

Center for Quality and Productivity Improvement
University of Wisconsin
610 Walnut Street
Madison, Wisconsin 53705

(608) 263-2520
(608) 263-1425 FAX
quality@coeadm.engr.wisc.edu

Report No. 156

**Improving Team
Effectiveness**

Ronald D. Snee, Kevin H. Kelleher, Sue Reynard

April 1997

The Center for Quality and Productivity Improvement cares about your reactions to our reports. Please direct comments (general or specific) to: Report Editor, Center for Quality and Productivity Improvement, 610 Walnut Street, Madison, WI 53705; (608) 263-2520. All comments will be forwarded to the author(s).

Improving Team Effectiveness

Ronald D. Snee*

Kevin H. Kelleher

Sue Reynard

*Joiner Associates
Madison, Wisconsin*

ABSTRACT

Much has changed since teams became popular in the 1980s. Teams are now an established approach for getting work done, and organizations have learned important strategies for making teams effective. But barriers to team progress still exist, many of them the result of poor or ineffective management strategies for coordinating the efforts of many types of teams across an organization. Examination of selected case studies illustrates how effective use of teams is a skill that can be learned, practiced, and improved by managers and employees alike.

Keywords: *Teams, management, improvement, team development, reviews*

*Now at Nynex Corporation, New York, NY

Improving Team Effectiveness

Ronald D. Snee, Kevin H. Kelleher, Sue Reynard

Much has changed since teams became popular in the 1980s. Teams are now an established approach for getting work done, and organizations have learned important strategies for making teams effective. But barriers to team progress still exist, many of them the result of poor or ineffective management strategies for coordinating the efforts of many types of teams across an organization. Examination of selected case studies illustrates how effective use of teams is a skill that can be learned, practiced, and improved by managers and employees alike.

I. Introduction

Teams have been a major part of how business is done for well over a decade. When our company published *The Team Handbook* in 1988, teams were riding a crest of popularity spurred by the quality movement. Teams were all the rage, being spawned in huge numbers because people thought they were an easy way to tap into the energy and knowledge of greater numbers of employees.

A lot has changed since then. For one thing, the team craze has subsided somewhat as organizations realize that it takes hard work both from the team members carrying out the work and the managers leading and planning the effort to create effective teams. Also, it's clear now that teams are not a panacea, that it's not enough to simply pull together a group of people and say "Go forth and do good things." Using teams is a skill that is developed over time, a skill that must be practiced and learned.

Yet the commitment to using teams has gained a permanent foothold in American management, and the role of teams has expanded from being primarily finite and project-oriented to include the ongoing operation of a department or work area. Organizations that find teams to be an effective way to get work done are facing new challenges: they've discovered that organizing, coaching, and aligning the efforts of many teams of various shapes and sizes requires new methods and systems that weren't necessary when all they had were a few isolated project teams. The managers and employees we work with now are hungry for simple ways to use teams as a competitive tool.

Effective teams depend on a delicate balance of management, team, and individual commitment, plus a combination of knowledge, skills, and methods that allow team members to accomplish their work. Our own experiences as well as those described in the vast body of team literature has driven the development of various tools and methods that help organizations assess their strengths and weaknesses and identify ways they could improve their use of teams.

In this paper, we recap some of the methods we've used to evaluate teams, introduce several case studies, and use the lessons from those cases and reviews of other team efforts to illustrate how organizations can assess and improve their use of teams.

II. Evaluating Team Efforts

Over the past decade, we and our colleagues have worked directly with dozens of teams and observed hundreds more. Throughout that time, we have advocated the use of evaluations or reviews to assess team performance, make mid-stream corrections, and identify systemic barriers that hinder team progress. These evaluations take place at many levels, including the three described below:

- **Self-evaluation by the team:** The teams with which we work are encouraged to do a brief evaluation at the end of each meeting. In our experience, teams will do evaluations only if they are quick, easy, and have obvious benefit to the team. Often, these evaluations are open-ended discussions around two questions: "What did we do well?" and "What could we do better at the next meeting?" Another popular alternative is to use a standard form such as that shown in Figure 1 to assess the team against specific criteria.

At the end of the team's efforts, or at major milestones for an ongoing team, we also have them do a post mortem to capture the lessons they learned about how to work as a team, document the barriers they encountered, and celebrate their accomplishments. Ideally, the lessons from these post mortems are passed along to management and shared with others in the organization.

- **Periodic reviews by management:** In all the organizations we've worked with, we emphasize the need for management to actively support and guide teams. One of the best ways to do this is to have the manage-

Our meeting today was:					
Focused	1	2	3	4	Rambling
Productive	1	2	3	4	A waste
The pace was:					
Too fast		Just right			Too slow
Everyone got a chance to participate:					
Yes		Somewhat			No
Our purpose was:					
Clear	1	2	3	4	Confused
We made good progress on our plan:					
Yes		Somewhat			No
At our next meeting we should:					
Do more of:					
Do less of:					

Figure 1: Team Evaluation Form

Every team should spend at least five minutes of each meeting evaluating their progress, process, and methods. Having a standard form like the one shown here helps the team track its performance over several meetings. The questions shown here are generic topics that almost every team will find useful, but teams can add, delete, or modify these questions to suit its particular situation.

ment sponsor and other key management formally review a team's progress every four to six weeks. We have developed and refined a particular review structure (described briefly in Figure 2) that helps management: (a) keep the project on track and focused, (b) encourage the team to use logic and data, (c) offer support and boost team morale, (d) help the team overcome roadblocks. The documentation of the outcome of these reviews serves as a valuable resource for identifying systemic problems or issues that only management can address.

<i>Before the meeting</i>	
<ul style="list-style-type: none"> • Team prepares summary documents and sends to reviewers 2-3 days in advance • Reviewers read documents, noting strengths, weaknesses, and gaps in team's use of logic and data 	
<i>During the meeting</i>	
<ul style="list-style-type: none"> • Presentation: Team makes a presentation (20 min.) Reviewers take notes and ask questions for clarification only. • Q & A/Comments: Reviewers comment on team's use of logic and data and offer suggestions for improvement. Together the team and reviewers discuss problems, gaps, lessons learned, future actions, etc. • Separate huddles: The reviewers and the team meet separately, each discussing what messages they think they sent to and heard from the other group. • Reconvene: The team and reviewers meet together and share the outcomes of their separate huddles. They clarify and discuss any unclear messages and document the path forward. 	

Figure 2: Team Review Structure

This team review structure can be used as a model for meetings between a project team or ongoing work team and its management team. The "double meeting" aspect of the review helps ensure that the managers and team are on the same wavelength regarding the team's status, direction, and future actions.

- **Major organization-wide reviews:** As an organization gets more and more teams, it is increasingly imperative that it assess its use of teams from a macro level. One way to do these reviews is to have managers, team leaders, and others across the organization periodically rate the organization on key factors (one example is shown in Figure 3).

One large service organization we worked with several years ago on a major team review took a more formal approach. With our guidance, a team of inter-

	Not at				Very
	all	1	2	3	4
Management actively supports and reviews the team.	-----	-----	-----	-----	-----
There is a management sponsor/champion who will secure needed resources and grease the wheels.	-----	-----	-----	-----	-----
Project scope or work function is manageable, not too large.	-----	-----	-----	-----	-----
Problem/work is important to organization's business success.	-----	-----	-----	-----	-----
The team has a clear mission.	-----	-----	-----	-----	-----
The team knows how to measure success.	-----	-----	-----	-----	-----
The team is not too large or too small (recommend 4 to 6 members)	-----	-----	-----	-----	-----
Team members have been trained in communication skills (listening, feedback).	-----	-----	-----	-----	-----
The team knows how to study and analyze processes (through data collection, creation of flowcharts, etc.).	-----	-----	-----	-----	-----
The organization's culture supports and rewards teamwork.	-----	-----	-----	-----	-----
There are mechanisms in place to maintain the gains made by the team (e.g., ongoing monitoring and reviews, documentation used for training, etc.).	-----	-----	-----	-----	-----
The team has methods for getting its work done (e.g., planning, improvement methods).	-----	-----	-----	-----	-----

Figure 3: Team Effectiveness Questionnaire

Organizations can create a standard questionnaire to be filled out periodically by all teams—two or three times during the life of a project team (including at the very end) or at regular intervals for an ongoing team, depending on the nature of the work. The data from these reviews should be maintained and reviewed periodically by management to assess progress on the problems that have been surfaced.

nal experts (quality coaches) created a formal survey that was sent to all known management guidance teams, project teams, and quality coaches. (One thing they learned is that they didn't have an accurate mechanism for identifying and tracking team efforts.) They got responses from over 40 teams and 15 coaches. To more deeply understand the survey results, the review team also held two focus groups with a cross-section of team leaders. These efforts allowed the team to identify major system-wide barriers to progress that management could then address. The major categories of barriers are shown in Figure 4.

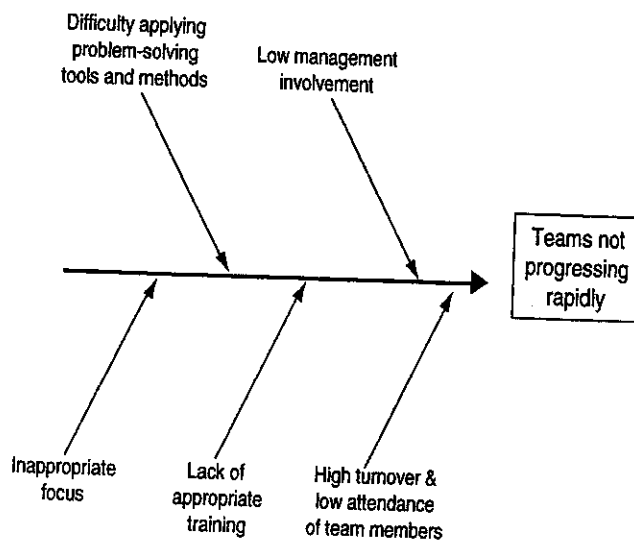


Figure 4: One Organization's Barriers to Team Progress

This cause-and-effect diagram represents the major categories of barriers identified by one large service organization after a company-wide review of team efforts. Separate cause-and-effect diagrams were constructed for each of the categories shown here.

Using these evaluation methods as well as documenting our own successes and problems (including a recent review we did of 18 major team efforts we were involved in over the past three years) has allowed us to identify common problems that organizations now face in the use of teams. The case studies described next illustrate several of the key themes we uncovered.

III. Case Studies¹

Case 1: New Product Development

Management was looking forward to the meeting with the team members. It had been four months now since they had called the team together and given them a very clear mission: the company needed to increase its revenue and had decided it was time to expand its lines of services. "We've got to work on new product development," they told the team. Now it was time for the team to report on its progress.

This meeting didn't quite go the way the managers planned. The team members came into the room looking pleased with themselves. They had a few large charts with them. "We've worked really hard in the past months. It was tough at times, but we pulled together and really worked well as a unit. Here's the new product development process we came up with."

"The what?" asked the managers.

"The new product development process."

"We didn't want you to develop a process. We wanted you to develop products, services...things that will bring in additional revenues. We've got it in the budget here."

"Oh," said the team. "When we started trying to come up with ideas on what to develop, it was clear we didn't have a process to use. And we didn't see how we could develop good products without having a good process. So we decided to work on that first."

"So you've spent the past four months coming up with a process?"

"Yes. And it's really great. We've got all the steps mapped out, including everything from getting the right customer information to developing a release plan. Now we're ready to get to work...."

Case 2: Manufacturing Crisis

The situation was a company's worst nightmare. Suddenly something went terribly wrong with the company's primary product—a specialty product sold in large volume to a small number of customers. These customers had

¹ The identities of these organizations and their products have been changed to protect their confidentiality.

started calling the company complaining about skyrocketing levels of defects. If the problem wasn't fixed soon, they would walk. The reason for the defects wasn't obvious, so management pulled together a team of the most experienced engineers, technicians, supervisors, and production workers and said, "Do whatever you have to do to get this problem solved. Now."

The team set to work with zeal. They scrutinized every aspect of the production line...but found nothing wrong. They drew on their expertise to come up with new ideas to test. But to no avail. Nothing they did seemed to have any effect at all. The days turned into weeks. It got so bad at one point that the company had 12 employees working full time *at the customer sites* just to repair defects. Customers began increasing their threats to take their business elsewhere.

Management couldn't figure out what was wrong. By most criteria, this team was in great shape:

- The issue was important to customers.
- Senior management would give the team all the support and resources it needed.
- The team had a clear mission and clear measure of success.
- The team consisted of a cross-section of dedicated, skilled, knowledgeable employees.
- Team members got along and communicated well on a personal level.

The turning point came one day when a consultant asked to see the team's data. Well, yes, they admitted, a key customer had been sending them data for weeks, but it didn't tell them anything. "Could you dig it out for me anyway?" asked the consultant. Sure. If he wanted to waste his time, they wouldn't stand in his way.

As you can probably guess, the consultant guided the team to look at the data in new ways. The team identified the exact date when defect levels had jumped so high. They discovered that the defect was much more prevalent in one brand of the product than in another. With those clues, several team members started re-examining the process trying to discover what had changed at about the time the defect levels had soared. An engineer began doing new analyses, looking specifically at what was different in the two brands and why one brand would exhibit the defect at a much higher level than the other.

Within just days—long days—the team solved the problem and took corrective steps. It turned out that a supplier

had made a seemingly minor change in the packaging of chemical ingredients, which created contaminants that caused the observed pattern of defects. Switching back to the old packaging made the defect levels immediately drop back to previous levels. But the team didn't stop there. The technical discoveries made by the engineer allowed the team to reduce defect levels even further, setting a new industry record that they have maintained for more than a year. Obviously their customers were delighted with this turn of events.

Case 3: Credibility Gap

The way the new Business Section manager saw it, the company's reputation was on the line. Too many errors were being caught in the final editing stages, where it was very expensive to fix them. And though not many slipped through and actually appeared in print, such errors hurt the credibility of a newspaper renowned for its accuracy.

So he commissioned an Error Team to study the problem and come up with solutions. "Right now," he told them, "we're catching about 20 to 30 errors per day in the final stages. I want that down to no more than 10."

Team members began work right away. Each day they counted the number of errors and plotted the data on a chart. They talked with people in the department and discussed their own experiences, then created a Pareto chart on the most common types of errors. From this analysis they discovered a few simple changes that should take care of the most common errors. But it would take cooperation from everyone in the department to make the changes work. So they put a lot of effort into coming up with descriptions of how the key process should work and creating job aides to help people remember the new policies and procedures. With the manager's blessing, they introduced the changes at a department-wide meeting called specifically for that purpose.

The team kept plotting the data, waiting for the level to drop. But nothing happened. The levels remained as high as ever.

What was wrong? The team went back to the department and discovered that most employees simply hadn't bothered to make the changes. Employees didn't really see why it was important to change, so they kept doing things the same old way. Real change didn't happen until line management took responsibility: "This is how we're going to do this from now on."

Error rates dropped immediately and have stayed low ever since.

IV. Learning From Experience

When teams started becoming popular in the 1980s, there seemed to be the expectation that good things would happen if we just got a bunch of people together to work on problems. It doesn't take many experiences like those described in the case studies above to shatter that illusion. Organizations are much more sophisticated now: they realize that many factors contribute to success.

Using teams is a skill that improves with practice. In the organizations we work with, the second wave of teams goes more smoothly and has fewer problems than the first teams; the third wave is better still. That's why some problems are starting to disappear:

- Organizations recognize that teams are not always the most appropriate way to tackle a situation and are much more sophisticated now about when to use teams (see list in Figure 5) and how to create manageable team efforts. Most have also developed training programs to teach people the basic communication, planning, and meeting skills needed to work efficiently in a group.
- Years ago, it wasn't uncommon to see teams with 15 or 20 people. Time and again these huge teams have proven to be unwieldy. Now, most organi-

zations we see have much smaller teams—we recommend 4 to 6 team members maximum—and find other ways to involve other people (such as helping the team collect data, having experts or other staff invited to meetings when particular issues are being discussed, and so on). Smaller teams have fewer communication and logistical problems than large teams, and as a result typically achieve more, move faster, and do better work than large teams.

- In their book *Incredibly American*, Zuckerman and Hatala (1992) note that we Americans seem to have a stronger desire for completion than other cultures. We want to get things done and move on. For that reason, we encourage managers to make sure team efforts can be completed in 6 months or less. This can mean limiting the scope and/or adding resources as appropriate. When teams run longer than about a half-year, energy and interest start to flag and the team has an increasingly difficult time reaching closure. Work that is larger in scope or ongoing by nature should be looked at as a series of projects or milestones, each of which can be reached in no more than 6 months. The milestones allow the team to celebrate its progress and move forward with greater energy and commitment.

But despite progress in these areas, there are still many barriers to team success that surfaced in our reviews. Figure 6 captures some of the most common.

- The task is complex
 - Creativity is needed
 - The path forward is unclear
 - More efficient use of resources is required
 - Fast learning is necessary
 - High commitment is desirable
 - The implementation of a plan requires the cooperation of others
 - The task or purpose is cross-functional.
 - There's a need to do more with current staff levels

Figure 5: When to Use Teams

Most organizations no longer throw a team at any situation that comes up. Criteria such as those listed above help them decide if and when a team is appropriate versus when an individual may be able to handle the work.

Barrier	Contributing factors
<ul style="list-style-type: none"> Team not supported by management 	Organization lacks either commitment to team support &/or methods for making it happen
<ul style="list-style-type: none"> Project scope too large 	Team and organization aren't clear on what is reasonable, or management is abdicating its responsibility to guide the team
<ul style="list-style-type: none"> Project objectives not significant 	Management has not defined what role teams will play in the organization
<ul style="list-style-type: none"> No clear measures of success 	Team is not clear about its charter and goals
<ul style="list-style-type: none"> Team too large 	Organization lacks methods for involving people in ways other than team membership
<ul style="list-style-type: none"> No time to do improvement work 	Values and beliefs of the organization are incompatible with team's work
<ul style="list-style-type: none"> Team not trained 	Organization is not aware of which skills are needed to help teams operate more effectively or has not made training a priority
<ul style="list-style-type: none"> Team not aligned within itself or with organization 	Organization not clear about its priorities for the team and how the team's charter supports its business goals and objectives.
<ul style="list-style-type: none"> Data not readily available 	Management information systems not adequate

Figure 6: Common Barriers to Team Progress

Just as Figure 4 showed the main barriers encountered by one organization, this table captures common barriers that surfaced repeatedly when we looked across the many organizations and teams with which we've worked.

The cases introduced earlier illustrate several of these barriers. Here's a quick review of each case.

Case 1 Revisited

The first case study illustrates the importance of establishing a shared understanding of a team's mission or charter. In this instance, the managers thought they were being very clear: "Work on new product development." The team did just that—or so they thought—by helping develop and document the process by which products and services were developed.

The problem was compounded because the company was also lax in its guidance of teams: The direction that man-

agement gave the team was much too broad and too vague. Their review system was poor—four months is far too long to go without contact between a team and its sponsors. The combination of a lack of management involvement and poor management-team communication meant the differences in perception about the team's mission wasn't caught until months of staff time had been wasted.

A review system supports alignment between a team and its sponsors. Ideally, management drafts a charter which the team then discusses—and together these two parties negotiate a reasonable charter (and goals) that both will commit to and support. Together they also schedule the first review, which should be no more than one month

later. Any differences in understanding or problems with the scope of the effort should have surfaced by then.

The lack of a management-sponsored charter is, in our experience, one of the biggest sources of team failure. The failure, however, is not with the teams but with management because it is management's responsibility to write the charter. We often see managers delegating responsibility for the charter to the team. Invariably, what the team comes up with is not what the managers really want—but, perhaps for the sake of "empowerment," the managers abdicate their authority and acquiesce to the team's desires. The waste of human resources from such self-chartered teams is enormous.

Case 2 Revisited

As described in the second case study, the defect reduction team had a lot going for it, including management support, adequate resources, and smooth dynamics within the team. Yet that wasn't enough. As this team learned, there is no substitute for good problem-solving skills, especially the ability to use and interpret data. This means

- Individuals on the team should know how to study problems and processes, and gather and use data. (Most current models of team development ignore the use of data, an element we have found key to rapid progress.)
- Teams will make faster progress if they have a standard problem-solving process they can follow. Having a model can guide the team's work and simplify communication with management.
- Management must have a way to monitor progress (also illustrated by Case 1).

In *Profits in the Dark*, Kearns and Nadler (1992) talk about a key lesson from their experiences at Xerox: "What did we do wrong? Early on, we failed to focus adequately on core work processes and statistics." This experience is not uncommon. In some organizations, too many teams still rely solely on gut feelings and hunches to try to solve problems. But we're also seeing organizations where each team or each department has developed its own problem-solving method—as a result, none of them can communicate with each other. In order for an organization to make effective use of data, problem solving, and tools, it needs to have a common methodology supported by training programs and coaches who have knowledge and experience of how this common approach to organizational improvement is best utilized.

Case 3 Revisited

This newspaper team did a bang up job of identifying the problems in their department and coming up with solutions. They used good problem-solving methods; they had a good understanding of their charter. And they even knew how to communicate their results, and to whom. But the team couldn't make the changes happen. It took management intervention to make the solutions a reality—in fact, the failure of employees to implement the solutions was a break down in *management's* responsibility, not the team's responsibility. Management must determine what the organization values and develop the systems and methods to make sure those values are put into action. In this case, the managers had to make it clear that the organization was now going to be run in a different way and that having everyone participate in ongoing improvement was imperative.

V. Managing a Portfolio of Teams

To produce significant change, organizations need to have a number of efforts under way at different levels of the organization at the same time. Perhaps the biggest challenge organizations face now is getting all the teams aligned internally, with each other, and with the organization's mission. It requires a management system that ensures (1) the teams are aligned with strategic direction and (2) line management knows what the teams are up to and how their work is contributing to the organization's business goals.

Some elements of this system include:

- An overall improvement plan
- A link to the organization's strategy
- A review schedule
- A system for identifying, chartering, and monitoring team efforts
- Organizational recognition of desired behaviors and celebration of team success

Linking to the organization's strategy is particularly crucial, and can best be achieved through use of an improvement cycle such as that shown in Figure 7 (see also Snee 1995). This model captures the key actions that management has to take to manage improvement overall—not just work done by teams.

Yet even this improvement cycle is not enough to ensure that teams have a measure of success. The organization must examine all its policies, values, and beliefs, and make

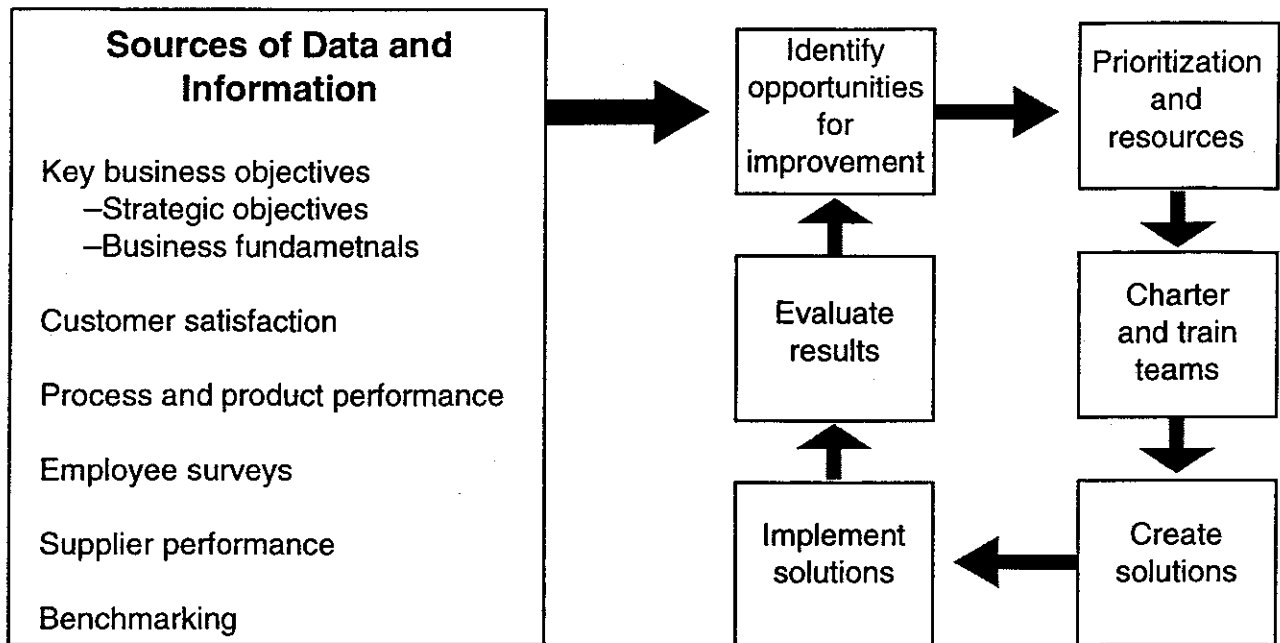


Figure 7: Improvement Cycle

This cycle of gathering information and using it to identify where teams are needed and what they should be doing should be done at least once a year, but not more often than every 6 months.

sure they encourage and support team behaviors. For example, a company that promotes its employees based primarily on individual achievement will have a hard time creating team players.

VI. Summary

Like other business tools and practices, teams are neither inherently good nor bad. Under the right conditions, they are often the best and most efficient way to solve difficult, complex problems or operate a work process. At the team level, we need to pay attention to how teams are chartered and monitored. At the organization level, we need a management system that ensures teams are linked to our strategic direction and are managed effectively across the organization. Using teams is a skill that needs to be learned and practiced by everyone in the organization. A key to success is periodic evaluations of team meetings, team results and activities, and the organizational impact of teams.

References

- Kearns, David T. and David A. Nadler, *Profits in the Dark: How Xerox Reinvented Itself and Beat Back the Japanese*. New York: Harper Business, 1992.
- Scholtes, Peter R. *The Team Handbook: How to Use Teams to Improve Quality*. Madison, WI: Joiner Associates, 1988.
- Snee, Ronald D. "Listening to the Voice of the Employee." *Quality Progress*, January 1995.
- Zuckerman, Marilyn D. and Lewis J. Hatala. *Incredibly American: Releasing the Heart of Quality*. Milwaukee, WI: ASQC Quality Press, 1992.