**Harrington Institute Consulting Engagements**

# Total Improvement Management

## So You Want To Improve

Improvement is not part of the game–it is the game today. Everyone wants things to change for the better. Top management wants employees to stop making so many errors. Engineering wants marketing to give them better forecasts. Marketing wants sales to improve their sales record. Sales wants manufacturing to produce better products so they will be easier to sell. Manufacturing wants engineering to give them designs that are easier to manufacture. Everyone wants everyone else to change, but too often they are unwilling to change themselves. You can no longer wait for someone else to change. The improvement process must start with you. The question is: How does an organization make the process work for them? There are many approaches. Suddenly there are hundreds of consultants knocking on management's door with the single right answer for you, and they are all different and in some ways the same.

## Confusion Reigns Supreme

Is it any wonder that management is confused? Even the individuals who were recognized as the gurus in the continuous improvement process cannot agree on how an organization should implement the improvement process.

Philip B. Crosby's "14 Steps" focused on motivating the individual, documenting their commitment to quality by having them sign pledge cards and measuring progress through the use of quality cost (a concept developed by A.V. Feigenbaum in the 1950s).

Dr. W. Edwards Deming introduced Japan's top management to the statistical process control methods developed by Walter Shewhart in the 1920s. Japanese management were quick to realize that this was the "secret weapon" that allowed the U.S. to mass-produce the vast quantities of high-quality weapons that defeated Japan in WWII. Dr. Deming developed a different "14 Point" program just for the United States.

Dr. Armand V. Feigenbaum focuses his effort on 10 benchmarks that direct the improvement effort. He is the father of Total Quality Control and published the first book on the subject in 1951. He also originated the concept of Quality Costs. He looks at the total product value cycle and applies systems engineering approaches to bring about improvement.

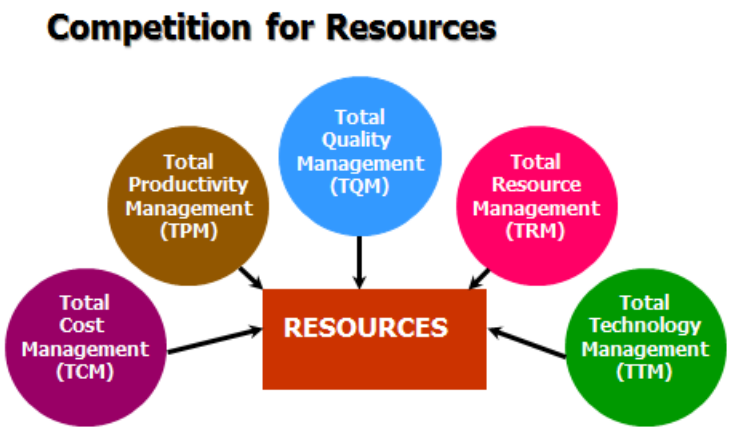
Dr. Joseph M. Juran, on the other hand, fosters the belief that an improvement effort is driven by many small, step-by-step improvements. Each saves the company approximately $100,000.

He uses pareto analysis to define the critical few problems and assigns teams to solve these problems. Dr. Juran defines quality as "fitness-for-use." He looks at what he calls, "The Spiral of Progress in Quality." The quality function is the entire collection of activities through which we achieve fitness-for-use, no matter where these activities are performed.

Dr. Kaoru Ishikawa was the leading quality expert from Japan and the originator of the quality circle concept. He espoused that the best way to improve performance is through the empowerment and enlightenment of the employees. Dr. Ishikawa's concepts fueled the unparalleled explosion in employee team skills and problem-solving training. Although Dr. Deming and Dr. Juran are given credit for the miraculous transformation of Japan, Inc., we believe that Dr. Ishikawa was the real genius because he took many concepts, put them together, and implemented them all effectively. Without Dr. Ishikawa's activities, we believe Deming's, Feigenbaum's, and Juran's work would have had little effect on the Japanese. Dr. Ishikawa looked at quality as a way to manage the total organization.

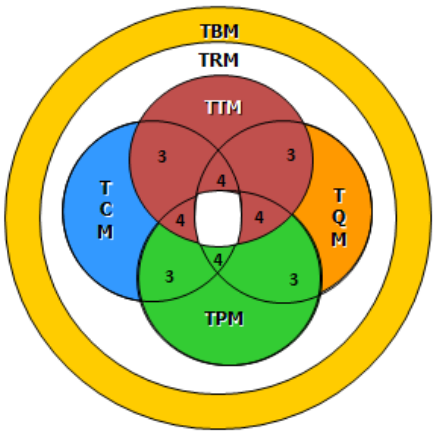
**Management's Improvement Dilemma**

Management's dilemma is the fact that they have a limited amount of resources to dedicate to the improvement effort and they have at least five different methodologies all competing for these limited resources:




But as profitable as each approach seems, it is obvious that the organization still had to use most of its resources to provide the products and/or services to their external customers that fund the organization's operation. Top management's job is to divide the limited improvement resources among the five improvement approaches to get the maximum results. The winning organizations have done an excellent job of distributing these improvement resources among the five approaches, shifting emphasis at the correct time.

Most of the survivor organizations have adopted one approach and held dogmatically to it, ignoring the others. The losers have shifted randomly among each approach, without explaining to their employees why they were changing direction. Consequently, employees were left with a feeling that they can wait it out. Why change, when the next time top management attends another conference, they will come back with another new approach that will change the organization's direction. Management needs to understand all five methodologies to be able to make correct decisions and to stop changing direction so often.




The white area in the center indicates activities that are part of four total management methodologies (TCM, TPM, TQM, and TTM). These methodologies are shown as being on top of the TRM circle because all the other four methodologies have a direct impact on the organization's resources.

Typical activities that are used in all five areas of total improvement are:

- Top Management Involvement
- Team Problem-Solving
- Process Improvement Methods
- Strategic Planning
- Education

In the figure above, the areas with a 4 in the center of them indicate activities that have a positive impact on four of the five methodologies. For example, by eliminating design review you may cut cost, reduce cycle time to product release, and increase productivity, but you cause quality problems when the product reaches manufacturing.

The areas in figure with a 3 in the center of them represent activities that improve only three of the five improvement methodologies. For example, a new material may be developed that reduces costs but has no impact on quality or the hours required to produce the product. Or, an

employee may suggest a way to do an activity that improves productivity, thereby reducing costs, but has no impact on technology or quality.

**Improvement Methodologies' Impact on Each Other**

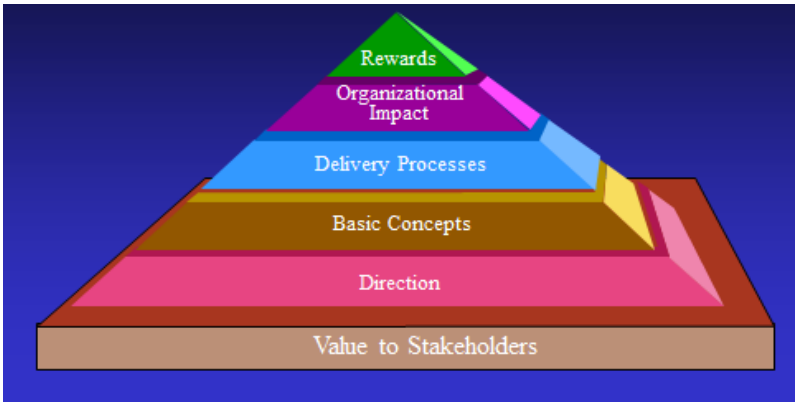
The key is to realize that each improvement activity can have any one of four results:

1. A positive impact upon all methodologies.
2. A positive impact on one or more of the methodologies, and a negative impact on others.
3. A positive impact on one or more of the methodologies, and no impact on others.
4. A positive impact on one or more of the methodologies, no impact on one or more of the methodologies, and a negative impact on one or more of the methodologies.

Remember that all improvement is change, but not all change is improvement. The total interaction of all changes must be evaluated before the change is implemented. To make the process even more complex, there are many different definitions of what tools and methods make up each of the improvement methodologies. For example, some proponents of TQM claim that it is doing everything perfectly, always making the very best decision, not just a good decision. Others claim that TQM is the elimination of errors. These are two very different concepts. In the first case, it's a degree of performance, and in the second case, it's a level of performance. For example: You decide to go out to dinner in a specific town. If you have a meal which completely meets your expectations and the service was excellent as well, then you could say you had a quality meal. In this case you are defining quality as a level of performance. On the other hand, if quality is a degree of performance, you would not know if you had a quality meal unless you were sure that you could not buy an equivalent or better meal within that city for the same or lower price.

**Blending Together the Improvement Methodologies**

To blend together the many improvement facets, we have developed a combined methodology called, "Total Improvement Management (TIM)." The 5-tier pyramid represents this new methodology.




Total Improvement Management Pyramid.

**Tier 1 – Direction:** The tasks in this tier develop the strategy that will set the future direction of
the improvement process and focus the energy of the organization on key business relationships.

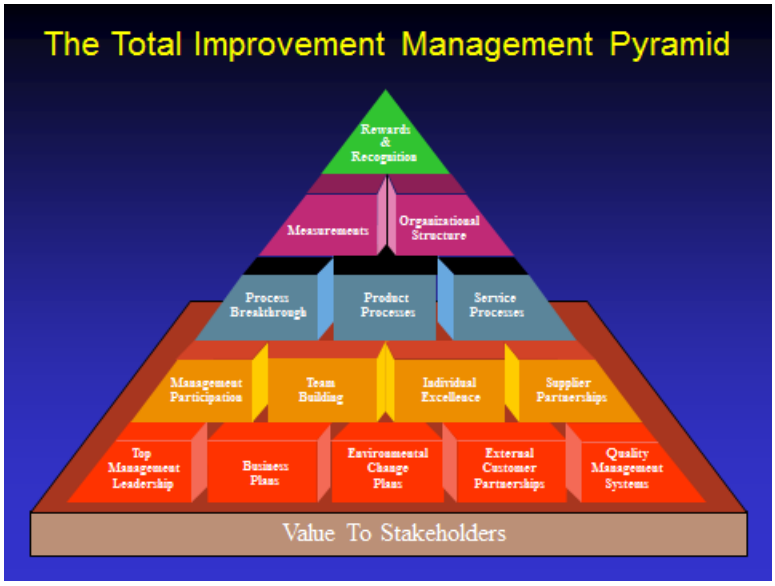
**Tier 2 - Basic Concepts:** The tasks in this tier introduce the organization to the basic improvement methodologies and integrate them into the normal business activities.

**Tier 3 - Delivery Process:** The tasks in this tier focus on the processes that drive the product and service industries, make the organization more effective, efficient and adaptable while reducing cost, cycle time and variation.

**Tier 4 - Organizational Impact:** The tasks in this tier develop new organizational measurement and structure.

**Tier 5 - Reward and Recognition:** The task in this tier focuses on developing a reward and recognition system that provides both financial and non-financial rewards. This rewards and recognition system is designed to reinforce the importance of the other tasks within the pyramid.

The pyramid was selected to represent the Total Improvement Management methodology because it is synonymous with strength and longevity. The pyramids were also built so that they set the absolute direction (north, south, east and west). What could better symbolize the strength, consistent direction, and long-lasting endurance of an organization that correctly implements TIM? If your organization uses the TIM pyramid's concepts, as time passes by, it will see competitors come and go and economic conditions ebb and flow, but your organization will grow and prosper. The diagram depicts the tasks that make up the The Total Improvement Management Pyramid.




**The Foundation of the Improvement Pyramid**

The purpose of any progressive, long-lasting organization is to provide products and services to its customers that have more value, better quality, and are less costly than other organizations offer. But it also has an obligation to all its stakeholders, which include investors, management, employees, suppliers, and the community. Truly great organizations provide ongoing security and value to all their stakeholders, not just their customers. TIM is built upon establishing strong stakeholder partnerships with the organizations undertaking the improvement activities. The word "partnership" infers that all parties involved will mutually benefit from their relationship. Without building a strong stakeholder foundation, your improvement process cannot sustain itself. It is like building your home on sand close to the ocean. No matter how well you put the building blocks together on top of a bad foundation, sooner or later the sand will shift and your house will come tumbling down. One of the most difficult jobs all organizations face is to balance the needs of all its stakeholders so that the organization is perceived as value-added by these stakeholders.

**Tier 1 – Direction:**
The first tier in the pyramid is used to set the direction of the improvement process. It consists of five building blocks (BBs), which are:

**BB1: Top Management Leadership:** Top management must do more than just support TIM. They must be part of the process, participate in designing the process, assign resources, and give freely of their personal time. The start of any improvement process is top management leadership.

**BB2: Business Plans:** All employees need to understand why the organization is in existence, what the behavioral rules are, and where the organization is going. This direction must be well-communicated to the stakeholders, and there needs to be an agreed-to plan on how to get there. That is what a Business Plan does for an organization. It sets the direction of

the business, what products are going to be provided, what markets are going to be serviced, and what goals need to be reached in the future. Without an agreed-to, well-understood business plan that is implemented effectively, the organization has no direction. It is like an automobile screaming down the road at a hundred miles per hour without a steering wheel. If the organization does have a business plan, but it is not communicated throughout the entire organization, it is not much better off. Now management is behind the steering wheel of that car screaming down the road at a hundred miles per hour, but now the steering wheel is not connected to the front wheels.

**BB3: Environmental Change Plans:** The only thing that management has control over is the environment within the organization. If we are going to improve the organization, it means that we must change the environment within the organization to produce the desired results. Environmental Change Plans first develop a set of vision statements that define the desired future environment. Individual vision statements and desired behavior patterns are developed for every influencing factor (example: Management Leadership, Business Processes, Customer Partnerships, etc.). Then a three-year plan is developed to bring about the desired transformation. The long-term effect of changing the environment is a change in the organization's culture.

A Change Management Plan is also developed and implemented. This plan paves the road for effective implementation of the environmental changes which are required to bring about the desired environment and behaviors within the organization. It is very important to prepare the stakeholders for these changes before, during and after their implementation. Even the very best improvement effort can be shot down if the stakeholders have not been prepared to embrace the required changes. As a result, the Change Management Plan is a crucial part of the direction-setting activities.

Whenever you do anything, you have four options. You can do the wrong thing effectively **(Option I)**, or do it ineffectively **(Option II**). You can do the right thing effectively **(Option III)**, or do it ineffectively **(Option IV)**.

In the 1980s and early 1990s, many organizations were doing a number of good things, but doing them ineffectively because they did not prepare their stakeholders to embrace the changes. Often the losing organizations' stakeholders spent their efforts trying to define why the change would not work and/or sabotaging the change, instead of trying to make it work. As a result, many of the changes failed to meet expectations or accomplish the improvement that they should have. The winning organizations tended to prepare their stakeholders for the changes. Because the stakeholders were prepared for the changes, they embraced them and spent their efforts making the changes work. As a result, these change programs often exceeded expectations.

**BB4: External Customer Focus:** Organizations are formed to service customers. As John Young, past president of Hewlett-Packard, put it, "Satisfying customers is the only reason we're in business." The primary ingredient for the success of any organization is an excellent understanding of, and a close-working relationship with their external customer/consumer. All planning must be based upon improving this relationship, for it is this relationship which generates the means to meet the needs and expectations of the other stakeholders.

**BB5: Quality Management Systems:** This building block is used to establish Quality Management Systems that are in keeping with good business practices. This basic level of minimum operating systems is necessary before more sophisticated improvement methods can be effectively implemented. The Quality Management Systems should be in compliance with the International Standards Organization ISO-9000 series, or the appropriate military or commercial specification (example: MIL-S-9858A). These systems are the "blocking and tackling" of the improvement process. They are an essential building block for the rest of the structure. Usually as TIM is implemented, some of the controls that are required initially in these systems are replaced because they are no longer needed.

Included in the Quality Management System are all the quality of life impactors. This enables safety, security and environmental issues to be addressed as part of the Quality Management Systems. Requirements, procedures and audits of the quality, security, safety and environmental impacts should be combined. Management's number one priority is not satisfying their customers, but ensuring the safety of their employees and their customers The Direction Tier of the pyramid is extremely important and is the one most loser organizations have paid too little attention to. Ignoring or quickly passing through this phase is the reason why most organizations did not progress at the rate they should have in the 1980s and early 1990s. Not paying the proper attention to each building block in this tier results in a haphazard approach to improvement that often confuses rather than helps the employee, and in the long run slows down the progress made by the entire organization.

**Tier 2 - Basic Concepts**

The second tier in the pyramid is directed at integrating the basic concepts into the organization. It consists of four building blocks, which are:

**BB6: Management Participation:** This building block is designed to get all levels of management actively participating in the improvement effort. Having management feel comfortable in a leadership role is essential to the success of the total process. It is important that you bring about the proper change in top, middle, and first-line managers and supervisors before the concepts are introduced to the employees. Most organizations have done a poor job of preparing management for their new leadership role.

**BB7: Team Building:** The use of management and employee teams to solve the organization's problems and to be involved in the organization's change process is a key ingredient in today's competitive business environment. This building block develops team concepts as part of the management process, and prepares all employees for participating in a team environment.

**BB8: Individual Excellence** - Management must provide the environment as well as the tools, that will allow and encourage employees to excel and take pride in their work, and then reward them based on their accomplishments. This is another key ingredient in every winning organization's strategy. You can have a **good** organization using teams, but you can have a **great** organization only when each employee excels in all jobs they are performing. Care must be taken to have a good balance between team cooperation and individuals who strive for excellence in all their endeavors. The two concepts need to work in tandem, not compete with each other.

**BB9: Supplier Relations -** Winning organizations have winning suppliers. The destiny of both organizations is inevitably linked. Once the improvement process has started to take hold within the organization, it is time to start to work with your suppliers. The objective of this partnership is to help them improve the performance of their output and increase their profits, while reducing the cost of their product and/or service to you.

The Basic Concepts Tier provides the infrastructure for improvement. It is designed to help management change from their role as "bosses" to "leaders." This results in an environment where all of the skills of the organization's employees are better utilized and challenged. From the employees' standpoint, it demonstrates to them the advantage of being part of the team. It also shows them how to balance their personal needs for success with the needs of the organization, while at the same time increasing the personal satisfaction they gain from being more creative. These building blocks develop a new set of relationships between the employees and their internal and external customers and suppliers is developed. The building blocks that make up Tier 2 are the fundamental ingredients in a continuous improvement process.

**Tier 3 - The Delivery Processes:**
The third tier is the Delivery Processes level. This tier of the TIM pyramid focuses on the organization's processes and the output that its customers receive. It is made up of three building blocks, which are:

**BB10: Process Breakthrough**: This building block uses cross-functional Process Improvement Teams (PITs) to make a quantum leap forward in the critical business processes (overhead-type activities). It focuses on making these important parts of the organization more efficient, effective and adaptable. This building block makes use of many different streamlining techniques, including bureaucracy elimination, value-added analysis, benchmarking, and information technology, carefully woven together. This approach brings about drastic improvements in the processes to which it is applied. Improvements between 400 to 1000% are being realized in a period as short as six months.

**BB11: Product Process Excellence:** This building block focuses on how to design and maintain product delivery processes so that they consistently satisfy external and/or internal customers. It is directed at the product design activities and the production process. All organizations, where they are classified as service or product industries, have production processes.

**BB12: Service Process Excellence**: The delivery processes for products and services are very different. These differences make it necessary to apply different improvement methods, and common methods in different ways, in the delivery of service. This building block focuses on how to design, implement, and improve the service delivery process in the service and product industries.

**Tier 4 - Organizational Impact**
The fourth tier of the pyramid is the impact level. By now the improvement process is well underway within the organization, and it will soon start to impact the organizational structure as well as its measurements. This tier consists of two building blocks, which are:

**BB13: Measurement Process:** This building block highlights the importance of a comprehensive measurement plan in all improvement processes. It helps the organization develop a balanced measurement system that demonstrates how interactive measurements like quality, productivity, and profit can either detract from or complement each other. Only when the improvement process documents positive measurable results can we expect management to embrace the methodology as a way of life. A good measurement plan converts the skeptic into a disciple. As the process develops, the measurement system should change. When you start the improvement process, you measure activities. About six months into the process, you start to measure improvement results, and about 18 months into the process, the normal business measurement should start to be impacted.

**BB14: Organizational Structure:** As the smokestack functional thinking and measurement systems begin to change to a process view of the organization, bureaucracy is removed from the processes and decisions are made at much lower levels. In this new environment, employees are empowered to do their jobs and are held accountable for their actions. With these changes, large organizations need to give way to small business units that can react quickly and effectively to changing customer requirements and the changing business environment. Functions like Quality Assurance and Finance take on new roles. The organization as a whole becomes more process-driven rather than functional organization-driven. In this environment, the organization needs to become flatter and decentralized, requiring major changes to the organizational structure. This building block helps an organization develop an organizational structure that meets today's needs and tomorrow's challenges.

**Tier 5 - Rewards and Recognition:**
The fifth and top tier of the pyramid is the Rewards and Recognition level. The top of the pyramid has only one building block, which is:

**BB15: Rewards and Recognition** - The Rewards and Recognition process should be designed to pull together the total pyramid. It needs to reinforce everyone's desired behavior. It also needs to be very comprehensive, for everyone hears "Thank You" in a different way. If you want everyone to take an active role in your improvement process, you must be able to thank each individual in a way that is meaningful to him or her. There is a time for a "pat on the back" and a time for a "pat on the wallet." Your rewards and recognition process should include both.

**Summary:**

There is no doubt about it. The U.S. is the blue-ribbon country of the world– the best place to live, work, and raise a family. We are more productive and have the best standard of living of anyone in the world. People are more satisfied with their jobs in the United States than in Canada, Europe or Japan.

- U.S. Index 40
- Canadian Index 39

- European Index 29
- Japan Index 16

*Money* Magazine evaluated the standard of living in the sixteen wealthiest nations. It compared them in five areas: health, solid job prospects, comfortable income, upward mobility, and adequate leisure time. The U.S. ranked #1; Japan, #7; Germany, #8; and the United Kingdom, #15. We are the envy of the rest of the world, and when you are #1, everyone is using you as a benchmark to beat. As a result, the gap between the U.S. and other countries around the world has decreased during the last quarter century.

International customers are attracted to your organization for four reasons, in the following order.

| Win Customers | Lose Customers |
|---|---|
| 1. Capabilities | 1. Trust |
| 2. Trust | 2. Quality |
| 3. Price | 3. Capabilities |
| 4. Quality | 4. Price |

Product and service capability is driven by using the latest technology and/or using present technology in more creative ways. Trust is based upon experience and reputation. It reflects the faith that the customer has in your ability to meet your cost, schedule, and performance commitments. Price today ties in directly with value. Customers are looking at getting the best performance at the least cost. Quality reflects more than just the initial view of the products or services purchased. It reflects the quality of the total organization, the reliability of its products, and the capability of its sales and service personnel. You lose customers for the same four reasons that you attract them, but in a different order.

For an organization to survive in today's competitive international environment, there must be improvement efforts in both the continuous and break-through improvement methodologies. Management need to make the correct business decisions so that the correct products are available at the time they are needed, while making the most of everyone's efforts. There needs to be a high level of cooperation between government, business, labor, and academia. Each must improve the value of its products and/or services as viewed by its customers.

This means that all functions in all organizations must use the most appropriate technology to improve their effectiveness, efficiency, and adaptability. In addition, all organizations need to have a well-communicated, agreed-to plan that merges together the many improvement methodologies to provide the greatest value to all of their stakeholders.

**To learn more about implementing Total Improvement Management in your organization, please contact Tom Quinn at tquinn@harrington-group.com or call 407-ISO-9000.**

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