Six Sigma Helps a Company Create a Culture of Accountability

How do you make employees feel more accountable for results? With many opinions but no hard facts about how to achieve this, one company turned to Six Sigma to find the answer. Six Sigma methodology, no longer confined to production departments, helped this company discover that a culture of accountability, first and foremost, is a function of strategically aligned employee expectations and an effective system of rewards and consequences. © 2004 Wiley Periodicals, Inc.

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Six Sigma, a process improvement methodology with its genesis in the manufacturing arena, has gained wide acceptance in U.S. companies; a recent study suggests that at least 25 percent of *Fortune 200* companies are using it. Lately the methodology has been proving itself effective in nonmanufacturing applications as a customer-driven, data-based approach that provides an objective framework for improving essentially qualitative processes.

When Amdell Inc. (a fictitious name for an actual company) faced the need to create a "culture of accountability" (COA) within its organization, it encountered divergent opinions about how to achieve this. But rather than relying on anecdotal observations and personal opinions, the company chose the Six Sigma methodology to guide the process of culture change. Six Sigma enabled the project team to select the two processes that could most greatly affect employees' sense of accountability, to identify gaps between how these processes should operate and how they currently functioned, and to design and implement specific improvements to close the gaps as quickly as possible. Six Sigma helped the Amdell project team not only focus its efforts in the most meaningful areas but also find the best triggers for making employees more accountable for results.

WHO IS ACCOUNTABLE FOR RESULTS?

With more than $750 million in annual sales, Amdell Inc., a wholly owned subsidiary of a *Fortune 100* company, develops and markets a

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Published online in Wiley InterScience (www.interscience.wiley.com) DOI: 10.1002/npr.20019

broad portfolio of automotive electronic components. Looking for better ways to sustain and improve on a tradition of strong financial performance, Amdell hired a high-profile consulting firm in 2000 to take a fresh look at the company's business operations. One of the firm's findings was that the overwhelming majority of employees were receiving overall performance evaluations of "3" or "4" (on a 5-point scale, with 1 = poor and 5 = outstanding) despite the fact that the company was regularly missing its revenue targets and overspending its budget. Who at Amdell, the firm asked, is responsible for unacceptable financial performance? The firm recommended that one way Amdell could improve its results was to increase the sense of accountability that each employee has for those results, i.e., to strengthen its culture of accountability (COA).

In the absence of objective data, many companies rely upon political and personal agendas to select a course of action.

Amdell's senior managers accepted the recommendation but quickly discovered there was no internal consensus on just how to achieve a stronger COA. Some managers felt it was a function of organizational processes and structures; others believed senior management effectiveness, human resource policies and practices, fiscal responsibility, or individual commitment was the primary lever. All these opinions reflected personal beliefs rather than any objective, customer-driven data. More importantly, each would lead to dramatically different courses of action for culture change. For example, a focus on individual commitment could have a goal to eliminate employees' "I deserve it" mentality, which contributed to the inefficient use of resources. If senior management effectiveness was the focus of the culture change process, then the goal might be to eliminate the bureaucratic activities and in-house committees that some people believed were an inefficient use of senior managers' time.

In the absence of objective data, many companies rely upon political and personal agendas to select a course of action. Financially astute senior managers often struggle with qualitative change processes, frequently pursuing ill-advised courses of action that demoralize their employees.

Amdell's senior managers knew in their "gut" that Amdell needed a culture change that would increase everyone's accountability, but without a clear consensus, they did not know how to facilitate the process. They turned to Amdell's Process Improvement Department for ideas.

The staff of the Process Improvement Department suggested using a Six Sigma framework known as DMAIC (Define, Measure, Analyze, Improve, and Control) to provide a structure for the process of creating a COA (see **Exhibit 1**). The senior managers were intrigued by the customer focus, objectivity, and data-driven nature of the DMAIC process. They embraced the Six Sigma approach and established a nine-member cross-functional project team, which included representatives from finance, human resources, sales, and research and development, as well as a Six Sigma Black Belt and a Green Belt (individuals trained and experienced in Six Sigma methodology and tools). The steps Amdell took to create a COA are discussed below according to each of the five DMAIC stages employed in the project.

THE DEFINE STAGE

The accountability issues at Amdell related to the organization's ability, or inability, to meet the business plan and financial targets developed by the Amdell board of directors. The project team thus defined its customer for this initiative as the board of directors.

In order to make its efforts manageable, the team also set project boundaries that limited the scope of the COA initiative to one location. Since Cleveland, the headquarters, had been the site of the consulting study that surfaced the accountability problem, it was the logical candidate. Furthermore, if the accountability problem existed in other parts of Amdell as well, a successful Cleveland prototype would be helpful in developing and implementing solutions elsewhere.

The project team created for the board of directors' approval the Critical-to-Quality (CTQ) tree shown in **Exhibit 2.** The CTQ tree captured the "voice of the customer" (the board) in the form of 26 outputs, or CTQs, that should be realized if

Exhibit 1. The Six Sigma DMAIC Framework

STAGE/OBJECTIVE	***TOOLS/OUTPUT***	
DEFINE		
Define the project's purpose and scope.	• Project charter: project's scope, goals, milestones, team members, and customer benefits • High-level process map, a SIPOC (Suppliers, Inputs, Process, Outputs, and Customers) diagram • Critical-to-Quality Tree: translates the "voice of the customer" into specific requirements	
MEASURE		
Gather information regarding existing process conditions to provide a baseline assessment of current performance levels and narrow the scope of inquiry to the most important problems.	• Control Charts • Frequency Plots • Pareto Charts • SIPOC Diagrams	• Prioritization Matrices • FMEA (Failure Mode and Effect Analysis) Charts
ANALYZE		
Identify the root causes of the problems that were clarified in the Measure Stage.	• Affinity Diagrams • Cause-and-Effect Diagrams • Control Charts	• Regression Analysis • Design of Experiments
IMPROVE		
Develop, implement, and evaluate solutions intended to eliminate the root causes of problems identified in the Analyze Stage.	• Brainstorming • FMEA • Flow Diagrams	• Hypothesis Tests • Consensus Building
CONTROL		
Ensure that problems remain fixed and that the new methods can be improved over time.	• Pareto Charts • Control Charts • Flow Diagrams	• Quality Control Process Charts • Other data collection methods

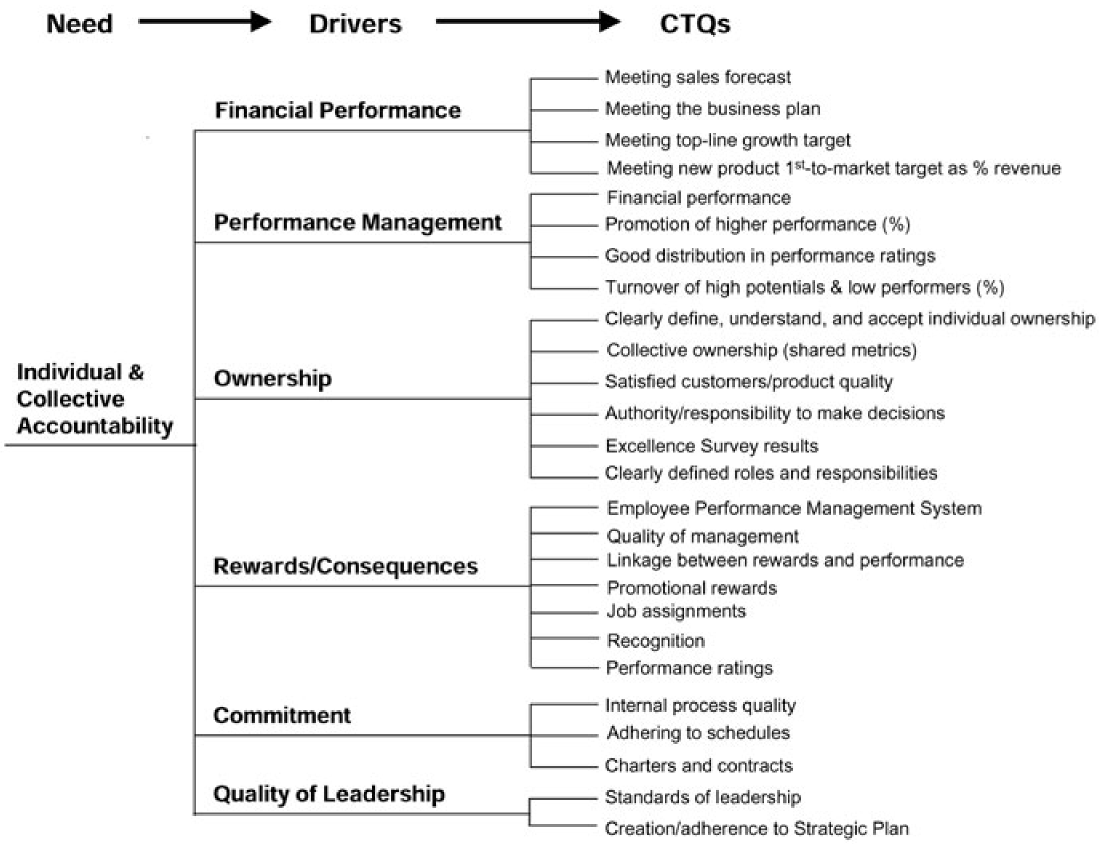
Amdell succeeds in creating a culture of accountability. For example, greater accountability would mean that Amdell meets the business plan, links rewards to performance, and adheres to schedules, to name just three of the 26 outcomes. The team also identified six processes—"Drivers" in the CTQ tree —that influence the accountability CTQs:

- Financial performance
- Performance management
- Ownership
- Rewards/consequences
- Commitment
- Quality of leadership

Next, the project team sought to "manage scope" by focusing its efforts on the two processes out of the six that have the greatest impact on creating a culture of accountability. To establish the relative influence of the six processes, the team had its customer, the board of directors, complete two cause-and-effect matrices. The first of these matrices, shown in **Exhibit 3**, lists the 26 CTQ requirements (in rows) and the six processes (in columns). The board used the following steps to complete the matrix:

1. Board members weighted each CTQ requirement for its relative "importance to the

Exhibit 2. Critical-to-Quality Tree



customer" by assigning it a rating between 1 and 10 (the first column of the matrix).

2. Board members selected one of the following four numbers to reflect how important they thought each process is in driving improvement in each CTQ requirement: 0 (no importance), 1 (minimal importance), 3 (medium importance), and 9 (high importance). The number was recorded in the cell of the matrix that corresponds to the intersection of the specific process and the specific CTQ requirement.
3. The value in each cell was then multiplied by the weighting factor of its respective CTQ requirement (from the first column) to yield a weighted score.
4. All the weighted scores in a process's column were summed and recorded in the last row of the matrix to produce a total score for each process.

Through this exercise, Amdell's board of directors gave Performance Management the highest score (1,989) and Quality of Leadership the second highest score (1,917), establishing them as the two most important processes for satisfying the accountability CTQs. Interestingly, Financial Performance was rated the lowest (1,017) of all six processes by the board. Although some members of the project team had initially believed that managing financial results was a key driver of accountability, the "customer" most likely saw it as more an outcome than a driver.

To further refine the meaning of the top-rated processes, the project team broke down Performance Management and Quality of Leadership into six component processes for the board of directors to assess in a second cause-and-effect matrix, shown in **Exhibit 4**. Although Rewards and Consequences was not among the highest scoring processes in Exhibit 3, the project team felt

Exhibit 3. Cause-and-Effect Matrix: Processes

CTQ		PROCESS					
IMPORTANCE	*REQUIREMENT*	*FINANCIAL PERFORMANCE*	*PERFORMANCE MANAGEMENT*	*OWNERSHIP*	*REWARDS & CONSEQUENCES*	*COMMITMENT*	*QUALITY OF LEADERSHIP*
10	Meeting sales forecast	9	9	9	9	9	9
10	Meeting business plan	9	9	9	9	9	9
6	Meeting top-line growth target	3	9	3	9	3	3
6	Meeting new product first-to-market target as % of revenue	3	9	3	9	3	3
9	Financial performance	9	9	9	9	9	9
8	Promotion of higher performance %	3	9	3	9	1	9
8	Good distribution in performance ratings	0	9	1	9	3	9
9	Turnover of high potentials and low performers %	3	9	3	9	0	9
10	Clearly define, understand, and accept individual ownership	0	9	9	3	9	9
8	Collective ownership (shared metrics)	3	9	9	9	9	9
10	Satisfied customers/product quality	9	9	9	9	9	9
7	Authority/responsibility to make decisions	3	9	9	9	9	9
8	Excellence Survey results	0	9	0	3	9	9
8	Clearly defined roles and responsibilities	0	9	9	9	9	9
7	EPMS	3	9	9	9	9	9
9	Quality of management	9	9	3	9	9	9
10	Linkage between rewards and performance	9	9	3	9	9	9
10	Promotional rewards	3	9	3	9	9	9
8	Job assignments	3	9	3	9	9	9
8	Recognition	3	9	3	9	9	9
8	Performance ratings	9	9	3	9	9	9
10	Internal process quality	3	9	9	3	9	9
7	Adherence to schedules	3	9	9	9	9	9
8	Charters and contracts	3	9	9	9	9	9
9	Standards of leadership	3	9	9	9	9	9
10	Creation/adherence to Strategic Plan	9	9	9	3	9	9
	Process Total	**1,017**	**1,989**	**1,361**	**1,761**	**1,724**	**1,917**

Exhibit 4. Cause-and-Effect Matrix: Subprocesses

CTQ		SUBPROCESS					
IMPORTANCE	*REQUIREMENT*	*EDUCATION & DEVELOPMENT*	*REWARDS & CONSEQUENCES*	*STRATEGIC DIRECTIONAL PLANNING*	*CLEAR EXPECTATIONS*	*RECRUITING HIRING & SUCCESSION PLANNING*	*COMPANY VALUES*
10	Meeting sales forecast	9	9	9	9	3	1
10	Meeting business plan	9	9	9	9	3	3
6	Meeting top-line growth target	3	9	9	9	3	1
6	Meeting new product first-to-market target as % of revenue	1	9	3	9	3	1
9	Financial performance	9	9	9	9	3	3
8	Promotion of higher performance %	9	9	0	9	9	9
8	Good distribution in performance ratings	1	9	0	9	1	3
9	Turnover of high potentials and low performers %	3	9	3	9	9	3
10	Clearly define, understand, and accept individual ownership	3	3	3	9	3	1
8	Collective ownership (shared metrics)	3	9	3	9	1	3
10	Satisfied customers/product quality	9	9	9	9	3	9
7	Authority/responsibility to make decisions	9	9	1	9	3	3
8	Excellence Survey results	3	3	1	3	3	9
8	Clearly defined roles and responsibilities	3	9	1	9	1	3
7	EPMS	9	9	3	9	3	3
9	Quality of management	9	9	1	9	9	9
10	Linkage between rewards and performance	9	9	3	9	3	3
10	Promotional rewards	3	9	1	3	3	9
8	Job assignments	9	9	3	3	3	3
8	Recognition	3	9	1	3	1	3
8	Performance ratings	3	9	3	9	1	3
10	Internal process quality	9	9	3	9	3	9
7	Adherence to schedules	1	9	1	9	1	1
8	Charters and contracts	1	9	1	9	1	3
9	Standards of leadership	3	9	3	9	9	9
10	Creation/adherence to Strategic Plan	9	9	9	9	3	3
	Subprocess Total	**1,253**	**1,881**	**815**	**1,785**	**763**	**969**

that it should be considered a component of Performance Management and thus included in the second matrix. Indeed, in this second assessment, the board of directors identified Rewards and Consequences (score = 1,881) and Clear Expectations (score = 1,785) as the two most important component processes for a COA.

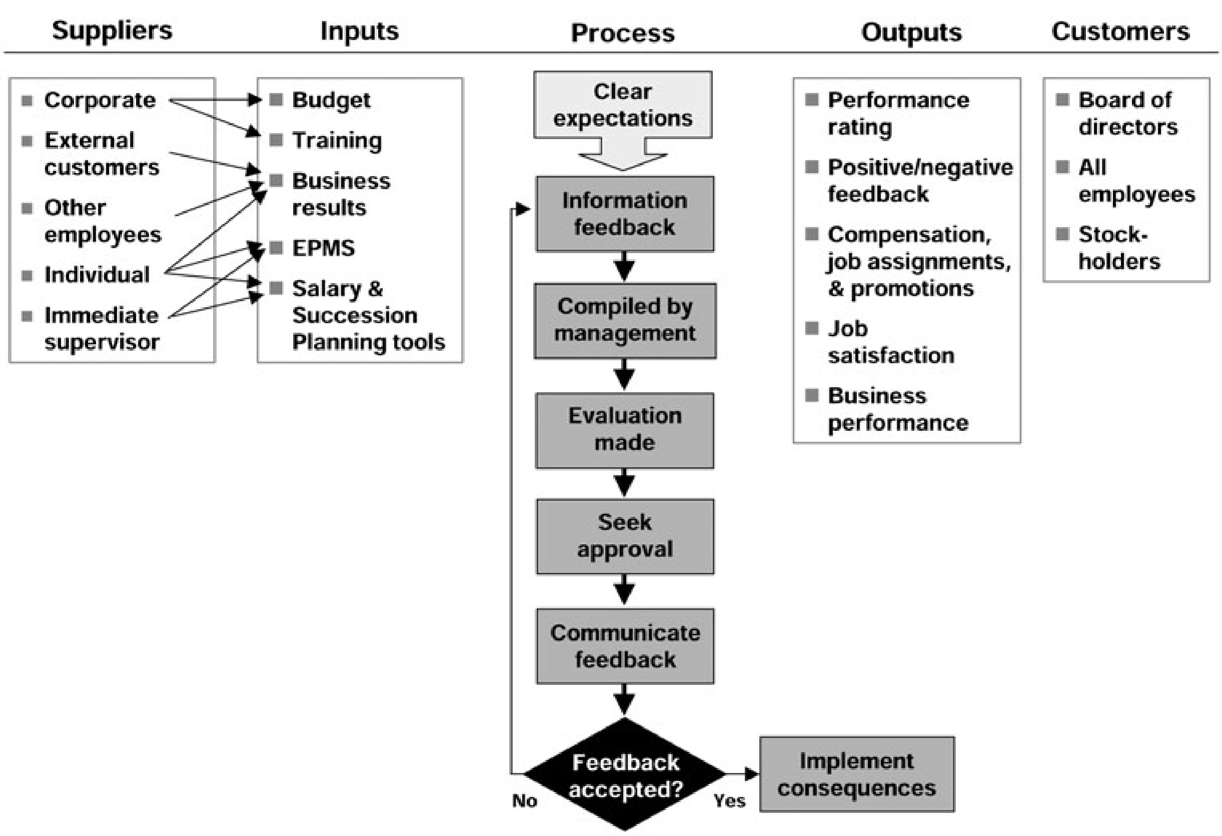
While all the processes assessed in Exhibits 3 and 4 could potentially improve Amdell's COA, the Define Stage of the DMAIC framework established a customer-driven prioritization. This distilled the somewhat nebulous concept of COA into an actionable equation: Clear Expectations + Rewards and Consequences = Accountability. This result would set the focus for the culture change efforts to follow.

THE MEASURE STAGE

The Measure Stage proceeded in two steps: (1) the project team developed a more detailed understanding of the Clear Expectations and the Rewards and Consequences processes, and (2) it measured key aspects of the two processes in order to establish a baseline assessment of their current effectiveness. The baseline assessment often creates a sense of urgency regarding the need to improve, and it provides a reference point for quantifying the extent of future improvements.

A SIPOC Diagram for Rewards and Consequences. The project team created a SIPOC (Suppliers, Inputs, Process, Outputs, and Customer) diagram for the two processes under study. By way of example, the SIPOC diagram for the Rewards and Consequences process is shown in **Exhibit 5.** Although the SIPOC diagram for the Clear Expectations process has not been included here, it is important to note that this process precedes Rewards and Consequences and thus acts upon elements shown in Exhibit 5—e.g., each supplier to Rewards and Consequences should share clearly aligned expectations.

Exhibit 5. SIPOC Diagram: Rewards and Consequences



Suppliers and Inputs. The Suppliers and Inputs columns of Exhibit 5 depict three key relationships:

- Amdell's parent company supplies two important inputs: (1) the high-level financial budget for the forthcoming period, which provides a target or benchmark for judging actual performance, and (2) an allocation of resources for training, which is necessary if employees are to be held accountable for their performance.

External customers, other employees, and each individual achieve (supply) the individual and collective business results.

- External customers, other employees, and each individual achieve (supply) the individual and collective business results. Comparison of these actual results with the budget—i.e., to assess performance—is important input to the determination of rewards and consequences.
- Each individual and his or her immediate supervisor supply information needed for three Amdell programs that are important inputs because they directly link results to how employees are evaluated, rewarded, and promoted:
  - The Employee Performance Management System (EPMS) documents mutually agreed-upon goals for the forthcoming year and actual performance relative to those goals.
  - The Salary Planning Tool establishes standards that equalize salary ranges within job levels across departments and provides parameters that enable employees to understand how their pay raises are determined.
  - The Succession Planning Tool ensures that employees receive appropriate training commensurate with their level of responsibility, which justifies holding them accountable for their performance.

Process. The Process column in Exhibit 5 shows six steps that constitute a detailed process map for Rewards and Consequences, which begins after clear expectations have been established through the other COA process under study:

1. Information feedback requires gathering all relevant information regarding the budget, actual results, and the mutually agreed-upon information from the EPMS, the Salary Planning Tool, and the Succession Planning Tool.
2. The immediate supervisor compiles the information from Step 1.
3. The supervisor makes a judgment regarding the subordinate's performance.
4. The supervisor seeks approval of this judgment from his or her boss.
5. The supervisor communicates the feedback and associated consequences to the subordinate.
6. The subordinate can accept the feedback, and then receive the associated consequences, or reject the feedback, thereby initiating another loop through the Rewards and Consequences process.

Outputs. The project team identified five key outputs in the Rewards and Consequences SIPOC diagram:

1. Supervisors assign each subordinate a performance rating.
2. The positive or negative feedback is shared with the subordinate.
3. The consequences manifest themselves in the form of each subordinate's compensation, future job assignments, and promotions.
4. The effectiveness of the Rewards and Consequences process drives each employee's level of job satisfaction.
5. The process's effectiveness ultimately influences the level of business performance.

Customers. Three customers—beneficiaries of the Rewards and Consequences process—were identified in the SIPOC diagram: Amdell's board of directors, all Amdell employees, and Amdell stockholders.

Baseline Assessment. Using the measurable inputs and outputs highlighted in the SIPOC diagram for each process, the project team performed a baseline assessment of how well each process was currently functioning. To do this, the team sought employee feedback through a questionnaire administered to all Amdell employees at the Cleveland location (16 questions for nonmanagement employees and 27 questions for managers). **Exhibit 6** summarizes a portion of the survey's findings.

Most significantly, the survey revealed that the inputs for the Rewards and Consequences process were failing, with a specific need to improve the following:

- EPMS training, usage, and clarity of goals and objectives
- Salary Planning Tool training and usage
- Succession Planning Tool awareness, training, and usage
- Performance feedback training

Employees' written comments highlighted several weaknesses regarding the key inputs of the Clear Expectations process. For example:

- Superiors and subordinates established too many performance goals.
- Superiors and subordinates did not clearly articulate the relative importance of defined performance goals.
- Employees lacked a unified understanding of the organization's most important strategic goals.

Written comments also spotlighted problems with the output side of both processes:

- Performance ratings and pay raises did not adequately discriminate between strong and weak performers.
- Performance was not reviewed often enough.
- The annual bonus was not linked to strategic objectives.

In addition to the survey, the project team gleaned one additional piece of baseline data from the earlier consultant's report that had recommended a stronger COA. The report found that 35 percent of Amdell's divisional objectives were not aligned with the company's overall strategic objectives—a clear problem on the output side of the Clear Expectations process.

Exhibit 6. Baseline Assessment Survey Results—January 2001

	% FAVORABLE RESPONSE	
QUESTION	***MANAGERS***	***NONMANAGERS***
1. Have you been trained on how to use the EPMS?	69	53
2. Are you currently using the EPMS for your associates?	68	-
3. Have you used the EPMS for your annual goals and objectives?	85	75
4. How well does the EPMS clarify your annual goals and objectives? [5-point scale, 5 = highest]	2.8	2.4
5. Are you aware of your department's succession planning process?	72	44
6. Have you received any training on the succession planning process?	38	-
7. Have you seen the results of and discussed your personal succession planning ratings?	53	39
8. Have you been trained on how to use the salary planning tool to create a career development plan?	35	17
9. Do you have a general understanding of the compensation model used by Amdell?	63	35
10. Have you received any training on compensation planning and the various available compensation options?	25	-
11. Have you received training on giving effective performance feedback?	58	-

No value in cell indicates question was not asked to nonmanagement employees.

The baseline data thus pointed to numerous opportunities for improvements in the Clear Expectations and the Rewards and Consequences processes, but in the opinion of the project team, it was unlikely that all the issues could be successfully addressed simultaneously. Accordingly, the team narrowed its scope to what it saw as the two most critical issues:

- The lack of strategic alignment (in the Clear Expectations process)
- The weaknesses with the EPMS (in the Rewards and Consequences process)

The project team would tackle the other issues later.

THE ANALYZE STAGE

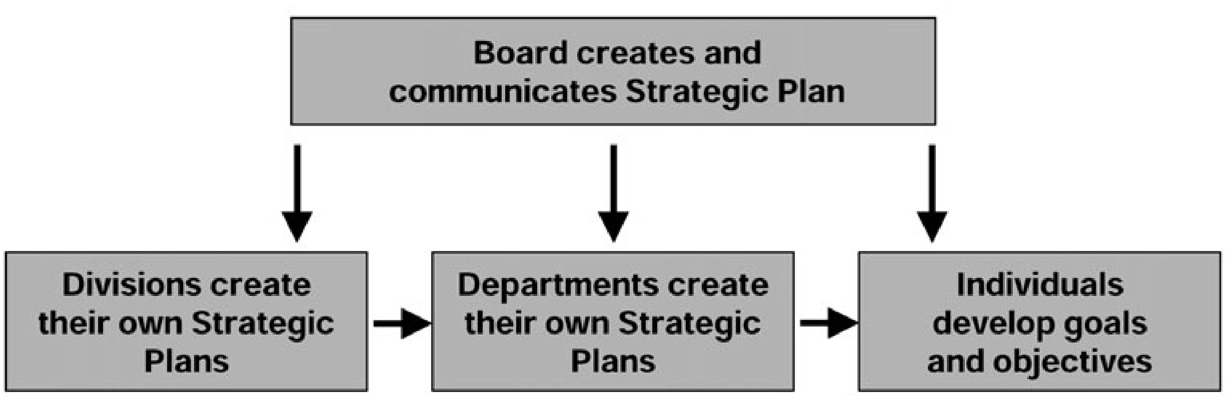
To understand the extent of the deficiencies in the two areas selected in the Measure Stage, the project team conducted a gap analysis between the current ("as is") and the desired state. The gap analysis done on strategic alignment is presented here to illustrate the team's approach.

Exhibit 7 shows the "as is" process map for Amdell's existing method of communicating its strategic vision and aligning its employees' efforts with that vision. The project team concluded that this approach suffered from three weaknesses:

- Although all employees learn of the Strategic Plan at an annual off-site "state of the company" meeting, there was no feedback mechanism to verify that divisional, departmental, and individual goals that emerged from the "as is" process were aligned with the priorities reflected in the company's Strategic Plan. Thus, vice presidents and departmental managers could establish goals that, while seemingly important from a functional perspective, were not important or optimal from a companywide strategic perspective.
- With no prioritization mechanism in the "as is" approach, an employee with both strategically aligned goals and functionally aligned goals would be more likely to focus on the functional goals because they were consistent with the immediate supervisor's agenda.
- The board of directors' strategic vision was not supported by specific measures that clarified the most important improvement targets.

The project team designed a new process—the desired state—shown in **Exhibit 8.** This process cascades the strategic goals down from the board of directors to the divisions, departments, and individuals in a sequential manner. In addition to the development of goals and objectives, the new process requires that the divisions, departments, and individuals also define measures, prioritize the goals and objectives, and verify their alignment with the strategic direction and mea-

Exhibit 7. Strategic Alignment: "As Is" Process Map



sures in the board of directors' business plan, with discrete feedback steps to assure this happens.

The project team realized that to fully implement this revised process would require two new solutions, which became the focus for the next stage of the project:

- Create a new performance measurement system that aligned everyone's priorities with the strategic goals of the company.
- Redesign the EPMS so that it held employees accountable for supporting the strategic goals of the company.

Exhibit 8. Strategic Alignment: Recommended Process Design

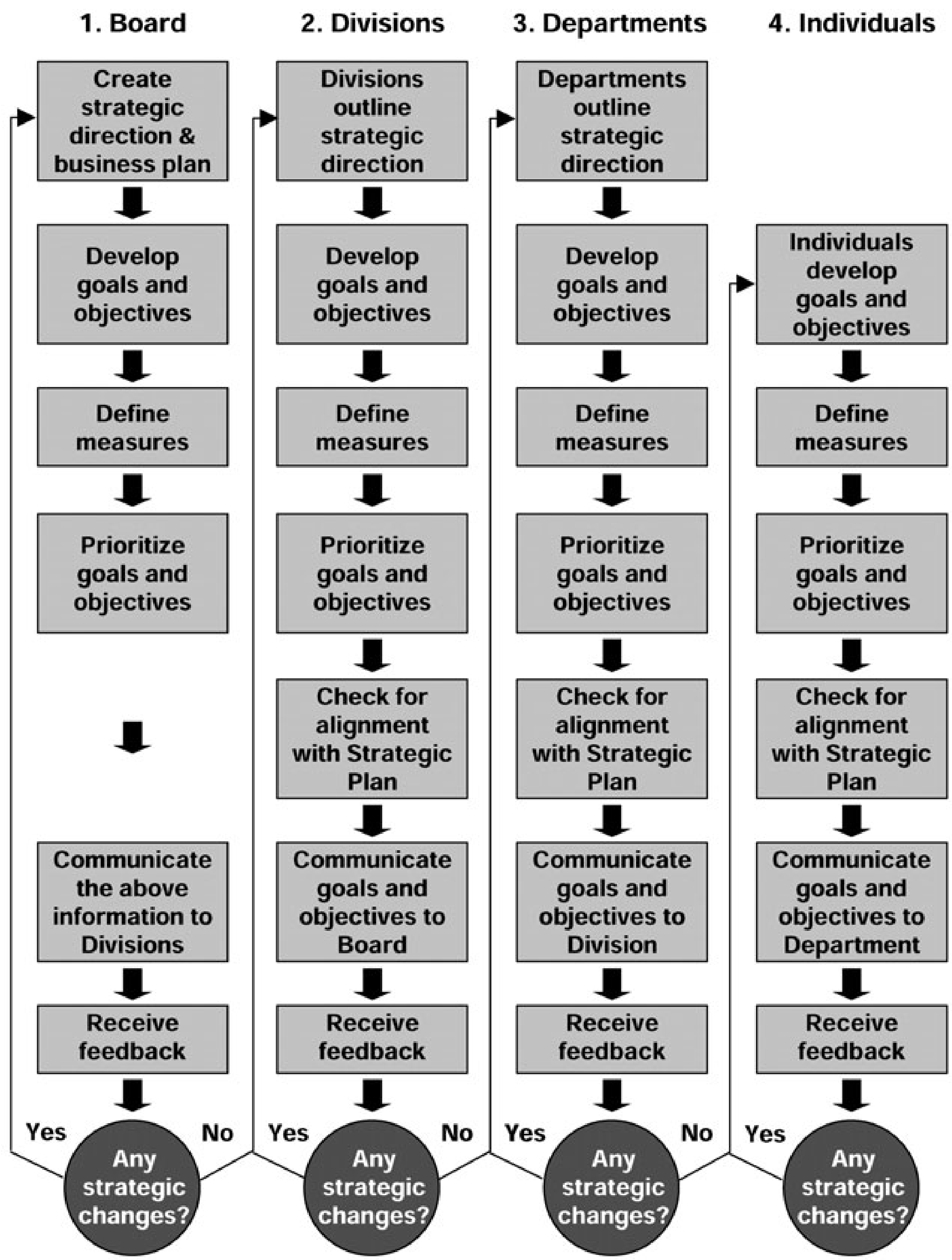


Exhibit 9. Amdell's Balanced Scorecard

VISION: REDEFINING CUSTOMER SATISFACTION THROUGH INNOVATION

STRATEGIC OBJECTIVE	***BUSINESS PLAN OBJECTIVE***	***COMPANY INITIATIVE***
Profitable growth	Achieve revenue targets	• Drive market share, market expansion, and new markets
	Drive free cash flow	• Margin improvement • Efficient capital spending • Efficient use of working capital
Customer-defined quality in products and services	Create a customer-centric culture	• Customer relationship management
	Drive toward Six Sigma through process excellence	• Design excellence • Proactive quality
Innovation	Drive product and process breakthrough improvements	• First-to-market products • Deploy process excellence • Implement e-business strategy • Continue to expand product development capability
Leadership development	Create a culture of accountability	• Implement companywide bonus plan, balanced scorecard, and revised EPMS
	Recruit, develop, and retain top talent	• Retention strategy • Implement robust staffing strategy • Succession and development planning

THE IMPROVE STAGE

Adoption of a Balanced Scorecard. The team proposed—and Amdell adopted—a Balanced Scorecard (BSC) to improve the strategic alignment of efforts throughout the company. Shown in **Exhibit 9**, the BSC translates Amdell's strategic vision— "redefining customer satisfaction through innovation"—into four broad strategic objectives: profitable growth, customer-defined quality in products and services, innovation, and leadership development. These four strategic objectives are broken down into seven business plan objectives, which in turn are supported by 15 more specific company initiatives. The BSC also contains 30 measures for the 15 initiatives (omitted from the exhibit for confidentiality reasons).

Each division within Amdell was required to create its own BSC that dovetailed with the company's BSC. A Divisional Alignment Matrix aided divisional managers in this task. **Exhibit 10** contains an excerpt from the consolidated alignment matrix for all divisions. (The matrix is similar in structure to the cause-and-effect matrices used in the Define Stage of the project.) The nomenclature for the measures shown in the excerpt—i.e., PG1 through PG9—indicates the specific strategic objective to which a company initiative and its measures relate—in this case, profitable growth (PG).

For each of the 30 measures in the company's BSC, a divisional manager assessed the degree of influence that his or her division had on that measure and recorded it in the corresponding matrix cell as either a 0 (none), 1 (minimal), 3 (medium), or 9 (strong). (The board of directors could challenge a division's cell values if deemed necessary.) Each cell value was multiplied by the measure's Importance Rating (from Column 1), which had been assigned to the measure by the board of directors to indicate its importance in Amdell's

Exhibit 10. Simple Divisional Alignment Matrix

COMPANY INITIATIVES			***DIVISION***				
Impor-tance	Initiative	Measure	A	B	C	E	x
10	Drive market share, market expansion, new markets	PG1	9	3	3	0	
9		PG2	9	3	1	0	
10		PG3	9	3	9	0	
10	Margin improvement	PG4	9	3	9	3	
10		PG5	3	3	3	3	
6		PG6	9	3	0	0	
10	Efficient capital spending	PG7	3	3	9	9	
8		PG8	9	3	9	3	
5	Efficient use of working capital	PG9	1	1	1	3	
		Division Total	1,492	1,171	1,327	1,034	#

BSC. The product of the two values indicated the relative priority of that measure for that division. The highest priority for a division was any measure with a score of 90—i.e., the highest Influence Rating of 9 and the highest Importance Rating of 10; its importance to the company's strategic objectives and the strong influence the division had on the measure signaled that it should be a critical component of the division's own BSC.

Each division's BSC was cascaded down to its departments and to individuals, in the sense that each employee's goals as stated in the EPMS had to be connected to Amdell's BSC. Furthermore, the annual employee bonus plan was connected to a subset of six to ten measures from the company's BSC.

Modification of the EPMS. The project team made five primary changes to the Employee Performance Management System (EPMS) to address the problems identified in the Measure Stage:

- The number of an individual's EPMS goals was reduced from 15 to 5. (The baseline data from the Measure Stage revealed that superiors and subordinates were establishing too many goals and that 35 percent of those goals were not strategically aligned. Fewer goals would sharpen each employee's focus on strategic priorities.)
- Each goal documented on an individual's EPMS had to support a strategic objective from the Amdell BSC. Individual or departmental goals not tied to the BSC were forbidden.
- The EPMS evaluation time frame was reduced from one year to quarterly, which required each supervisor and subordinate to sign off on quarterly performance reviews.
- The EPMS's 5-point performance rating scale was expanded to a 9-point scale. (The baseline data indicated that more than 95 percent of employees were rated either a "3" or "4" on a 5-point scale. An expanded 9-point scale—coupled with additional performance feedback training—would enable greater discrimination among employees' performance.)

- Amdell committed additional resources to training its managers how to give constructive performance feedback.

THE CONTROL STAGE

Subsequent to the changes made in the Improve Stage, Amdell developed a three-part strategy to institutionalize the BSC and the new version of the EPMS and to implement monitoring plans that prevent reverting to old practices. As the first and most important element of this strategy, the Amdell president now frames her communication to Amdell employees about the progress of the company in terms of the four pillars—strategic objectives—of the Balanced Scorecard. Furthermore, she clearly communicates the importance of linking each employee's EPMS goals to the BSC.

The Finance Department now maintains a dashboard of BSC metrics that is electronically available to all employees. The message from the president, coupled with the visibility of the dashboard, ensures that the BSC becomes the language of the organization.

As the third leg of the Control Stage strategy, the Human Resources Department now annually administers what Amdell calls its Excellence Survey. The questions in the survey are designed to gauge employee perceptions about the policies, processes, and practices that should support a culture of accountability. By monitoring survey results and taking action where improvement is needed, Amdell ensures that it continuously improves upon its COA rather than reverting to prior patterns and practices.

CONCLUSION

Nine months after its baseline assessment survey and four months after the changes were made in the Improve Stage, Amdell again conducted the survey first used for the baseline assessment. The results of the two surveys are compared in **Exhibit 11.** There were significant improvements in both

Exhibit 11. Follow-Up Survey Results Compared with Baseline Assessment

	% FAVORABLE RESPONSE			
	MANAGERS		*NONMANAGERS*	
QUESTION	***JAN 2001***	***OCT 2001***	***JAN 2001***	***OCT 2001***
1. Have you been trained on how to use the EPMS?	69	90	53	83
2. Are you currently using the EPMS for your associates?	68	86	-	-
3. Have you used the EPMS for your annual goals and objectives?	85	97	75	95
4. How well does the EPMS clarify your annual goals and objectives? [5-point scale, 5 = highest]	2.8	3.5	2.4	3.2
5. Are you aware of your department's succession planning process?	72	80	44	60
6. Have you received any training on the succession planning process?	38	55	-	-
7. Have you seen the results of and discussed your personal succession planning ratings?	53	52	39	39
8. Have you been trained on how to use the salary planning tool to create a career development plan?	35	44	17	32
9. Do you have a general understanding of the compensation model used by Amdell?	63	65	35	43
10. Have you received any training on compensation planning and the various available compensation options?	25	32	-	-
11. Have you received training on giving effective performance feedback?	58	73	-	-

No value in cell indicates question was not asked to nonmanagement employees.

the managers' and nonmanagers' perceptions about the EPMS (Questions 1–4 and 11)—a main area of the COA project focus—including wider use of the EPMS for goal setting and greater clarity about goals. Future efforts of the COA project team will address issues related to salary planning and career development (Questions 7–10).

The use of Six Sigma led to the implementation of a Balanced Scorecard and revisions to the Employee Performance Management System, which were significant improvements to the two processes at Amdell most important for a COA—Clear Expectations and Rewards and Consequences. These changes supported a stronger culture of accountability in five ways:

- The BSC clarifies and communicates Amdell's performance expectations to all of its employees.
- The revised EPMS requires each employee to prioritize and be held accountable for five performance goals that are linked to the BSC, thereby directing employee efforts toward those areas most likely to produce good business performance and long-term success for the company.
- Six to ten measures from the BSC are used to determine the bonus pool for all Amdell employees, thereby forging a direct link between a significant reward for employees and the achievement of results important to the company.
- The revised 9-point EPMS grading scale, coupled with the investment in constructive feedback training, improves Amdell managers' ability to discriminate between strong, average, and weak performers. Managers are better able to award pay and promotions that more closely reflect employees' actual levels of performance and contributions to the company, which in turn motivates employees to sustain good performance where it already exists and improve performance where it is needed.
- The more frequent quarterly EPMS reviews (rather than annual reviews) with supervisor/subordinate sign-offs increase each employee's understanding of how his or her performance supports the strategic goals of the company. More frequent and targeted feedback reinforces behavioral change. This also provides a richer source of feedback data that can be used to more finely discriminate between strong and weak performance, which enables more targeted and equitable use of rewards and consequences.

With the aid of the Six Sigma DMAIC framework and tools, Amdell clarified the nature of its problems with accountability, focused its efforts in the most productive directions, and configured and implemented solutions that will sustain positive change into the future. Six Sigma principles thus proved very useful to Amdell in making two qualitative processes more effective in order to create a stronger culture of accountability. Amdell's experience demonstrates that Six Sigma can be used effectively in nonmanufacturing, highly qualitative contexts. For organizations that have had to rely upon anecdotal opinions and political influence to drive qualitative strategic changes, Six Sigma holds promise for lending the customer's voice, as well as structure and objectivity, to these types of management challenges. ■

ADDITIONAL RESOURCES

Hammer, M. (2002). Process management and the future of Six Sigma. MIT Sloan Management Review, Winter, 26–32.