Lean Teams
Developing the Team-Based Organization
The Skills and Practices of High Performance Business Teams

By Lawrence M. Miller

To compete in today’s world of high speed processes, Six Sigma quality and continuous innovation, hierarchies have been crushed and the horizontal process rules. Managing with a focus on the horizontal flow of the work process through highly empowered and effective teams is the key to competitive organizations.

This paper is divided into two parts: the first defines a team-based organization, the what; the second part presents a well proven process for making the transition from a more traditional organization to an organization built around high performance business teams. This is the how.

What is A Team-Based Organization?

Throughout all of human history, from the cave to the craft shops of colonial America, the family was the primary work unit. You didn’t get up and go to work. You were already there! Then we started building large buildings, specialized production on Henry Ford’s assembly line, and started telling workers to “do your own work, don’t worry about what he is doing. I’m your supervisor, I’ll worry about that!” Simplification and specialization narrowed the focus of individual work and teamwork was discouraged and viewed as subversive to the authority of the manager. And, productivity (output divided by input) increased, and we declared that it was good. We had more cars at a lower price.

1 See www.lmiller.com & www.managementmeditations.com
There was only one problem: the system of mass production was a violation of the natural human social and psychological system. Humans couldn’t live that way.

The family farm and small craft shop was a work and social system based on high intimacy, high trust, and high ownership of the work. Human psychological and social needs were well met by this system. It was however, not highly productive relative to the mass production factory. Units out the door relative to hours of work went up dramatically due to the innovations of mass production. We gained economic efficiency and productivity, but with that system we sacrificed social intimacy and psychological security.

Now the Toyota Production System, or Lean organization, based on a clear focus on the horizontal flow of the work, managed by highly empowered teams that can make decisions on-the-spot, has become the most successful form of organization. It is not only a work system, but a management system and a social system. These “lean teams” achieve both high intimacy and high economic efficiency. This should be the goal of every organization.

The following are some of the critical characteristics of lean teams or a team-based organization.

1. **Design the Teams Around the Process**

A team-based organization is focused on the work processes because teams have been designed around the process. Each team owns a piece of the process and is responsible for continuously improving that process. Every team knows their customers, suppliers, and is measuring performance to customer requirements.

The truth is that much of the employee involvement that has been practiced has been paternalistic and based on the idea that “we’ll let them make recommendations, but we won’t really give them any power.” The team based organization is comprised (or this is the goal, anyway!) of high performance business teams (HPBT). They are high performing because they know that they are responsible for the results of their process and they have the
satisfaction of knowing that they are empowered to make decisions about their own work. They are business teams because they are essentially managing their own business. Every business, regardless of corporate walls or legalities, is only part of a larger process. Whether it is PPG supplying paint to General Motors, or one team handing off their work to the next team, all teams only have partial ownership of a larger process.

2. **Clarify the Purpose of Teams "Purpose of Teams"**

   Be clear about what you are doing. There are, fundamentally, three types of teams and they have completely different functions. Many constraints occur because teams are expected to do things they are not structured to do. Teams can be either problem-solving teams, managing teams or, networking teams and they each perform different functions.

   The majority of teams have been formed as a result of a quality management process. They are formed to solve a quality or process problem, are most often comprised of volunteers who are trained in problem solving skills, and meet to study the problem and propose a solution to that problem. Most frequently they will go away after their solution is accepted by a management group, although they will sometimes follow through implementing and evaluating the solution to the problem.

   **Problem solving-teams** (a.k.a. quality teams, quality circles, continuous improvement teams, or SixSigma teams) only have responsibility for proposing a solution, not responsibility for the on-going performance that produced the need for a problem solving group. They are also generally not held responsible for results since they lack the power and authority to implement significant changes. They can only be accountable for “proposing” a solution, not for implementing and getting results. Only managers can be accountable for results if they hold the decision making authority.

   **Managing teams**, or what my associates and I have called "team management" for many years, is based on a completely different premise than problem-solving teams. Team management assumes that some team is responsible for the on-going, day-to-day, management of every process in the organization. These are not temporary teams that go away after a problem is solved. The Board of Directors, the CEO's team, and other senior management teams are permanent and they have the authority to make decisions and are responsible and accountable for performance. Similarly, work teams or professional teams, can be organized around the flow of the work. From the creative conception of a product or service to the delivery to the customer, teams can take responsibility for doing and improving the work. Organizing teams around work processes is the most “natural” kind of team and organization. In this manner, all processes have “process owners”, teams responsible and accountable for the performance of that process. Managing teams are responsible for providing feedback to their suppliers, and responding to feedback from their customers. They are empowered to continuously improve their own work process that serves their customers.

   **Networking teams** are again, something very different. Networking teams have neither the responsibility to solve a problem, nor the responsibility to manage performance. They exist for the purpose of learning, sharing and support, particularly among those with
common professional skills. Within the large corporation there may be dozens or hundreds of individuals with particular skills, who are isolated from others with those same skills. These may be engineers of a specialty, finance managers, human resource development managers, graphic artists, or lawyers. Each of these individuals is in their own process of learning and often learns lessons that would benefit their peers in other parts of the organization. They are also able to share tools and solutions across the organization. These networks may exist only in virtual space, sharing information on a web site or through some in-house software like Lotus Notes.

3. **Do it Top to Bottom:**

   There is magic in everyone doing it together. Every army has understood this. Every soldier wore the same uniform, exercised together, ate together, and marched to the same drum.

   One of the absolute rules of change management is this: the likelihood of successful and lasting change is directly related to the degree to which that change is practiced at the top, expected below, and reinforced from the top down. If senior managers who initiate change processes understood this law, a virtual law of physics, they would save a great deal of wasted energy. To expect change to be initiated at a low level, in a narrow area, and to expect that change to succeed over time, is entirely unrealistic and defies the law of nature. It rarely happens. Nor does it happen that the culture of the organization will change based on words alone, without the support of clear deeds. The essence of leadership is to be serve as a model, to do what you ask of others, and this is never truer than when trying to change the culture of an organization.

4. **Be Business Focused:**

   Stephen Covey said “begin with the end in mind.” If you want to achieve improvements in business performance, start with a focus on business performance. Too many teams do good things, but do not impact business performance. Teams should focus first on business results, and then ask, what are the processes that impact those results and how can we improve those processes? Analysis of many change failures leads back to the same point. Begin with the end in mind. What results do you really want to achieve. If you want to achieve improvement in business performance you are well advised to design the connection into the change process, from the beginning.

   A clear business scorecard helps to focus efforts in a way that will produce reinforcing results. It is particularly effective if that scorecard can be integrated, with common language, from top to bottom in the organization.

   What defines a group of people as a business or managing team?

   
   *You are a business focused team if…*

   ...You have on-going responsibility for a work process that results in business revenue and/or expends operating costs.
...you know your customers and communicate with those customers concerning their requirements and satisfaction.

...you measure your financial performance, measures of current cash flow or income, expense and assets.

...you measure your operating process performance in terms of quality and productivity.

...you have the capability and responsibility to evaluate your performance, solve problems and make decisions to improve your operations.

5. Clarify Who Makes What Decision and How:

It is only common sense that people want to understand how decisions are made and who makes them. Many of the conflicts that arise around teams involve a failure to create this clarity. If team members think they are going to make a decision, and a manager makes the decision alone, they will be upset even if they don’t disagree with the decision.

Here is a quick and common sense primer on assigning decision responsibility: Three types of decisions: Command, consultative and consensus. Think - who knows, who cares, who acts, when must it be made? The answer to these questions determines how it should be made.

Command decisions are those made by an individual. Individual command authority is not dead and not merely a leftover dinosaur of the military organization. Of course, command worked well on the battlefield on which quick decisions were required and obedience won battles. Even today, if the building is burning down, if the machine is spitting smoke and oil, if the customer calls and is furious that he got the wrong package delivered – is the right answer to call a meeting? Definitely, not! These are decisions where time, speed, is more important than reaching consensus. These decisions are best left to individuals who are on-the-spot and have expert knowledge.

Speed and expert knowledge are two reasons for command to be the preferred decision style. In the operating room, with the patient cut open and the cardiologist holding a heart in his hand that has just stopped beating – do you want him to call a meeting? Of course you want him to use his expert knowledge and make a decision, fast! The greater the degree of knowledge an
individual has, the more likely a command decision is appropriate. The greater speed required, the more likely command is appropriate.

Consultative decisions involve selective involvement by those who know, care, or must act. If the customer calls and was shipped the wrong order, you may say, “I am very sorry about that. Let me look into it and call you back within an hour. We will definitely solve your problem.” The customer will likely say “fine.” The customer does not want to be told it will be taken up at the weekly meeting. And, it is likely that you personally do not have sufficient information to know what to do to solve the problem. You will then walk down the hall, gather together the two or three people who have knowledge, who may have some investment in this decision (they care), and who may have to take action to solve the problem. You can do this quickly. You are consulting, while still maintaining control of the decision, involving those who know, care or will act.

Consensus decisions are true team decisions where you turn over the decision to the group and you give up control to the group. When do you do this? First, when the conditions of speed and individual expertise are not the most important factors. Consensus decisions involve a cost – the cost of time, energy of the group, and the risk that you may not like the decision. When do you employ consensus decision making? For those decisions that are strategic – involve long term goals, and how we do things, our on-going processes. All members of the group have an investment in the goals of the group and the “how” and “why” we do our work. Involvement in these types of decisions gains commitment, gains the wisdom of the group, and provides for shared learning.

6. Clarify and Redefine the Role of Managers

Managers will do what they are held accountable for. If teams are to develop, if they are to take responsibility for performance, the manager’s job definition is going to have to change to reflect this reality.

These changes can be summarized in the following chart. The essence of the manager’s job to day is to enable groups to take responsibility for their performance, to achieve group commitment to goals, and create collective wisdom. The job of the manager in the future may be equally ego gratifying, but not because of a sense of self-importance, but because of a pride in the accomplishment of others you have enabled.

<table>
<thead>
<tr>
<th>The Traditional Manager</th>
<th>The Team Manager/Coach</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Direct the work</td>
<td>1. Assign Process Responsibility</td>
</tr>
<tr>
<td>2. Decide How to Fix Problems</td>
<td>2. Develop Problem Solving Skills and Encourage</td>
</tr>
<tr>
<td>3. Hire and Fire</td>
<td>3. Develop and encourage Individuals and Teams</td>
</tr>
<tr>
<td>4. Know the score</td>
<td>4. Assure Information Flow to Teams</td>
</tr>
<tr>
<td>5. Catch and control mistakes</td>
<td>5. Reward Continuous Improvement</td>
</tr>
<tr>
<td>6. Know the Answer</td>
<td>6. Create Collective Wisdom</td>
</tr>
<tr>
<td>7. Pride in Personal Achievement</td>
<td>7. Pride in Team Achievement</td>
</tr>
</tbody>
</table>

Copyright, 2005

Lawrence M. Miller
How Do You Implement Lean Teams?

Implementing lean teams or a team-based organization is an exercise, not only in redefining organization, but developing new skills, new habits, a new culture. It will require motivation and discipline. An athletic team does not develop superior performance by practicing simply when it is in the mood, when it “feels” like it. It does not develop by practicing in a random or disconnected manner. It does not develop without a clear sense of roles and responsibilities and a game plan for each position on the team. Similarly, in order to develop the skills and habits of a team based organization there must be a clear plan and a disciplined effort.

The leadership team of an organization must take responsibility for actively managing the process of improvement. Every consultant, regardless of the methodology, has learned the importance of leadership from the top. This was just as true in Total Quality Management as it is in Six Sigma, and was true during in reengineering, or at General Electrics “work-out” process. The leaders of the organization, put very simply, must make it important! If it is not important there are too many distractions that will derail in significant change.

To be an effective team leader or member requires the development of new habits and skills. When these become the norm in the organization you have changed the culture. However, to establish that change in behavior and culture it is important to come to terms with how individuals actually learn new skills.

We have standard methods of training in our organizations, particularly the two or three day workshop model, which works well to introduce new knowledge or new skills, but is entirely insufficient to actually establish a new set of habits in the organization. Habits are changed over time, often a long time, with repeated practice, feedback and encouragement. There must be a process that provides for this.

The method that has proven most successful involves an introductory workshop, then a six to twelve month period of practice, coaching, feedback, and on-the-job training. During the first year of implementation, every team should have a coach to provide this development process. Coaches should form their own team to process the lessons they are learning, share experience and insights and identify system wide constraints and needs for modification of systems and structures. These coaches can be either internal or external consultants, and a combination often works best.

The following is a step-by-step map of an implementation process. While this is not the only way to do it, these steps represent the learning after much trial and error and expense in several hundred organizations. It is, at least, a good starting point for developing your own plan.

The left hand column are the “macro” steps; and, the detailed steps are presented horizontally, from left to right.
1. Define Strategic Goals: The leadership team of the organization is the team with overall responsibility for business performance. It is their responsibility to have a business strategy that defines future market position, brand identity and brand strategy, and the strategic initiatives that will achieve that strategy and financial performance. It is their job to translate that strategy into clear performance targets.

Unfortunately, most leadership teams do not translate their strategic objectives into measures and activities that create ownership by those in the organization who must actually get the results. This is the most critical breakdown in the achievement of most strategies.

1.A. Confirm Business Strategy: The Leadership team should begin by confirming that it understand the business strategy and that it has clear measures of business success that are linked to the strategy. It is often the case in many organizations that the strategy is understood in only the most general terms and is not associated with specific actions and targets.

1. B. Operating goals include quality, productivity, cost and speed (QPCS). Virtually every strategy can be measured in the achievement of these four measures. It is a universal truth that if an organization is increasing the quality of its products and services, increasing its output to input (productivity), reducing costs, and increasing flow through cycle time (speed) it will gain in its competitive position. The larger organization must have clear strategic goals in order to focus the efforts of all teams.

1. C. It is recommended that the leadership team develop a macro scorecard, the scores that will be viewed for the entire organization, and this should serve as a template for teams lower in the organization.

1. D. It is recommended that one or two “challenge goals” be set by the leadership team for business units. These may be targets such as achieving Six Sigma, or reducing cycle time by 50%.

1. E. The leadership team must begin to create team discipline and motivation by establish clear progress reviews and a recognition and feedback process to reinforce teams who are achieving their goals. This progress review should include both process and results.
2. Appoint Steering Team & Coaches: While the executive management team of an organization must accept responsibility for any change that is designed to impact the achievement of business and strategy goals, it is helpful to appoint a team of “subject matter experts” who will make it their business to manage the details of the change process. Almost every change effort has an Executive Champion, the senior executive who makes the final decision to move forward.

The Steering Team of the implementation process should include senior line executives, staff executives and the senior internal and external coaches. This team should study the best practices in change management and serve as the senior advisors to the Chief Executive his or her team.

2.A. The Steering Team should define its own roles and responsibilities with the help of an external consultant or coach and have those responsibilities confirmed by the Executive Champion. Defining the selection criteria and selecting coaches is an important step. For twenty five years my firm implemented team based organization change and it always clear that the quality and commitment of the internal coaches, who would be assigned to every team, was a critical step.

2.B. These coaches are then trained both in the process of creating HPBT’s, ahead of the teams, but are also trained in coaching skills.

2.C. Once trained, the Steering Team will develop an overall project plan with specific dates for completion of each of the following steps in the process. Coaches will do the same in consultation with management teams responsible for the business units for which they will provide coaching.

2.D. The Steering Team will map out the entire organization, its processes and structure. It will create an initial definition of teams (which will necessarily change processes are better defined and the work of teams better understood) and will assign a coach to each team. One coach can typically provide coaching to 10 to 20 teams if they are given this responsibility full-time, and fewer if part time.
3. Define Training & Management Process: An important aspect of developing HPB Ts is that everyone in the organization should participate in training and in the team process itself. It is an inclusive management system, not simply a training program. Therefore, it is important that all of those who will be expected to participate receiving training.

3A. Define Cascading Schedule: It is important the leaders of the organization are among the first to participate in the training so they can begin to serve as a model for the rest of the organization. A schedule should be established starting at the top of the organization and cascading down.

3B. Assign coach/trainers to each team.
3C. Present introductory workshop and training materials.
3D. Train and coach on a weekly/bi-weekly or monthly basis.
3E. Plan and assure management review of training and team development process.

3F. Define Reward, Recognition and Review: It is strongly recommended that a system of reward and recognition be established that will encourage individual members to complete the training and for teams to implement each step in the process.
4. Assign Process Ownership to Teams:

If you consider the entire work of your organization from the input you receive from your suppliers, to the output, the product or service for which they pay you, you can think of this process flow as “requiring” ownership. Processes improve and develop, like a baby, when someone cares for, trains, develops, improves that process. The most senior team owns the entire process. However, it is probably too large for them to have sufficient knowledge, to pay sufficient attention, to improve well. The components of the large process must be broken down into some logical flow, and each component assigned to a team.

4A. The steering team should map the entire process flow from input to output. This should be done first with the “core work” process, that process that directly results in revenue to the organization. Then the “enabling” processes that support the core process should be mapped.

4B. Each component of these processes should then be assigned to a team. Assign team responsibility beginning at the first level of the organization, the level at which the core work is actually performed.

4C. Then assign teams of managers at the level above. The team process should maximize responsibility at the first level, reducing the need for levels of management.

4D. Each team should be responsible for clear measures of performance (quality, productivity, speed, and costs) for their process and/or for the process of a group of teams. In other words, you may have a team whose work is too closely linked to the work of another team for their revenue measure, for example, to be an independent measure. Nevertheless, every team should strive to have measures that include quality, speed, revenue, and costs. These are the four BIG ONES, the four measures that distinguish just another team from a business team.
5. Define Your Team’s Principles: All groups, whether families, communities, or work and management teams, perform best when the members have a common understanding of principles. Principles are the rules we agree to live by; the assumptions we have in common; the common vision of a shared future. Common principles create unity and make dialogue and decision making easier. The following steps can bring your team to consensus on principles.

5A. Frames of Reference: Corporate value statements are one frame of reference. However, you and members of your team may have other frames of reference. It is OK to talk about religious principles, national or other group principles that you feel may serve as reference points on which you can draw. Remember that everyone does not need to have the same frame of reference in order to arrive at a consensus on principles.

5B. Stakeholders: Who cares about the work done by your team? Anyone who cares is a stakeholder. Your customers, your suppliers, your managers or your employees are all stakeholders. What do they need from you (in general terms, later you will define specific requirements).

5C. Business Purpose: What is the purpose of your team in terms of the business? How do you contribute to the overall success of the business?

5D. Ideal State: Imagine that your team is the perfect, ideal, team; performing in the ideal manner. What would this ideal state look and feel like? This is not the time to define specific measures, just the general condition.

5E. Principles of Behavior & Relationships (Internal): In your ideal team, how do people behave? What behavior enhances the functioning, communication and performance of your team?

5F. Principles of Behavior & Relationships (External): Principles guide your relationships with those who are outside your team – other teams, suppliers, customers, etc. What principles should guide your relationships with those external stakeholders?

5G. Form Consensus on Your Team’s Purpose, Vision and Principles: After having brainstormed the above questions it is time to reach consensus on your team as to your purpose, vision and principles.
6. Define SIPOC Flow:

Business teams manage a system. That can be defined in a number of different ways, but the most fundamental way is to analyze the flow of work to the customer. This flow can be easily understand from the Supplier who delivers Input to your team; that is then used in your Process that produces the Output that is delivered to, and satisfies the needs of, your Customer. Defining this flow is the beginning the essential work your business team.

6A. Define Core Work Process: The core work process is the essential work that results in service and satisfaction for your customers. For almost every team there are core and enabling processes. The core process is the reason customers pay you. Enabling processes make it possible for you to succeed at the core work.

6B. Define Your Customers: Most teams have a number of types of customers. Your work process may be one component of a chain processes that serve and end use customer, as well as an immediate customer who uses your work output in the next stage of the work.

6C. Define Output to Customers: What is the output of your work process that adds value to your customer? This is the product, service, or information that enables the customer to perform his or her work. This is the critical, measurable thing for which the customer is willing to pay. Be sure to consider both the immediate customer (who “catches” your work) as well as the end use customer.

6D. Define Input to Core Work Process: What do you need to do your work? From whom does it come? You are the customer for this input. It is your job to define your requirements for the input you need, and to provide input to your suppliers.

6E. Define Suppliers: You may have immediate suppliers, as well as originating suppliers, just as you may have had immediate customers and end use customers. It is important to define your suppliers, as well as your input, so you can plan a process of regular feedback to help them improve their ability to meet you needs.

6F. Define Feedback Loops: Performance of any system, a group of people or an individual, is in large measure a function of the feedback they receive on their performance. It is the job of your team to assure to sets of feedback loops. First, and most important, define feedback from your customer to you; second, from you to your supplier.
7. Define Customer Requirements:

There is no more important step in developing high performance business teams, for improving business performance, or improving the work process, the clearly and accurately defining customer requirements. For the past twenty years, when the quality movement has been the focus of so much attention, and company have worked hard to develop “passion” for their customers, the average employee and manager is still unclear as to exactly what are their customer’s requirements.

7A. Review & Confirm Customer Relationships: Before proceeding with the following steps, just be certain that you have identified your customers. It is often worth confirming this, checking out your assumptions, with you team or manager above yours.

7B. Prioritize Customers: Are all customers equal? Sometimes they are and sometimes not. It may be, for example, that your strategy calls for a migration from one group of customers to another. They may even have conflicting requirements. It may be necessary to sacrifice satisfaction of one customer for that of another.

7C. Know the Facts! How? It is absolutely normal to think you know what your customers want, and to be entirely wrong. Just as we have assumptions about what our spouse or children want (and how wrong those assumptions often are!) we are often operating on assumptions about our customers without having actually asked them, listened to them, and reflected back our understanding to them to check out the accuracy of our perceptions. It is essential that you go through the process of actually gathering the data on customer perceptions of your work.

7D. Gather the Facts: Now you have to do the actual data gathering. Gathering the facts is not simply a one time thing but a process that presents facts over time, trends, and variability.

7E. Analyze the Facts: Once the data is gathered it must be given meaning and significance. It is a key function of the team to process those data, assess the meaning of customer’s input. Assessing that meaning is the beginning of the improvement process.
8. Define Your High Performance Business Team Scorecard:

The development of the business scorecard may be the most critical step in the transformation of a group of individuals into a high performance business team. It is a focus on the measures of business performance that will drive improvement. There are many models used to define a team scorecard. In the past ten years the Balanced Scorecard model has been used with great success. In this work we provide an updated version of the Balanced Scorecard.

8A. Confirm Strategic Direction & Targets: It is essential that the senior management team or the steering team have defined a business strategy for the organization and critical targets, both financial and non-financial. This should provide your team with some focus and direction in your selection of measures for your scorecard.

8B. Customer Satisfaction Measures: You have already defined measures of customer satisfaction. The key measures should now become part of your team scorecard.

8C. Business Process Measures: It is the effectiveness of business processes that will determine customer satisfaction. How work gets done, the steps in the flow from input to output, are the business processes.

8D. Financial Results: Every team should have a financial statement of income and costs. A business team learns to monitor income and costs on an on-going basis. There are many possible financial results that could be on your scorecard. However, some measure of revenue and growth in that revenue; costs; and, return on assets or capital employed in the operations of the business, are the essential measures that determine a sense of business responsibility.

8E. Learning and Improvement: the long term successes of any business are determined by its ability to process feedback, change and learn. A measure of learning and improvement is a desirable component of a balanced scorecard.

8F. Feedback Process Design: All the measures in the world are useless if they are not used as a vehicle for improving behavior and processes. The team should consider how feedback impacts performance and decision making and design a feedback process that will assure regular review of the scorecard.
9. **Analyze the Work Flow to the HPBT Scorecard:** One of the reasons for the failure of many change or improvement efforts is the absence of a link between process improvement and the business scorecard. This step is designed to assure that your improvement process is clearly linked to the factors that result in business success.

9A. Confirm SIPOC Flow: To link the scorecard to your process flow you should first review your process flow from supplier to customer. Links to the scorecard may be found before the core work process, within the process, or after the process. In other words, links to your scorecard may involve measuring input, the work process itself, or the output of the process.

9B. Create Detailed Process Mapping: An initial, high level flow chart, should now be turned in a detailed process map, preferably using a “relationship map” to identify both steps and responsibilities.

9C. Identify Key Steps for Customer Satisfaction: Now, along the detailed process map, identify which steps have the greatest impact on customer satisfaction.

9D. Identify Key Q.P.S.C. Measures & Steps: Now brainstorm all the possible steps in the process that impact quality, productivity, speed and costs of flow through the process. Then prioritize and reach consensus on those that have the greatest impact on both financial results and customer satisfaction.

9E. Identify Key Steps to Financial Performance: As you study your process brainstorm and identify those steps in the process that will have the greatest effect on financial performance.

9F. Identify Key Learning Loops: Your ability to improve, to engage learning, to develop people and to improve the process, is dependent on the nature of the feedback loops - their immediacy, specificity, relevance, and visual impact.
10. Define Key Variances for Quality, Productivity, Speed & Costs: A variance is a performance or result that differs from the desired performance or result. In other words, a variance is a problem or an area in need of improvement.

10A. Brainstorm all Variances from steps 7, 8, and 9. When you defined customer requirements, your scorecard, and the work flow you probably thought of ways in which current performance fails to meet those standards. Brainstorm all of the possible ways that the current process varies from standards of quality, productivity, cost and desired cycle times.

10B. Define State Changes: A state change is when input is transformed in a way that is necessary to achieve an output. Chemicals are mixed, wood is cut, information is sorted or calculated. Each of these are state changes. Each state change is an opportunity for a result to vary from the desired result. Examine each of these state changes for the appearance of quality problems.

10C. Define Key Quality Variances: Now it is time to decide which quality variances are most critical to achieving the results in your balanced scorecard.

10D. Define Key Productivity Variances: Productivity is defined by ratios of input to output. Production units to costs or time spent in production, for example. What are they variances from desired productivity.

10E. Define Key Cost Variances: From your financial statement and from having identified the key financial measures, you can now identify the key variances for desired cost levels.

10F. Define Key Cycle Time Constraints: Speed of flow through the core work process is cycle time. Every team should measure cycle time and be aware of the constraints, the blockages or obstacles, to flow. What are they key obstacles or constraints, they key causes of delay or waste in the system?
11. **Problem Solve and Improve**: You should now have all the critical information to begin problem solving and developing solutions to improve all of the measures on your scorecard.

11A. Prioritize Variances and Start with the Highest: You may have identified literally dozens of key variances and you may find it difficult to know where to begin solving problems or making improvement. Simply prioritize the variances in terms of which ones may have the greatest impact on your scorecard.

11B. Gather the Facts: Problem solving is not something you do in one session, rather it is a process. An essential element of the process is to gather data on the extent of the problem, the variability and the trends. Gathering the facts may also include seeking clarifications from customers, those working in the process or from suppliers.

11C. Brainstorm and Analyze Causes: Understanding the facts, it is now time to brainstorm and prioritize all the possible causes of problems.

11D. Cause Analysis: Common and Special: Common causes are those attributable to the nature or design of the system. Special causes are those variances from the way the system is supposed to perform caused by some controllable influence. Because common and special causes require very different types of solutions, it is useful to define variances as either common or special cause.

11E. Brainstorm Possible Solutions: Brainstorm and study possible solutions to each of the key causes of your priority problem.

11F. Reach Consensus on Solutions: One of the advantages of a team is that creative ideas emerge from group brainstorming. However, the extent of the list of creative ideas, whether problems, causes, or solutions also requires narrowing down, focus, prioritization and reaching consensus.

11G. Develop Action Plans: Results are not achieved by problem solving. Results are achieved by the actual implementation of solutions to problems. A well thought out action plan with specific action steps, assignment of responsibility and dates for completion is critical to achieving results.

11H. Implement and Evaluate: Now manage the process of implementing your improvement and be sure to build in plans for regular evaluation and improvement of your solution.
12. **Reflect, Recognize and Renew**: Every improvement process includes ups and downs, victories and failures. Managing motivation and gaining perspective on the process are essential if your team is to have the tenacity, the perseverance required for lasting success. Successful improvement requires not only knowledge and effective processes, but the wisdom that comes from deliberate reflection.

12A. Agree on Periodic Process Checks: A process check is a reflection, a period of asking questions about “how its going” for the people participating on the team. I may seem that this would be a natural thing to do. However, just as we often fail to ask members of our family, or others close to us “how’s-it-going,” we also fail to ask the members of our team to reflect on their experience in the team, to consider how things have improved, or how things could improve in the future. That is why it is important to have planned, period reflections on the overall process.

12B. Reflect on How to Improve the Team Process: Most of what has been presented in the twelve steps in this process involves the steps to achieve improvements in measurable business performance. However, it is also important to improve the quality of team interaction and motivation. Ultimately, business performance is the result of how human beings feel about their work and each other. It is therefore, critical to reflect on the quality of dialogue, communications and trust within the group.

12C. Plan Recognition for Contributions: One of the keys to motivation is empowerment. Another is simply recognition for effort and contributions to the success of the team. Recognition needs to be a regular item on the agenda of the team. It also needs to be the subject of more periodic reflection on how to show appreciation to those who in some way assist the efforts of the team.

12D. Plan Celebrations & Renewal: In some cultures it is normal for teams to go on vacation together for the purpose renewing their spirits and bonding as a group. While this is an extreme, there is a fundamentally right idea that teams should take some time together to celebrate their successes and renew their commitment to each other and their work.