts by month (SEC7), and (8) number of arsons by month (SEC8). An example of a key indicator can be seen in Figure 18.8, showing a c chart of the number of auto thefts by month (SEC7) before a daily management team implemented a change to the process for responding to auto thefts.

Figure 18.8
Number of Auto Thefts per Month



The Chief of Campus Police promotes the mission of the Business Services Department by studying his superior's (the Vice President of Business Services) key indicator data to identify his key objectives. For example, the Police Chief establishes a team to study the number of auto thefts by month (SEC7). The team members determine that most auto thefts occur in two campus parking lots between 7:00 a.m. and 7:00 p.m. The Chief redeploys the police force to heavily patrol the two problematic lots between those hours. Subsequently, there is a drastic reduction in the number of auto thefts by month (SEC7), as shown in the c chart in Figure 18.9 (SEC7A).

Figure 18.9
Number of Auto Thefts Before and After Process Improvement



18.4.2 Benefits of a Dashboard

A dashboard has both strategic and tactical benefits. The strategic benefits of a dashboard include deploying the mission statement throughout the levels of an organization, from top to bottom, through the development of a cascading and interlocking set of key objectives and key indicators; monitoring deployment of the organizational mission statement, via key objectives, throughout the organization; pursuing the organizational mission and its derivative key objectives through improving and innovating processes as measured by key indicators; balancing management's attention between customer, process, employee and financial key objectives as measured through key indicators; and increasing communication between, and within, the levels of an organization.

The tactical benefits of a dashboard include linking all processes or jobs to the organization's mission statement; improving each employee's comprehension of his job responsibilities and accountabilities so that each employee understands the effects of special causes of variation and common causes of variation on his job and on decision-making in the organization; eliminating tampering with a process, so that each employee understands the effects of special causes of variation and common causes of variation on his job and on decision-making in the organization; and developing and testing hypotheses about the effectiveness of potential improvements to a process.

18.4.3 Technical Terms

There are four major technical terms associated with dashboards: key objective, key indicator, task and project.

Key Objectives. There are two kinds of key objectives: **business objectives** and **strategic objectives**. Business objectives are the goals that must routinely be pursued within an organization if it is to function, such as producing paper in a paper mill, answering customer inquiries in a call center, preparing paychecks in an accounting department, or doing ROI calculations in a finance department.

Strategic objectives are the goals that must be accomplished to pursue the presidential strategy of an organization. For example, one strategic objectives of a large, urban university is to "gerontologize" the entire university. Any objective, at any level, within the university that promotes "gerontologizing" the university is a strategic objective. Any other objective (if it does not support another of the president's strategies) is not a strategic objective; it is a business objective. Another example of a

strategic objective is the implementation of **Six Sigma** management as the method for conducting business at General Electric. Any GE objective, at any level, that promotes Six Sigma management is a strategic objective. Any other objective (if it does not support another of the president's strategies) is not a strategic objective; it is a business objective.

There are four basic categories of key objectives [Lawton, 2002, p. 69]: financial; customer satisfaction; process improvement; and employee growth and development. A key objective can encompass one or more of these categories. Examples of each key objective category are shown below.

Examples of **financial key objectives** include management's and stockholder's desire for more profit, market share, dominance and growth, and the desire for less waste, turnover, financial loss and customer defection.

There are four types of **customer satisfaction key objectives**: customers' desired outcomes; customers' undesired outcomes; customers' desired product and service attributes; and customers' desired process characteristics. Examples of customer satisfaction key objectives include customer's desired outcomes such as "joy, security, personal time, belonging, and health," and customer's undesired outcomes such as avoidance or elimination of "death, taxes, discomfort, wasted time, and frustration." Examples of customer's desired product and service attribute key objectives include "ease-of-use, accessibility, low cost of ownership, durability and appeal." Examples of customer's desired process characteristic key objectives include "timely arrival of product, no waiting time, and ease of acquisition."

Examples of **process improvement and innovation key objectives** include management's desire for consistency and uniformity of output, high productivity of employees, products that are easy to build and low cost to produce, products that meet technical specifications, products that do not incur warranty costs, and products that are easy to distribute throughout the channels of distribution.

Examples of **employee growth and development key objectives** include improving leadership skills, providing training opportunities, providing educational opportunities, and creating the opportunity to work on stimulating special assignments.

Key Indicators. A key indicator is a measurement that monitors the status of a key objective. There are five types of key indicators: attribute indicators; measurement indicators; binary indicators; list by time period indicators; and Gantt chart indicators.

Attribute indicators are used when a key objective is being monitored using attribute data (classification or count data) over time. Some examples of attribute type classification indicators are: percentage of defective products produced by week, percentage of customer base complaining per month, and percentage of accounts receivables over 90 days by quarter. Some examples of attribute-type count indicators are: number of industrial accidents per week, number of customer complaints per month, and number of thefts per quarter.

Measurement indicators are used when a key indicator is being monitored using numerical measurement data. Measurement data can be displayed over time in the following formats: run chart, average and range by time period, average and standard deviation by time period, or distribution by time period.

Binary indicators (Yes/No by date) are used when a key indicator monitors whether an action has been accomplished by a given date. An example of a binary key indicator is “Computer system operational by July 12, 2014? (Yes or No).”

List indicators are used when a key indicator monitors a group of people or items for compliance with some deadline or standard. Two examples of list key indicators are “List of employees not trained in the new safety standards by December 31, 2014” and “List of laboratories not up to federal code standards as of June 15, 2014.”

Gantt chart indicators are used when a key indicator is a record-keeping device for following the progression in time of the tasks required to complete a project. A Gantt chart indicates which tasks are on schedule (black cells) or behind schedule (see “xx”); an example is shown in Table 18.4.

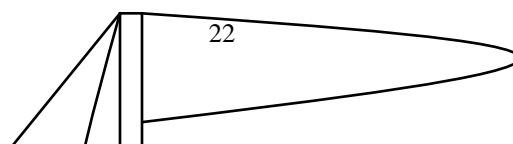
Table 18.4
Generic Gantt Chart

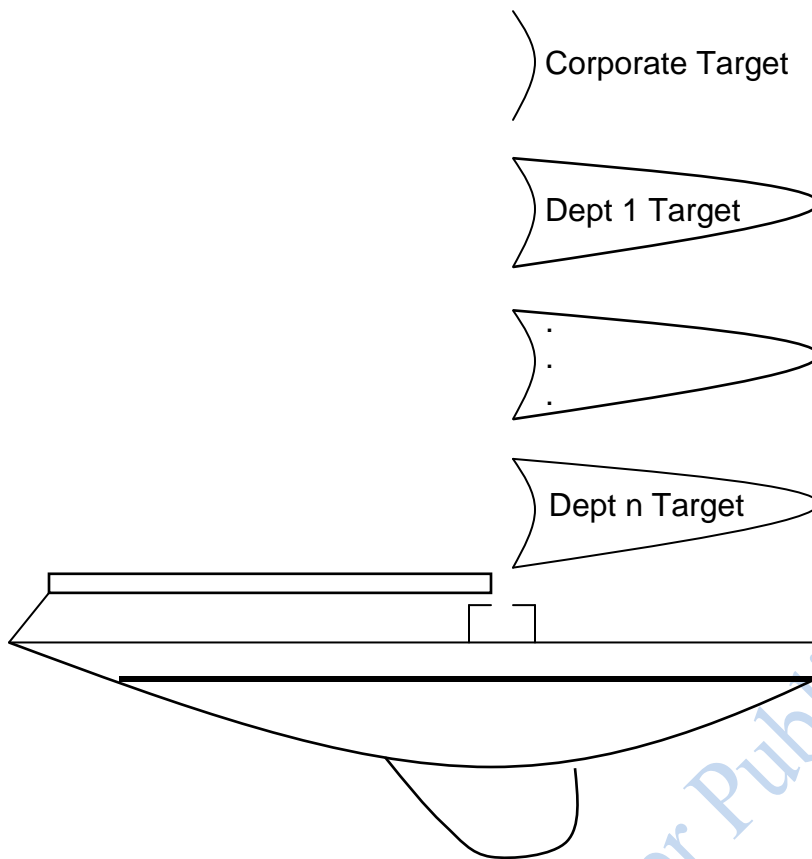
Tasks	Resp.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A	HG																							
B	HG																							
C	RO																							
D	RO												xx											
E	AO												Xx	xx	xx	xx	xx	xx	xx	xx				
F	AO																							
G	AO																							
H	AO											xx	xx											
I	HG																							
J	HG																					xx	xx	xx

Table 18.4 shows that activity C cannot start before time 5 since activity B must be completed before activity C can begin. As each activity (or part thereof) is completed, the appropriate bar is shaded. At any point in time, then, it is clear which activities are on schedule and which are not. The Gantt chart in Table 18.4 shows that as of week 13 activities D, E, and H are behind schedule, while G has actually been completed (because it is all shaded) and hence is ahead of schedule.

Flag Diagrams. A tool used to track the contributions of subordinate key objectives to the pursuit of a superior key objective is called a **flag diagram** [Kano, Yamaura, Toyoshima, and Nishinomiya, p. 3 and p. 34; Aldecocoea, 1990], as shown in Figure 18.10.

Figure 18.10
Generic Flag Diagram





There are two types of flag diagram, additive flag diagrams and non-additive flag diagrams.

Corporate indicators are the summation of departmental indicators in some applications of flag diagrams. An example of an **additive** or **linear flag diagram** in which the corporate indicator (Y) is a linear combination of the departmental indicators ($X_1 + X_2 + X_3 + X_4$) can be seen in the case of burglaries on a university campus as a function of the buildings that the burglaries occurred in, where

Y_i = total burglaries on campus in month i
 X_{1i} = burglaries in building 1 in month i ,
 X_{2i} = burglaries in building 2 in month i ,
 X_{3i} = burglaries in building 3 in month i , and
 X_{4i} = burglaries in building 4 in month i .

In other applications of flag diagrams, corporate indicators are not the summation of departmental indicators. For such **nonadditive flag diagrams**, knowledge, experience, and statistical expertise are required to determine the relationships between corporate and departmental indicators. An example of a non-linear flag diagram in which the corporate indicator (Y) is not a linear combination of the departmental indicators ($Y = f[X_{11}, X_{12}, X_{21}, X_{22}, X_{31}, X_{32}, X_{41}, X_{42}]$) can be seen in the number of burglaries on a university campus as a function of the number of doors left open (unlocked) in the building the burglaries occurred in, where

Y_i = total burglaries on campus in month i
 X_{11i} = # open doors in building 1 in month i ,
 X_{12i} = # of hours police patrol in building 1 in month i ,
 X_{21i} = # open doors in building 2 in month i ,

X_{22i} = # of hours police patrol in building 2 in month i ,
 X_{31i} = # open doors in building 3 in month i ,
 X_{32i} = # of hours police patrol in building 3 in month i ,
 X_{41i} = # open doors in building 4 in month i , and
 X_{42i} = # of hours police patrol in building 4 in month i .

Tasks and Projects. A **task** is a process improvement activity in which the necessary process change is known by the process owner, but she has not yet had an opportunity to effectuate the change. The need for a task is determined by a chronic gap between the real and the ideal value of a key indicator. A **project** is a process improvement activity in which the necessary process change is unknown by the process owner. Generally, the process owner forms a process improvement team to identify and test the necessary process change. The need for a project is determined by a chronic gap between the real and the ideal value of a key indicator.

There are three categories of projects or tasks [Kano, Yamaura, Toyoshima, Nishinomiya]: zero projects or tasks, increase projects or tasks, and decrease projects or tasks. Each category is explained below with examples.

In a **zero project** or **task**, the ideal value of a key indicator is zero, or the optimal difference between the current value and the ideal value of a key indicator is zero. The purposes of a zero project or task are: (1) to get the current value of a key indicator to be zero (the ideal value of the key indicator) by a given date, or (2) to reduce the gap to zero between the current value of a key indicator and the ideal value of a key indicator by a given date. Examples of zero tasks or projects are to reduce to zero the proportion defective units by day, or to reduce unit-to-unit variation of the mean and standard deviation of gold bar weights around nominal.

In an **increase project** or **task**, the ideal value of the key indicator is “X” units or “Y” percentage points higher than the current value of the key indicator. The purposes of an increase task or project are: (1) to get the real value of a key indicator to be “X” units or “Y” percentage points higher by a given date, (2) to raise the ideal value of the key indicator by a given date, or (3) to establish or clarify the ideal value for a key indicator by a given date. Examples of increase projects or tasks are to increase revenue or to increase profit.

In a **decrease project** or **task**, the ideal value of the key indicator is “X” units or “Y” percentage points lower than the current value of the key indicator. The purposes of a decrease task or project are: (1) to get the current value of a key indicator to be “X” units or “Y” percentage points lower by a given date, (2) to lower the ideal value of the key indicator by a given date, or (3) to establish or clarify the ideal value for a key indicator by a given date. Zero is not a rational target for a decrease task or project; for example, most costs of doing business cannot be zero if the business is still operating. Examples of decrease tasks or projects are to reduce costs or to decrease cycle time.

18.4.4 Developing a Dashboard

Policy setting, discussed in the previous section of this chapter, is the method for identifying the presidential key objectives of an organization from its mission statement, its values and beliefs, a SWOT analysis, a list of crises, a list of technological issues, and an analysis of the key processes affecting stakeholders. Vice presidential objectives can be identified once presidential objectives and indicators have been listed in the first two columns of a dashboard. This is accomplished by each vice president studying the president’s key indicators relating to his area of responsibility and identifying the change concept(s) required by the relevant process to achieve a desirable state for a

presidential key objective. For example, Figure 18.8 shows how the Campus Chief of Police studied the Vice President of Business Services' (his boss) key indicator on the number of auto thefts by month (SEC7) and determined the parking lots and times of day that auto thefts occurred most frequently on campus. The Police Chief established his key objective of redeploying campus police patrols with this information. He established his key indicator to be the number of auto thefts on campus by month, as shown in Figure 18.9 (SEC7A). The process of a subordinate studying his superior's key indicators to identify his key objectives is critical to the creation of effective dashboards, and objectives for the subordinate.

18.4.5 Managing with a Dashboard

Top management uses a dashboard at monthly operations review meetings for several purposes. First, managers use dashboards to clarify mission statements and key objectives, and accountability for them, among all personnel and areas. Second, managers use dashboards to promote statistical thinking about reacting to fluctuations in key indicators. For example, is the sales volume for last month due to a special or common cause of variation in the selling process? Third, managers use dashboards to clarify and reduce the perception that most of the daily crises (called "helter skelter" items) requiring immediate and special attention are really special cases of known key objectives. A manager's ability to recognize helter skelter items as special cases of key objectives reduces the amount of tension involved in dealing with a multitude of crises *du jour*. Fourth, a manager uses dashboards to develop and test hypotheses concerning potential changes to processes. Hypothesis tests usually require a task or project to analyze a key indicator in order to identify a change concept to improve this or some other key indicator, as illustrated in Figure 18.9 for the auto theft example. Stacking key indicators at adjacent levels in a dashboard can be used to identify correlations between them. Correlations can assist personnel in the development of hypotheses leading to improvement of a process, and hence, achievement of a key objective. Nonadditive flag diagrams and multiple regression analysis can be used to develop and test hypotheses relating several lower level key indicators to a higher level key indicator. Fifth, a manager can use dashboards to ensure the routine and regular updating of key indicators.

Managers can use the following questions when conducting a monthly review meeting to get the most out of their dashboard [King, 1989, p. 70]:

- Are the key objectives and key indicators on the dashboard the "best" set of objectives and indicators to attain the organization's mission statement?
- Is the dashboard balanced with respect to financial, customer, process, and employee objectives? Do any areas have too much, or too little, representation on the dashboard?
- What products and/or services are most critical to the organization's achieving its mission statement? List the top 5 or 10 products and services.
- Are targets being met in a timely fashion for all key objectives? Remember, targets are set to allocate resources to projects. They are not arbitrary numerical goals!
- What process is used to manage, perform and improve project work?
- Which key indicators on the dashboard are used to measure customer satisfaction and dissatisfaction? Are these measures operationally defined? Are these measures adequate?
- What process is used to reward/punish project work? Does the process consider the effects of special and common causes of variation on rewards and punishments?
- Does the organization have the ability to identify the return on investment from its dashboard? How is ROI measured?

18.4.6 Deployment of Key Objectives throughout an Organization.

Key objectives are deployed by the members of the PDC through assignment of responsibility for action to people or groups of people in departments, as shown in step 31 of the detailed fork model in Figure 18.1. The assignment of responsibility is discussed by the members of the PDC and LST in meetings called **Mini-SITCONS**, which consider the costs to improve and/or innovate processes. After costs have been identified, it may be necessary to renegotiate project budgets. This process continues until all parties reach a consensual agreement on projects; recall from Section 18.3.3 that this is called catchball. Finally, the members of the PDC ensure that the agreed-upon projects incorporate the information determined in the Table of Tables.

The assignment of responsibility for a project to a manager creates an opportunity to conduct a project that will result in improved or innovated **best practice methods**, the allocation of necessary resources, and an obligation to predict the contribution of projects to strategic objectives.

Deployment of a project or task is complete when a **project team** has been assigned responsibility to improve and/or innovate a method. Figure 18.11 shows the projects, channels of communication, type of coordination, and resources necessary to implement policy in a department. Column A of Figure 18.11 shows departmental key objectives, from section D of Figure 18.6. Column B of Figure 18.11 shows the departmental improvement plans or tactics needed to promote the departmental key objectives, shown in section F of Figure 18.6). Column C of Figure 18.11 shows the project(s) necessary for each departmental key objective. Each manager assigned a project must sign the appropriate line of column C indicating his or her acceptance of the project. Column D of Figure 18.11 shows the channels of communication and types of coordination between departments needed to carry out the projects shown in column C. The manager of each department named as a necessary supporter of a project must sign the appropriate line of column D, indicating his or her willingness to assist in the conduct of the project. Column E of Figure 18.11 shows the additional financial and human resources needed to carry out the projects shown in column C.

Figure 18.11
Project Coordination Matrix

Departmental Strategic Objectives	Departmental Improvement Plans (Tactics)	Projects	Other Departments Affected by Improvement Plan (Coordination needed)	Needed Resources: Dollars, People, Etc.
(A)	(B)	(C)	(D)	(E)

The members of an LST ask the following questions of all project team members [Mizuno, 1988, p 106]:

1. Are information channels between all relevant stakeholders open to promote the improvement plan?
2. Has a detailed schedule been set up for carrying out the improvement plan?

18.5 Policy Implementation

Policy is implemented in two ways, as shown in step 32 of the detailed fork model in Figure 18.1: first, when teams work on projects to improve and/or innovate processes, and second, when departments use the revised processes and measure their results with respect to improvement plans and strategic objectives.

The members of the EC assign responsibility for the promotion of each strategic objective to a high-level executive. The executive removes any impediments to progress for his/her strategic objective(s). Furthermore, the executive coordinates efforts in respect to the strategic objective throughout the organization. Finally, the members of the PDC, in conjunction with the members of various LSTs, may have to modify improvement plans as they proceed over time.

18.6 Policy Feedback and Review

Periodic **management reviews** are conducted at two levels, as shown in step 33 of Figure 18.1. First, the members of the EC review progress toward each strategic objective and its improvement plans monthly. Brief presentations for each strategic objective are made by the high-level executive responsible for that strategic objective. Twice a year, each strategic objective is selected for a detailed management review. The detailed review probes deeply into the issues surrounding a strategic objective. The members of the EC must insist that all process modifications are supported by sound analysis. This may require that action items be assigned to the high-level executive responsible for a strategic objective. The members of the EC must also follow up on the action items. Second, the members of the PDC and of appropriate LSTs review progress for each project. The purpose of these reviews is to provide feedback to project team members that promote process improvement efforts. The members of the PDC must make sure that all process modifications are supported by sound analysis of data. This may require that action items be assigned to the members of a project team. The members of the PDC must also follow up on the action items.

In **feedback and review**, the members of the EC, PDC, or appropriate LSTs ask the following questions of project team members:

1. Does your organization have a vision statement and a mission statement?
2. Do you know what they are?
3. Do you understand how you can contribute to the vision and mission of your organization? How do you know?
4. Does your department/area have vision and mission statements?
5. Do you know what they are?
6. Do you understand how you can contribute to the vision and mission of your department? How do you know?
7. Do you understand the processes by which you will achieve the vision and mission of your department? Organization?
8. Do you know which processes are most critical to pursue the vision and mission of your department? Organization?
9. Do you know the aims (missions) of these processes?
10. Do the objectives of these processes support the objectives of your department? Organization?
11. Are these objectives necessary?

12. What are the critical control points (indicators) for these processes?
13. Have the critical control points (indicators) been operationally defined?
14. Have you used the SDSA cycle to standardize processes?
15. Have you used the PDSA cycle to improve and innovate processes?
16. Do you know the customers of these processes are?
17. Do you understand the needs of these customers?
18. Do you know the suppliers of these processes?
19. Do you understand the needs of those suppliers?
20. Do you understand how these processes interact with other processes in your department? Organization? How do you know?
21. Have you been trained in team skills and basic quality improvement tools?
22. Have you received training in the processes critical to your job?
23. Is your training in job skills updated as your job changes over time?
24. Have training manuals been updated as jobs change over time?
25. Do you receive feedback on the performance of the processes with which you work on a continuous basis?
26. Do you feel ownership of the processes with which you work?
27. Do you take joy in your work?
28. Are you an empowered employee? How do you know?
29. Does your supervisor lead you in the conduct of planned experiments aimed at improvement and innovation of processes?
30. Do you have the latitude to modify the processes you use on your job to take advantage of your unique skills and abilities?
31. Do you need the latitude you have with respect to a process?
32. Can all of your colleagues who perform a particular process produce equal outcomes?
33. Do you trust your supervisor to support the decisions you make within the latitude given to you in respect to a particular process?
34. Is your supervisor working toward eliminating fear in your department? Organization? How do you know?
35. Are you implementing the improvement plan and/or projects per schedule?
36. Are records being kept of quality improvement efforts?
37. Are you revising the improvement plan as necessary?

The members of the EC and PDC ask the following questions of themselves:

1. Are we effectively conducting management reviews?
2. Are we improving and innovating the management review process?
3. Are methods being standardized and revised as required by the improvement plan?

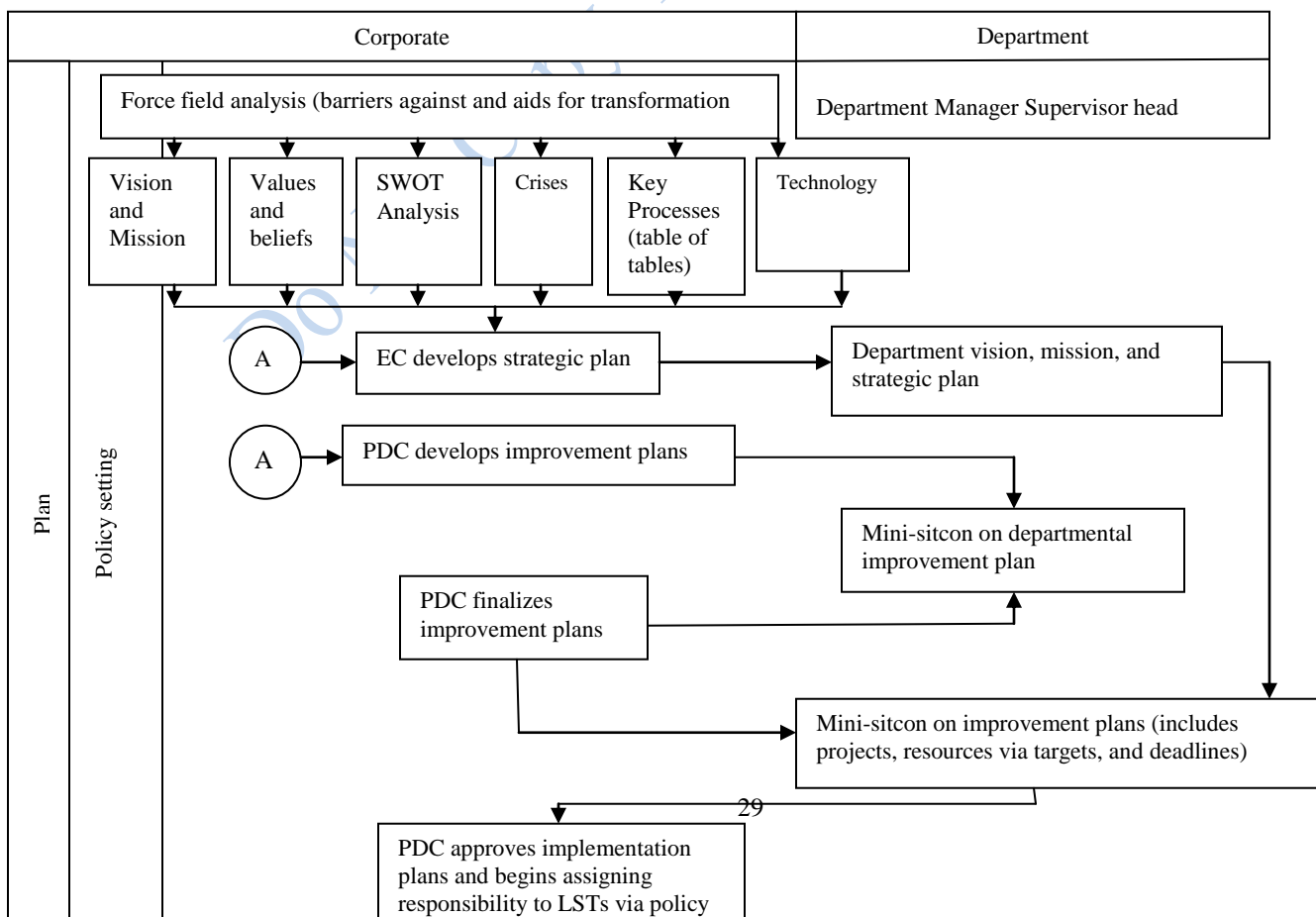
18.7 Presidential Review

Finally, the President conducts the Presidential Review, shown in step 34 of Figure 18.1 of the major areas within the organization. Department managers present their efforts using the **quality improvement story** format, discussed in Chapter 11. The purpose of the Presidential Review is to collect information used to establish the quality strategy and goals of the organization and to determine progress toward presidential policy. Presidential Reviews provide input for setting policy for the following year, as shown in step 29 of Figure 18.1 and described in Section 18.2 on the Initial Presidential Review. The management system is improved with each successive policy management cycle.

18.8 Flowchart of Policy Management

An **integrated flowchart** depicting the relationship between the PDSA cycle and the five steps of policy management, and corporate and department responsibility for policy management, is shown in Figure 18.12.

Figure 18.12
The Policy Management Process



18.9 Relationship between Policy Management and Daily Management

The relationship between policy management and daily management can be understood by viewing an organization as a tree. The vision is the root system, the mission is the trunk, the strategic objectives yield the major branches, and the improvement plans are smaller branches emanating out of the strategic objective branches. As expertise is developed with policy management methods, they are moved into daily management methods.

Frequently, employees claim they do not have time for policy management due to the demands of their daily routine. However, recall that undertaking daily management and cross-functional management removes non-value-added daily routine to free up time for policy management.

18.10 A Personal Example of Policy Management

This section of the chapter presents the application of policy management to a person's life. All the steps of policy management are used in this example, which demonstrates how to implement the detailed procedure. Bart is a 40-year old manager in a large company. For the most part, his life has gone according to his plans. He is a respected manager, earns a comfortable salary, and is reasonably happy in his personal and family life. As he enters his forties, Bart begins to wonder whether he can improve his situation. Stimulated by what he is involved in at work, he decides to apply the principles of quality management to his life.

18.10.1 Policy Setting.

Pros and Cons to Transformation. Bart performs a force field analysis and asks himself the following question: "Do I have the energy necessary to do quality management in my life?" From the force field analysis, he finds the "forces for change" to be more compelling than the "forces against change," as shown in Table 18.5. Bart decides to apply policy management in his life.

Table 18.5
Force Field Analysis

Forces for Change	Forces Against Change
Some dissatisfaction with my current life situation	No time to establish a policy management plan
Complaints from spouse, brother, and daughter	Family, friends, and colleagues will think I am a lunatic
Need to be more efficient and productive at work	

Values and Beliefs. Bart feels that the values and beliefs embodied in Deming's System of Profound Knowledge are completely consistent with his own, so he adopts these values and beliefs. They are: (1) manage to optimize the entire system, (2) manage to create a balance of intrinsic and extrinsic motivation, (3) manage with a process and results orientation, and (4) manage to promote cooperation.

Vision and Mission. Bart's personal vision and mission define his future desired state and his current reason for existence.

Personal Vision: To be at peace with my world and to generate positive energy into the universe.

Personal Mission: To continuously improve my mind, body, and relationships.

Organizational and Environmental Factors. Bart conducts a SWOT analysis of himself. An abbreviated listing of strengths, weaknesses, opportunities, and threats is shown below.

Strengths. Honest, forthright, mature, intelligent, excellent educational background, inquisitive, considerate, willing to help others with their problems, physically healthy, excellent communicator, strong support system of family and friends, well-established and ingrained values and beliefs, financially secure, professionally secure, able to stay focused, capable of retaining many facts until a strategy emerges, open to new ideas, resources available for self-improvement...

Weaknesses. High cholesterol, twenty-five pounds overweight, unilingual, resents working in non-productive groups, not good at understanding other people's viewpoints, inability to change own behavior, mood swings, poor short-term memory, low frustration tolerance...

Opportunities. Excellent business contacts, professional opportunities expanding, excellent system of personal mentors, increased ability to travel...

Threats. Increased demands to spend time working at the expense of personal life, parents passing away and not being prepared for the loss, the unknown and unknowable risks of life...

Synthesis. Bart studies his SWOTs and looks for **S**trengths and **O**pportunities that overcome his **W**eaknesses and **T**hreats. He decides that being "open to new ideas" and having "resources available for self-improvement" will help him overcome his physical (high cholesterol and 25 pounds overweight) and emotional (inability to change own behavior) condition.

Crises. The crisis known to Bart is diminution in quality of life due to moderate swings in mood (too much common variation in a stable system).

Key Processes. Voice of the Customer and Voice of the Business analyses help prioritize processes for improvement attention. The purpose of these analyses is to provide customer and personal input into the determination of strategic objectives.

Voice of the Customer. Bart surveys each of his stakeholders and asks them to answer the following question: "From your perspective, what should I focus on to pursue my mission statement?" Data is collected from each individual. All issues that emerge from this analysis are quantified on a "dynamite" scale; the scale ranges from 1 stick of dynamite (unimportant or done well) to 5 sticks of dynamite (very important and not done well). The dynamite scale was developed to create data that can be averaged. The dynamite data is being used to impart a feel for which issues are priority issues in Bart's pursuit of his mission. The dynamite data was analyzed using Pareto-type analysis.

Spouse

The spouse's survey indicates 17 separate items of concern, which are grouped into four subcategories: "Child care responsibility," "Home care responsibility," "Finances," and "Time allocation." All 17 items are rated on the dynamite scale, as shown in Table 18.6.

Table 18.6
Voice of the Customer for Spouse

Category			Results from customer survey (Ranking on dynamite scale)
(a)	Child care responsibilities		
		Drive child to/from school	1
		Prepare child's dinner	2
		Care for ill child	2
		Help child with homework	1
(b)	Home care responsibilities		
		Shop at supermarket	5
		Shop at drug store	5
		Go to dry cleaners	5
		Sort clothes for wash	1
		Make bank deposits	4
©	Finances		
		Prepare household accounts	1
		Generate family income	1
		Manage expense control	1
(d)	Time allocation		
		Decrease work time	4
		Increase family time	2
		Increase play time with child	2
		Decrease business travel	2
		Increase pleasure travel	2

An analysis of the priority rankings shown in Table 18.7 indicates that 36.6% of the spouse's issues involve household chores" shop at supermarket," "shop at drug store," and "go to the dry cleaners." Therefore, "Home care responsibility" is the spouse's critical area of concern.

Table 18.7
Analysis of Spouse's Voice of the Customer Data

Category	Rank	%	Cumulative %	Note
----------	------	---	--------------	------

Shop at supermarket	5	12.2	12.2	36.6% of spouses issues involve household chores
Shop at drug store	5	12.2	24.4	
Go to dry cleaners	5	12.2	36.6	
Make bank deposits	4	9.6	46.2	
Decrease work time	4	9.6	55.8	
Increase family time	2	4.9	60.7	
Increase play time with child	2	4.9	65.6	
Decrease business travel	2	4.9	70.5	
Increase pleasure travel	2	4.9	75.4	
Prepare child's dinner	2	4.9	80.3	
Care for ill child	2	4.9	85.3	
Drive child to/from school	1	2.45	87.65	
Help child with homework	1	2.45	90.10	
Sort clothes for wash	1	2.45	92.55	
Prepare household accounts	1	2.45	95.00	
Generate family income	1	2.45	97.45	
Manage expense control	1	2.45	99.90	
Total	41	99.90 (Rounding error)		

Child

The child's survey indicates three items of concern, as shown in Table 18.8.

Table 18.8
Voice of Customer from Child

Category	Results from customer survey (Ranking on dynamite scale)
Increase play time	4
Relax sleep over rules	2
Decrease food restrictions	3
Total	9

An analysis of the child's issues indicates that "increase play time" is the most critical area of concern; it accounted for 44% of the child's issues, as shown in see Table 18.9.

Table 18.9
Analysis of Child's Voice of the Customer

Category	Rank	%	Cumulative %
Increase play time	4	44	44
Relax sleep over rules	2	33	77
Decrease food restrictions	3	23	100
Total	9	100	

Parents and Brother

The parents' and brother's survey indicates several items of concern, as shown in Table 18.10.

Table 18.10
Voice of the Customer for Parents and Brother

Category			Results from customer survey (Ranking on dynamite scale)
(a)	Father		
		Increase private time together	3
		Go to sporting events together	2
		Work on car together	2
		Work on garden together	2
(b)	Mother	Determine common interests	4
		Increase private time together	3
©	Brother	Increase private time together	4
		Share private feelings and dreams	5
		Learn to support each other	4

An analysis of the parents' and brother's concerns shows that 45% of all issues directly involve the brother, as shown in Table 18.11. The brother's three issues are: "share private feelings and dreams," "increase private time together," and "support each other."

Table 18.11
Analysis of Voice of the Customer with Parents and Brother

Customer	Category	Rank	%	Cumulative %	Note
Brother	Share private feelings and dreams	5	17	17	45% of all issues involve communication with brother
Brother	Increase private time together	4	14	31	
Brother	Learn to support each other	4	14	45	
Mother	Determine common interests	4	14	59	
Mother	Increase private time together	3	10	69	

Father	Increase private time together	3	10	79	
Father	Go to sporting events together	2	7	86	
Father	Work on car together	2	7	93	
Father	Work on garden together	2	7	100	
Total		29	100		

Voice of the Business. The Voice of the Business seeks to answer the following question:

“What should I focus on to pursue my mission?” Bart compiles a list of 11 personal issues that are critical to the fulfillment of his mission, as shown in Table 18.12.

Table 18.12
Voice of the Business

Category
Increase pleasure travel with spouse
Increase private study time
Maintain study group time
Increase play time with child
Increase fun time with friends
Increase exercise time
Decrease body weight
Plan and shoot fireworks displays
Plan and execute special events
Increase private time with spouse
Improve financial security

These 11 issues are rated with respect to severity, urgency, trend, and importance to customer, as shown in the prioritization matrix in Figure 18.13. The ratings are then multiplied to obtain a total score for each issue. This method is used to demonstrate an alternative to the dynamite scale used in the Voice of the Customer analysis.

Table 18.13
Prioritization of Matrix of the Voice of the Business

Category	Severity	Urgency	Trend	Importance to Customer	Total Score
Increase pleasure travel with spouse	1	1	2	3	6
Increase private study time	1	1	4	5	20
Maintain study group time	1	1	2	5	10
Increase play time with child	3	3	4	4	144
Increase fun time with friends	1	1	2	3	6
Increase exercise time	3	3	3	5	130
Decrease body weight	4	4	4	4	256
Plan and shoot fireworks displays	1	1	2	1	2
Plan and execute special events	1	1	3	3	9
Increase private time with spouse	2	2	4	5	80
Improve financial security	1	1	3	3	9

The items in the matrix are then arranged in descending order of priority, as shown in Table 18.14.

Table 18.14
Ranking Voice of the Business Data

	Severity	Urgency	Trend	Importance to Customer	Total Score
Decrease body weight	4	4	4	4	256
Increase play time with child	3	3	4	4	144
Increase exercise time	3	3	3	5	130
Increase private time with spouse	2	2	4	5	80
Increase private study time	1	1	4	5	20
Maintain study group time	1	1	2	5	10
Plan and execute special events	1	1	3	3	9
Improve financial security	1	1	3	3	9
Increase pleasure travel with spouse	1	1	2	3	6
Increase fun time with friends	1	1	2	3	6
Plan and shoot fireworks displays	1	1	2	1	2

An analysis of the data in Table 18.14 is shown in Table 18.15.

Table 18.15
Analysis of Voice of the Business Data

Category	Total Score	%	Cumulative %
Decrease body weight	256	38.1	38.1
Increase play time with child	144	21.4	59.5
Increase exercise time	130	19.3	78.8
Increase private time with spouse	80	11.9	90.7
Increase private study time	20	3	93.7
Maintain study group time	10	1.5	95.2
Plan and execute special events	9	1.3	96.5
Improve financial security	9	1.3	97.8
Increase pleasure travel with spouse	6	0.9	98.7
Increase fun time with friends	6	0.9	99.6
Plan and shoot fireworks displays	2	0.3	99.9

Four of the 11 issues account for 90.7% of Bart's issues. These include "decrease body weight," "increase play time with child," "increase exercise time," and "increase time with spouse."

Table of Tables. The prioritized issues from the Voice of the Customer and Voice of the Business studies are combined into one prioritized list in the rows of Table 18.16. The processes that comprise Bart's life are listed in its columns.

Table 18.16
Table of Tables for Bart

Legend		Score		Partial Listing of Methods that are Important to Bart																	
○	Strong relationship		3																		
○	Medium relationship		2																		
△	Weak relationship		1																		
	No relationship		0																		
Needs and Wants	Fitness			Occupation		Leisure		Learning		Spiritual	Psychological			Relationships				Importance to customer or employee (A)	Current level of performance to customer or employee (B)	Desired level of performance by management (C)	Total weight = A(C/B)
	Weight	Diet (food intake)	Exercise	Joy in work	Revenue	Travel	Entertainment	Education	Training		Self-esteem	Well-being	Joy	Love	Communication	Fun	Sharing Responsibilities				
VOB – Decrease bod weight	○	○	○					△			△	△					5	1	5	25.00	
VOB – Increase exercise time	○		○									△					4	1	5	20.00	
VOC spouse – Household chores (Supermarket, Drug store, dry cleaner)													△			○	5	1	5	25.00	
VOC daughter – play time – VOB and VOC (Increase play time with daughter)							△				△		○	○	○	○	4	3	2	2.67	
VOC brother – increase communication (Feelings, time, support)													○	○	○		1	3	2	0.67	
	135	75	135	0	0	0	2.67	25	0	0	27.67	45	31.68	8.68	10.02	8.01	80.34				

The *importance to customer or employee* scale, shown in column A in Table 18.16, is ranked from 1 (unimportant to customer or employee) to 5 (important to customer or employee). The rankings are developed by company personnel and are modifications of the rankings identified in the voice of the customer and voice of the business studies. The scale indicates that "decrease body weight" (5), "increase exercise time" (4), "household chores" (5), and "increase playtime with child" (4) are important to customers and Bart.

The *current level of performance to customers or employees* scale, shown in column B in Table 18.16, is ranked from 1 (large gap between customer or employee desired requirements and actual performance) to 5 (small gap between customer or employee desired requirements and actual performance). The rankings are developed by company personnel. The gap analyses of "decrease body weight", shown in Figures 18.12 (a and b), "increase exercise time, shown in Figure 18.13, and "household chores", shown in Figure 18.14 (a, b, and c), all indicate large gaps between desired and actual performance, in the opinion of the company personnel. Specifically, the gap analysis of "decrease body weight", in Figure 18.12, shows that Bart's average body weight has steadily increased to 171.7 pounds. According to Bart's physician, he should weigh 145 pounds. Additionally,

the gap analysis of “increase exercise time”, in Figure 18.13, shows that Bart has not been capable of maintaining the required three exercise periods per week. He achieved three exercise periods per week in only 25% of the weeks in the trial period. Finally, gap analysis of “household chores”, in Figure 18.14, shows that Bart has not been capable of maintaining the necessary one trip per week to the supermarket, drug store and dry cleaner most of the time during the trial period.

Figure 18.12 (a)
Gap Analysis of Bart’s Daily Average of Weight

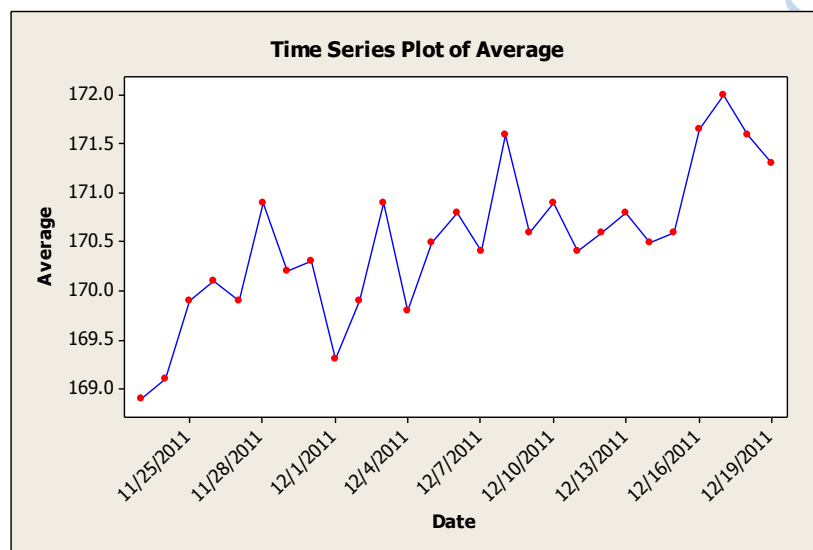


Figure 18.12 (b)
Gap Analysis of Bart’s Daily Range in Weight

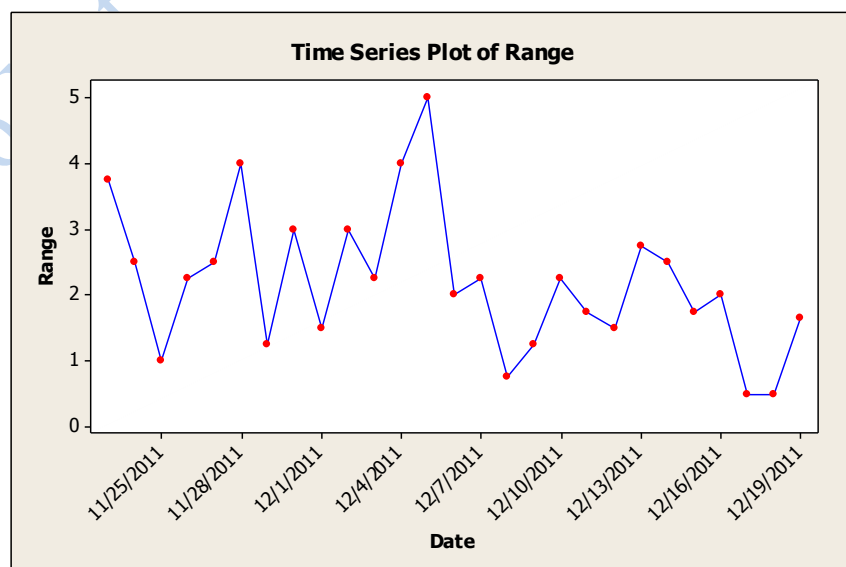


Figure 18.13
Gap Analysis of the Number of Exercise Periods per Week

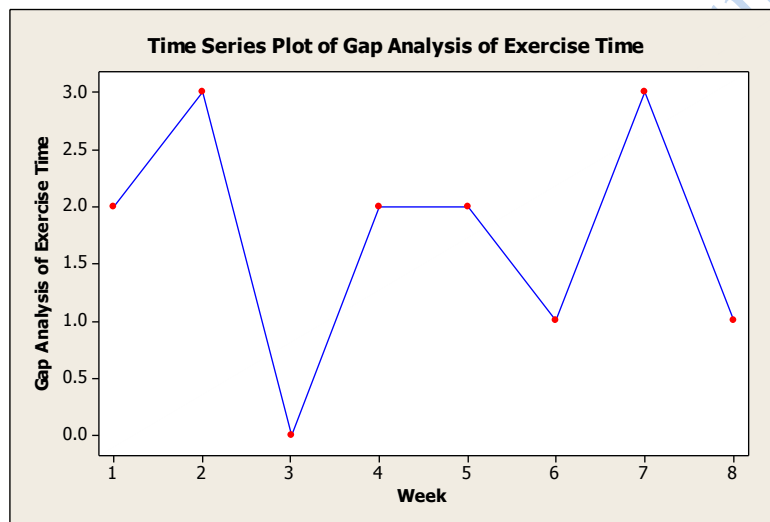


Figure 18.14 (a)
Number of Trips to the Supermarket per Week

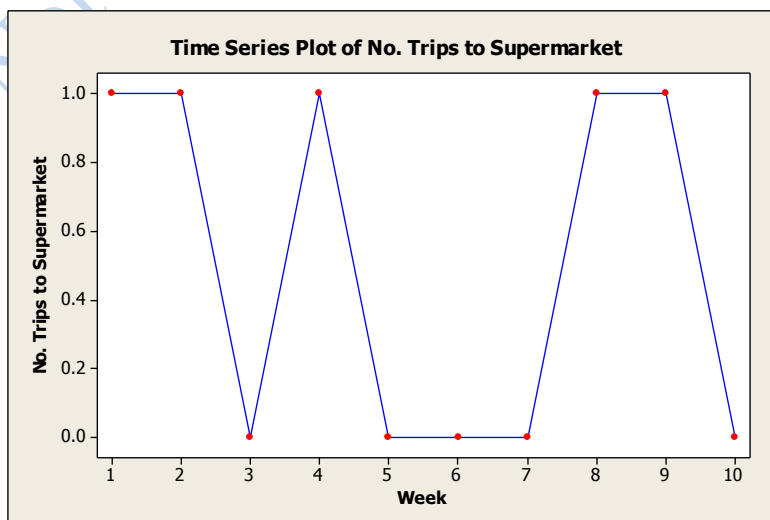


Figure 18.14 (b)

Number of Trips to the Drug Store per Week

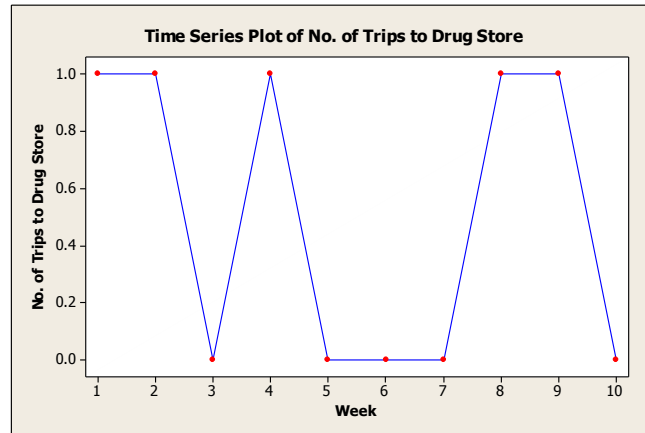
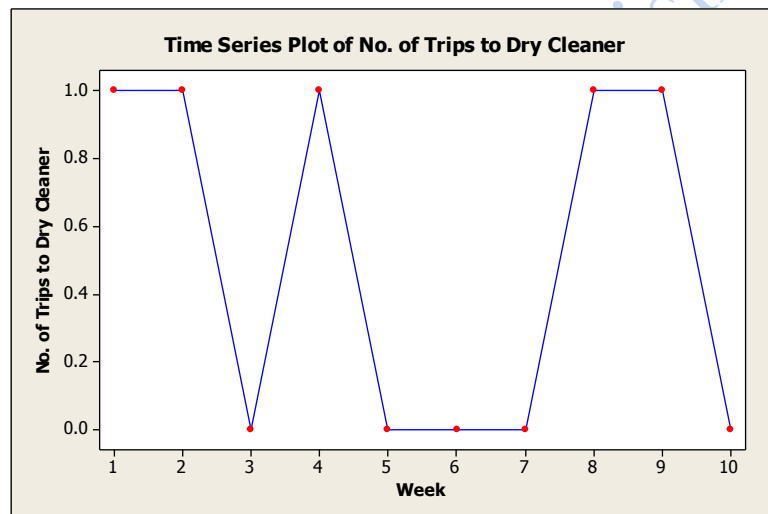


Figure 18.14 (c)
Number of Trips to the Dry Cleaner per Week



The *desired level of performance by management* scale, shown in column C in Table 18.16, is ranked from 1 (improvement is not urgent) to 5 (improvement is urgent). Again, the rankings are developed by company personnel based on management's view of the urgency to improve Voice of the Customer or Voice of the Business items. The scale indicates that "decrease body weight," "increase exercise time," and "household chores" are all deemed in need of urgent improvement attention by Bart.

The *total weight* scale, shown in column $[A*(C/B)]$ in Table 18.16, is computed by multiplying the *importance to customer or employee* scale by the *desired level of performance by management* scale to obtain a significance indicator (1 signifies extreme unimportance and 25 indicates extreme importance). This significance indicator is divided by the *current level of performance* scale. The resulting number is the *total weight* scale. A *total weight* of 0.2 $([1 \times 1]/5)$ indicates a very unimportant voice of the customer or voice of the business item, while a *total weight* of 25 $([5 \times 5]/1)$ indicates an extremely important voice of the customer or voice of the business item. The *total weight* scale shows the need to focus attention on "decrease body weight" (total weight = 25), "increase exercise time" (total weight = 20), and "household chores" (total weight = 25) in Bart's strategic objectives, as shown in Table 18.16.

The Table of Tables reveals that “weight” (priority = 135), “exercise” (priority = 135), and “shared responsibilities” (priority = 80.34) are the processes that must receive attention in Bart’s strategic objective if he is to surpass the needs and wants of his customers and himself, as shown in the bottom row of Table 18.16.

Develop Strategic Objectives. Bart's strategic objectives are:

- They emerge from an analysis of Bart's vision and mission statements, his values and beliefs, a SWOT analysis of his life, the crises Bart faces, the key processes that have to be improved to delight Bart's stakeholders, and technological issues that might affect Bart's life. The best Quality Management method for generating strategic objectives is a thoughtful, yet subjective, analysis of all inputs by the members of the Executive Committee. It is critical that all stakeholders agree to support the strategic objectives.

Figure 18.15
Interrelationship Diagram of Causes of Diminished Health

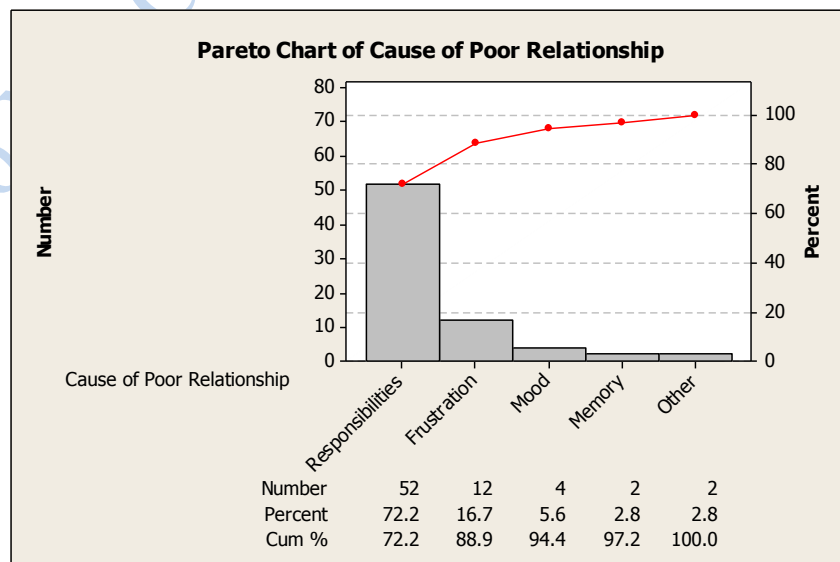


Too little sleep
(3/0)

The arrows between the items on the **interrelationship diagram** indicate the direction of “cause to effect” relationships, for example, “too much stress” partially causes “too little sleep,” while “too much stress” is partially caused by (the partial effect of) “too little exercise.” The numbers in parentheses under each item on the interrelationship diagram, such as (1/3) under “Unbalanced diet,” indicate the number of arrows entering (affecting) an item and leaving (causing) another item, respectively. The item with the largest number of arrows entering it is called the “root effect” item because it is affected by so many other items. Root effect items are frequently viewed as the sources of problems, but since they are affected by so many other items, it is difficult to do anything about them. “Too much body weight” and “too little sleep” are the root effect items in this interrelationship diagram. They make sense in that these are commonly the things people worry about with respect to health, but they are difficult to do anything about because they are affected by so many other things. On the other hand, “too little exercise” is the “root cause” item in this interrelationship diagram; it affects (causes) the most other items. This is the improvement tactic Bart should focus on to pursue his first strategic objective.

Bart collects frequency data from his diary for a two-month period on the barriers that prevent him from improving his personal relationships, as part of a gap analysis. The barriers include the following potential causes: failure to share responsibilities (house care, child care, time allocation); moderate swings in mood; not good at understanding other people’s viewpoints; poor short-term memory; low frustration tolerance; and increased demand to spend time at work. Figure 18.16 shows a Pareto diagram of the occurrence of each barrier, extracted from Bart’s diary, and that failure to share house care responsibilities is the most significant cause that affects Bart’s personal relationships.

Figure 18.17
Analysis of Personal Relationships



The above gap analyses indicate that Bart needs to construct improvement plans to deal specifically with developing an exercise regimen (tactic for strategic objective 1), and sharing house care responsibilities (tactic for strategic objective 2), if he wants to achieve his strategic objectives.

Bart operationally defines control points and establishes targets for an exercise regimen and house care responsibilities; in particular, going to the supermarket, drug store, and dry cleaner. The purpose of the targets is to allocate the resources available to Bart between his improvement plan tactics. In this case, the targets are based on medical science and years of experience with the chores. Control points and targets are shown in Table 18.17.

Table 18.17
Control Points (Indicators) and Targets

Strategic Objective	Improvement Plan (Tactics)	Control Point (Indicators)	Rational Target
To become healthy	Develop an exercise regimen	No. of exercise periods per week	3
To continually improve personal relationships	Do supermarket shopping	Number of trips to the supermarket per week	1
	Do drug store shopping	Number of trips to the drug store per week	1
	Go to dry cleaner	Number of trips to the dry cleaner per week	1

18.10.2 Policy Deployment

Bart is responsible for the two projects discussed in the policy setting section of this chapter. The following section presents the methods that will be deployed in his improvement plan.

1. *An Exercise Regimen:*

Bart's method for improving his exercise regimen was discussed in Daily Management in Chapter 16.

2. *House Care Responsibilities:*

PLAN (developing a plan) – An important process in Bart's life highlighted for attention is "sharing responsibility" with his spouse, especially household chores such as shopping at the supermarket, shopping at the drug store, and picking up and dropping off clothes at the dry cleaner. Bart collects data on each of these three activities for 10 weeks, as shown in Figure 18.14(a), (b), and (c) earlier in this chapter.

Analysis of the run charts in Figure 18.14(a), (b), and (c) leads Bart to the realization that he needs to develop methods for “sharing responsibilities.” He develops the flowcharts (methods) shown in Figures 18.18(a), (b), and (c).

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Figure 18.18(a)
Method for Shopping at the Supermarket

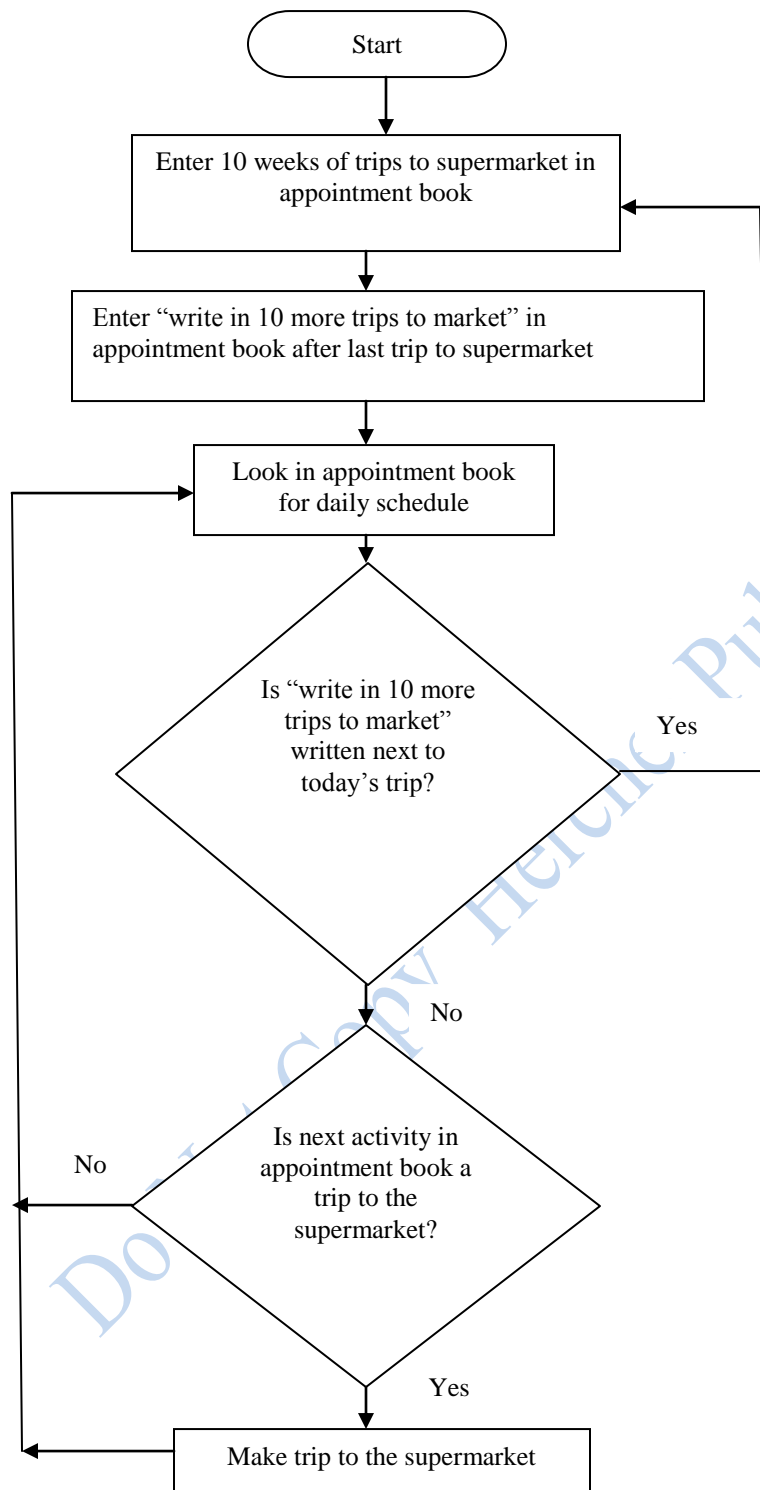


Figure 18.18(b)
Method for Shopping at the Drug Store

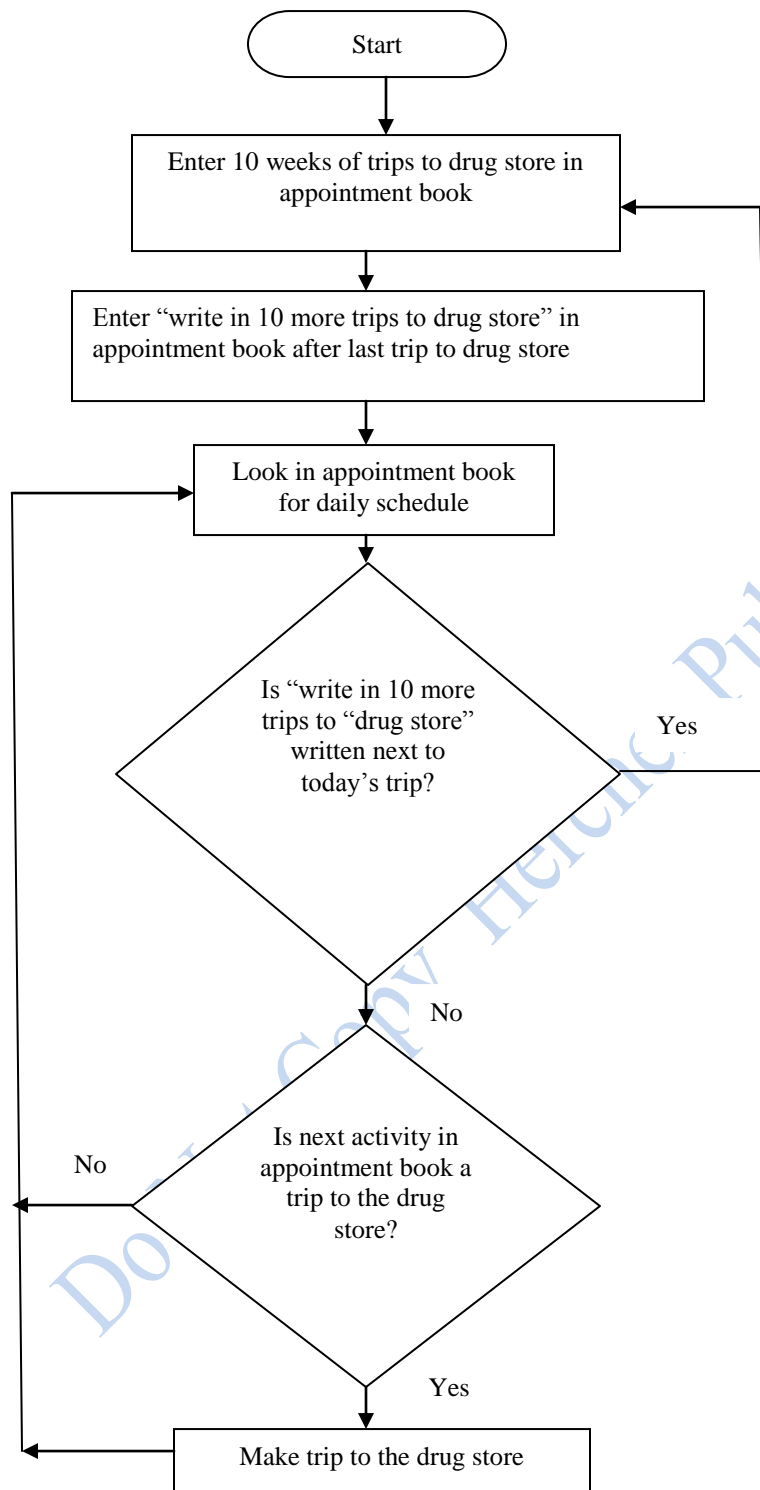
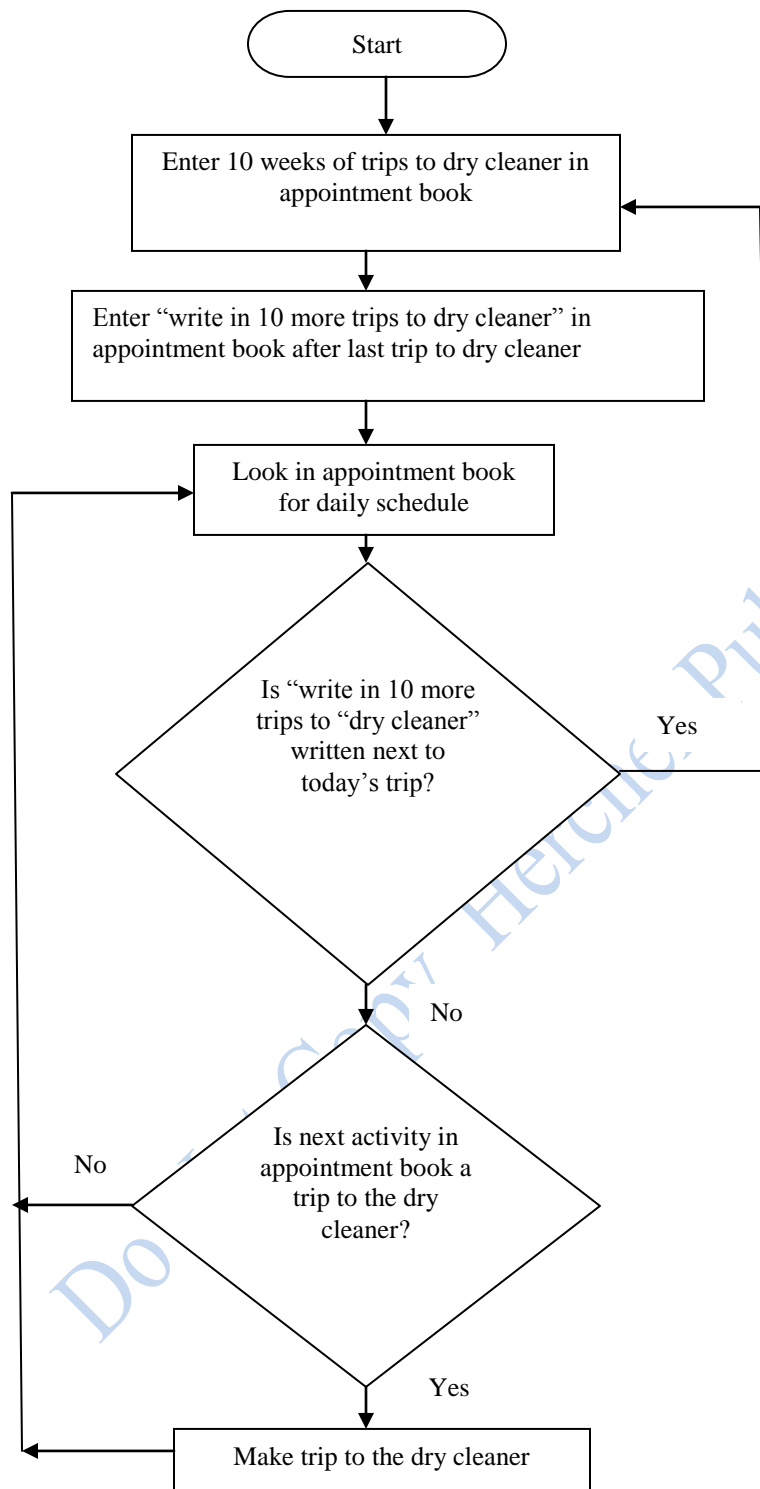


Figure 18.18(c)
Method for Going to Dry Cleaner



DO (implementing the plan) – Bart records the number of trips to each location for ten weeks after development of the methods. The data are shown in Figure 18.19(a), (b), and (c).

Figure 18.19(a)
Number of Trips to the Supermarket per Week

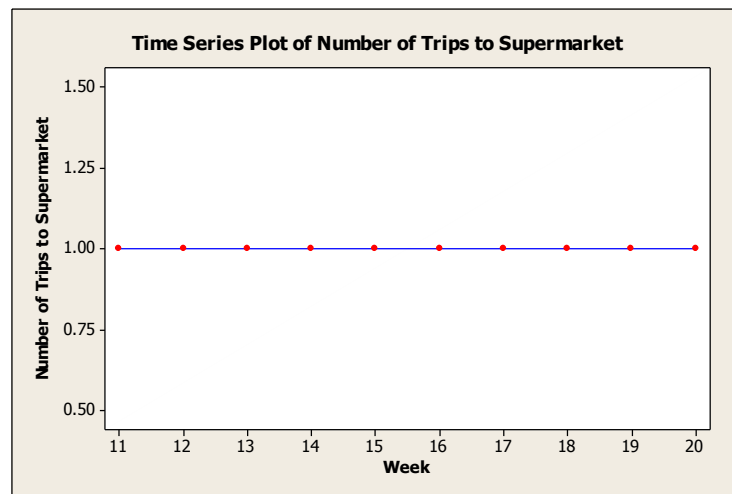


Figure 18.19(b)
Number of Trips to the Drug Store per Week

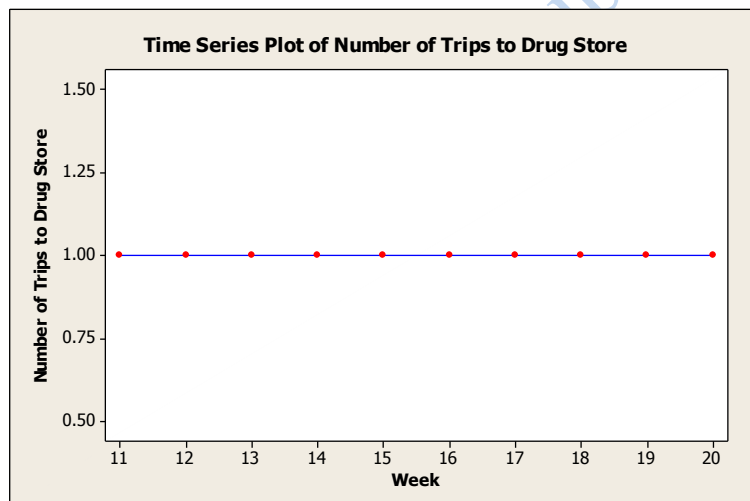
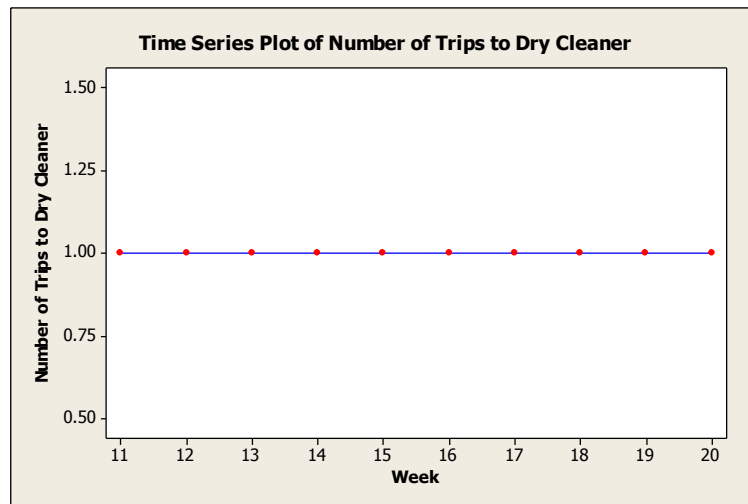


Figure 18.19(c)
Number of Trips to the Dry Cleaner per Week



STUDY (checking the effectiveness of the plan) – The records show that all three targets are being met using the above methods.

ACT (take action) – Action to modify current method is taken if a trend develops indicating failure of the methods to meet targets. Continuous monitoring and documentation of the causes for additional trips will help modify the current practices and assure achievement of targets.

18.10.3 Policy Implementation

All methods in the improvement plan are implemented and monitored on a weekly basis: exercise regimen, trips to the supermarket, trips to drug store, and trips to dry cleaner. All methods are yielding predicted results for a ten-week period, as shown in Figure 18.20(a), (b), (c), and (d).

Figure 18.20(a)
Number of Exercise Periods per Week

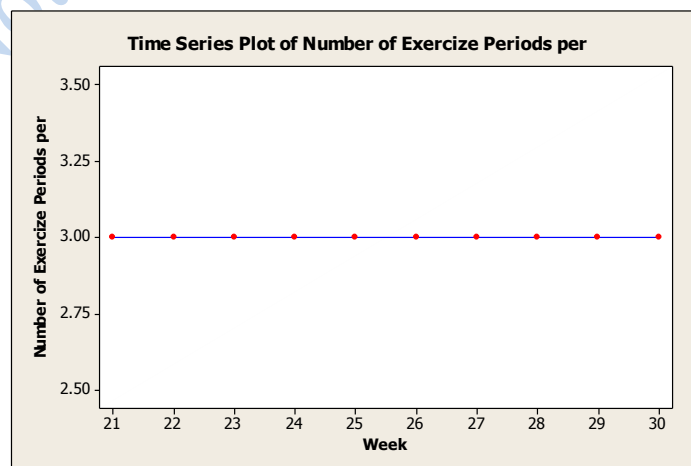


Figure 18.20(b)
Number of Trips to the Supermarket per Week

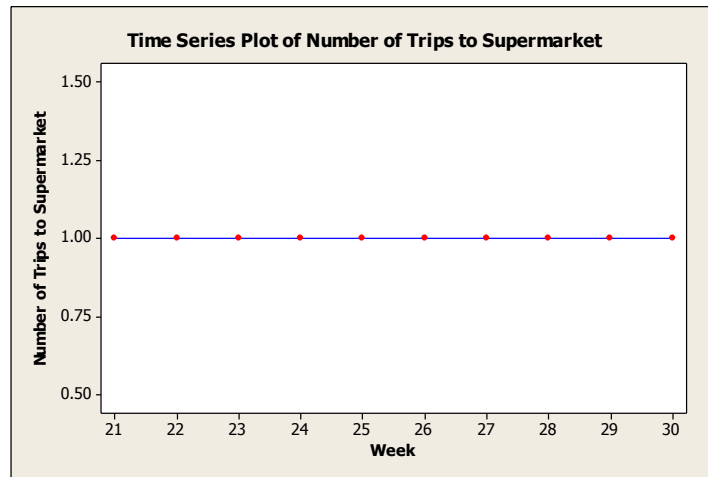


Figure 18.20(c)
Number of Trips to Drug Store per Week

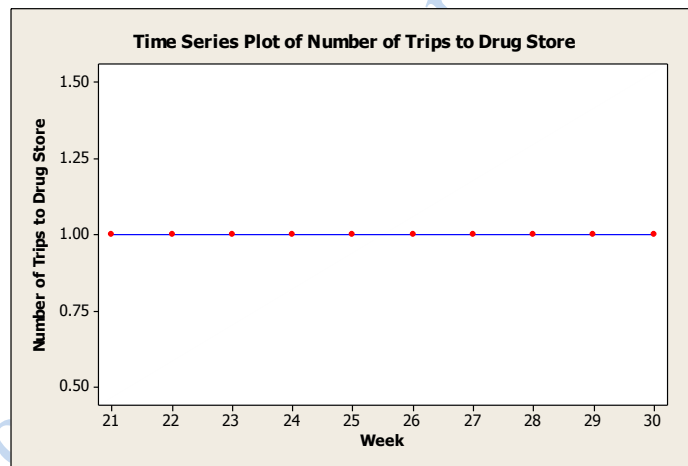
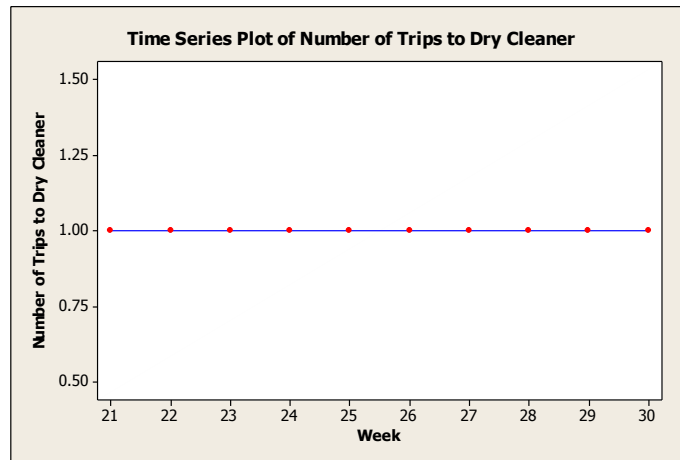


Figure 18.20(d)
Number of Trips to Dry Cleaner per Week



18.10.4 Policy Study and Feedback.

All methods implemented in the improvement plan are subject to monthly management reviews by Bart. He finds that the methods are yielding predicted results. A year-end management review will be conducted at the appropriate time to determine if the methods remain effective with respect to optimization of Bart's interdependent system of stakeholders.

18.10.5 Presidential Review

Presidential Review in the case study of personal policy management is equivalent to the yearly management reviews conducted by Bart himself of his strategic and improvement plans.

18.12 Summary

Chapter 18 discussed Policy Management, Prong 3 of the quality management model presented in this book. Policy Management is performed by using the PDCA cycle to improve and innovate the methods responsible for the difference between corporate results and corporate targets, or to change the direction of an organization. Policy Management includes setting policy, deploying policy, studying policy, providing feedback to employees on policy, and conducting Presidential Reviews of policy. Policy Management is accomplished through the workings of an interlocking system of committees, including the Executive Committee (EC), the Policy Deployment Committee (PDC), Local Steering Teams (LSTs), and Project Teams.

The President conducts an initial Presidential Review to determine the state of the organization and to develop a plan of action for the promotion of corporate policy. This promotes a dialogue between the President and mid-level management and brings out information about problems. After a few rounds of Presidential Reviews, the President will have a good understanding of the major problems facing the organization and their possible causes.

The Executive Committee (EC) is responsible for setting the strategic plan for the entire organization, which includes establishing values and beliefs, developing statements of vision and mission, and preparing a draft set of strategic objectives. Techniques such as an affinity diagram, SWOT analysis, and the "Table of Tables" are used to gather information and develop strategic objectives.

Members of the Policy Deployment Committee (PDC) develop a set of integrated improvement plans to promote the strategic objectives. The members of the PDC use tools such as gap analysis, Pareto

diagrams, and cause-and-effect diagrams to develop the departmental and corporate improvement plans needed to promote departmental and corporate strategic objectives. The members of the Local Steering Teams (LSTs) are responsible for coordinating and carrying out the projects set up in the corporate and departmental improvement plans.

Strategic objectives and improvement plans are deployed by the PDC through assignment of responsibility for action to people or groups of people in departments. Techniques used in policy deployment include catchball and flag diagrams.

Policy is implemented when teams work on projects to improve and/or innovate processes. It is also implemented when departments use the revised processes and measure their results in respect to improvement plans and strategic objectives.

Periodic management reviews are conducted at two levels. First, the members of the EC review progress toward each strategic objective and its improvement plans monthly. Second, the members of the PDC and appropriate LSTs review progress for each project. The purpose of these reviews is to provide feedback to project team members that promote process improvement efforts.

EXERCISES

18.1 Prepare a personal mission statement.

18.2 List your values and beliefs. Do they form an entire system of behavior?

18.3 List your strengths, weaknesses, opportunities, and threats. Develop a list of your strengths and opportunities that bypass your weaknesses and threats.

18.5 List the technological issues relevant to your life.

18.6 Construct a Table of Tables for your life using all of your relevant stakeholders; for example, spouse or significant other, parents, friends, colleagues, etc. What are the critical processes in your life?

18.7 Develop a list of key objectives for your life.

18.8 Develop a list of key indicators for each of your key objectives.

18.9 Construct a dashboard for your life.

18.10 Identify your high priority projects or tasks.

18.11 Conduct a SDSA / PDSA cycle on one of your high priority projects.

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