



ADVANCED MANAGEMENT & PLANNING
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THE PACIFIC PLANNING INSTITUTE

presents



QUALITY TEAM MANAGEMENT

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Vision

America was founded on a work ethic and a set of definite principles. These principles demanded loyalty, teamwork, and a commitment to the excellence available at the time. Early Americans succeeded in mastering both the agricultural and the industrial "revolutions." Early Americans demonstrated to the world that commitment to a vision, to technological advancement, and to teamwork does produce extraordinary results.

The 1980's have unveiled major economic shifts in world trading. This has been a result of high-speed communication and rapid technological acceleration. A paradigm shift in business philosophy, socioeconomic opportunity, and trade is an emerging trend for the 90's — and our future! We are growing aware of our changing global economic and ecological climate. This change is linked primarily to education and training. The discipline to strive for excellence is paramount in a quest to provide superb business leadership.

This paradigm shift, "The Contextual Revolution" has arrived. It is being implemented in many organizations worldwide. We describe this contextual revolution as a "synergistic" combination of business disciplines and values. These values include teamwork, product quality, excellent customer service, and the need to satisfy human relationships through effective communication. All the while, we must maintain support for the ecological balance of our "spaceship earth" — the source of livelihood for all life as we know it.

Over the next several years we all have the opportunity to rise to the call of this "Contextual Revolution." The benefits for those who participate will include high dividends both personally and financially. The time for participation is, and has been for a long time, now.

Pacific Planning Institute has prepared, for nearly a decade, for the changes that now find themselves manifest.

The mission of Pacific Planning Institute is to promote and facilitate teamwork in all of life's endeavors, to encourage individuals to maximize their ever increasing potential, to co-create working environments that foster all forms of excellence as the operating standard, and to make the workplace a contributing and positive part of life — to improve the quality of people's lives through their work.





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QUALITY TEAM MANAGEMENT

Being competitive in today's global marketplace takes more than delivery of a quality product — on time and on budget. We must now develop and create a work environment of a higher quality. This new work environment will transform the human experience of work and the role that work plays in life. Joy, enthusiasm, pride of ownership, partnership, teamwork, and fun are all part of this new work environment and experience. It is made possible by a well implemented program of continuous quality improvement and a quest for excellence.

QTM, Quality Team Management, improves the quality of people's lives through their work.

- Quality programs increase market share, increase profit, and decrease costs. Quality programs continually educate and improve the quality of the work experience for all.
- Team building improves productivity and morale. Team building improves the quality of the work experience through healthy competition, acknowledgement, and fun.
- Planning and management skills add to the bottom line through efficiency. Thirty year studies reveal a 15 to 25% savings on all resources used by projects that are well planned and managed. Those resources are materials, money, time, and the various human energies used to complete any task.

QTM, Quality Team Management, is a system that improves the creation and delivery of product and service.

QTM, Quality Team Management, changes attitudes about the process of work. QTM can assist American business in regaining a more effective position in the global marketplace.

QTM, Quality Team Management, is a unique system and philosophy of business. QTM synergistically integrates sound and proven management technologies into a new and exciting business management system. These components are:

1. Statistical Quality Control procedures and methodology co-created developed by Dr. W. Edwards Deming. These technologies have been used by Japanese and German industry since the end of World War II. The Deming Quality Award is the most prestigious industrial award in the world.
2. The accumulated technology of team building including the process of human values fulfillment and the science of linguistics.
3. Planning & Management systems, PERT - Planning Evaluation & Review Technique, developed by the Navy and Lockheed Aircraft in the late 1950s for the Polaris Missile program and used by NASA and major project managers and contractors today.

Each of these components on their own produce outstanding results for their users. Used in concert, including consideration of the intended product, process, and personal values, these components add to each other such that the final product is much more than the sum of the parts - the definition of Synergy. It works.

COMPONENT 1 - QUALITY PROGRAMS

• OPERATIONAL DEFINITIONS

People work together better when they can speak the same language.

People work together better when they can speak the same language.

Language is one of the doors to intellectual experience and distinctions. Different words mean different things to different people. "Picnic" to one person is "Wine, good food, sunshine, and thou" while to someone else "Picnic" means rain, mud, and poison ivy. The internal representations that a person has for a word depends upon the personal experiences associated with that word.

Most environments, including businesses and industries, have a "short hand" language for common concepts, products, and procedures as well as a number of common words and phrases that are used in the process of communication within that environment. In most business organizations that have not formulated and published a set of operational definitions for their commonly used words and phrases, there exists as many different definitions as there are people.

If it doesn't add value, it's waste.

Creating the list of common words and phrases used in the target environment is the first step. The best process for creating this list is creating process charts for the functions of the various divisions, departments, and/or products of the business. (Process charts will be discussed later in this outline)

After the words and phrases are listed and definitions created, we ask the following questions:

1. What is the criteria to be applied?
2. How will the criteria be satisfied?
3. How will we interpret the results of the test?

4. Are all the terms in the operational definitions clearly defined?

Example — Waste: (Operational definition from Toyota)

— Anything other than the minimum amount of equipment, materials, parts, space, and worker's time which are absolutely essential to add value to the product.

IF IT DOESN'T ADD VALUE, IT'S WASTE.

• Toyota's Seven Areas of Waste

1. Waste from over production.
2. Waste from waiting time.
3. Transportation waste.
4. Processing waste.
5. Inventory waste.
6. Waste of motion.
7. Waste from product defects.
8. Waste of under-utilization of people skills and capabilities (Note: not on Toyota's list; however it is implicit in their management actions.)

The basic method to improve a system is to work co-operatively on:

1. how to measure each process
2. how to reduce variation and/or time (simplify, combine, or eliminate).

In 1988, Toyota's employee "suggestion program" generated over a million suggestions on how to remove waste. Over 90% of these suggestions were adopted.

Creating operational definitions is the first step in a classical quality control process.

How might a house look if instead of blueprints the contractor was given a written description of what the house should look like?

- **PROCESS CHARTING**

Process Charting can be thought of as map making.

If we want to get from one place to another, either we know the way or we have to find out how to get there. There are four basic ways we will do this:

- We can ask directions from someone who knows and try to remember what s/he said.
- We can ask directions from someone who knows and write the directions (job description).
- We can ask directions from someone who knows and draw a map.
- We can look at a professionally made map or have one drawn.

Another example of process charting is blueprints for building. How might a house look if instead of blueprints the contractor was given a written description of what the house should look like?

A process chart (PERT chart or flow chart) is created by finding out what the destination (goal) is, finding out what all of the check points (milestone events) are along the way, how much time and fuel (resources) will be used between the designated checkpoints, and who will be the driver from point to point (responsibilities). Anyone who has seen John Madden draw his X's & O's on the screen during a football game has seen a process chart.

Creating a chart diagram of a business process makes it clear to all exactly what that process is. The process of creating the chart diagram is where and when most of the key words to be used in the operational definitions will surface. The process chart is the skeleton upon which the management of the process can be placed.

- **QUALITY ATTRIBUTES**

The quality attributes of a product, process, or a project are the defined elements from which quality measurements can be taken. The QTM system looks for quality attributes in three areas:

1. Product

Quality attributes of product are the physically measurable criteria (size, diameter, thickness, etc.) that must be present for the item to be accepted. This is the traditional use of statistical quality control process found in manufacturing and related industries.

2. Process

Quality attributes of process are the criteria defined and established by the people involved in the process of completing any task (on time, ease of communication, efficient, etc.) Process attributes are more interpretational, deal with the quality of the "feel" of the process, and is more appropriate in the service industries.

3. Values

Applying Deming statistical quality control methodology to the measurement of human values fulfillment on the job forms a foundation for the QTM system into which most people easily enroll. Systematic and regular attention to the values of the people involved in the process or product being monitored is one of the elements that gives QTM its unique position as a management system. It is this element that provides the personal depth that is absent in most business management available today.

For someone to want to be on a team, there has to be a game that people want to play.

“When our values are clear, our choices are easy.”

- **TEAM - THE TECHNOLOGY OF TEAM BUILDING**

The word team is used often in the world of business as an important element yet there is little formal training available in most business educational process. QTM team building starts with some of the basics that we find get left out of most business team building:

1. For someone to want to be on a team, there has to be a game that the potential team member wants to play.
2. There must be some form of “super-bowl” that the team members want to “win” if the team is to go beyond the norm.
3. There must be planned and budgeted team events for review and evaluation as well as celebration and acknowledgement if team momentum is to be built and maintained.
4. The personal values of the individual team members are known, acknowledged, and respected by all team members.

To these basics, we add team building “instruments” and psychological and linguistic technology from leading institutions and established leaders in their respective fields.

- **QTM VALUES INVENTORY**

“When our values are clear, our choices are easy.”

The QTM values inventory is an instrument to measure the existing business conditions for values fulfillment. The frequency of samplings is dependent upon the specific situation to which the process is applied.

Following are the basic activities in the QTM Values Inventory:

1. Group or individual values inventory w/ current perception of company - 10 highest priorities:
 - a. count
 - b. averages etc.
2. Individual values inventory form to be filled out each cycle. Brief explanation for each entry. Detailed explanation for extreme ratings.
3. Quality control charts.

BENEFITS:

- Knowledge of individual
- Composite perception of company
- Compare to culture statements of company
- Composite of existing values resident in company
- Attributes for control measurements
- Enhanced performance of people

There are less than 100 professional operational planning firms listed in all the Yellow Pages in the United States.

The project team comes together on a plan that is, by group consensus, realistic and attainable.

- **MANAGEMENT - STRATEGIC AND OPERATIONAL PLANNING AND MANAGEMENT**

QTM planning and management systems are based upon classical PERT (Project Evaluation & Review Technique) technology developed in the late 1950's by the Navy and Lockheed Aircraft for the Polaris missile program. The QTM planning system adds modern linguistic communication technology and current personal computer programs to classical PERT methods. The result is a planning and management system that is easy to implement and appropriate for most current circumstances.

In this age of technology and service, it's a fact that there are less than 100 professional operational planning firms listed in all the Yellow Pages in the United States. There is a growing trend towards planning awareness marked by growing numbers of articles in business publications and new computer planning software. But purchasing planning software does not make one a planner any more than buying a piano makes one a piano player. Planning is a science that requires study, training, and practice.

In a recent study designed to determine the most important management needs facing private companies, 550 executives responded that when they do turn to outside professional groups, an accountant is the primary business advisor. Next are bankers and attorneys.

But for state-of-the-art planning, one of the most important aspects of business, they don't look outside! In the rare cases when they do look to outside help, they look to an accountant. An accountant is usually – an accountant – not a planner!

Unlike computer software, QTM planning starts by literally creating the final moment of success -- the project's completion. Then through modern linguistic technology, we recreate exactly what it took to get there.

Unlike software, it's more like soft sell to your management team and/or employees. Everyone is involved before we introduce our unique computer generated models -- the "blueprints" of how to "build" your project per plan, on time, and within budget.

*Real-time
ex-perience
is the only
real teacher
of oper-
ational
systems.*

• **STRATEGIC THINKING & PLANNING:**

This is the "Big Picture".

Here we determine the course of action - the strategy - for you to arrive where you want arrive in any given period of time. What do you want your company to BE? What is its position relative to others? Etc.

- OPERATIONAL Project Planning:

Operational Planning is the next step, the "nitty-gritty" of the process.

It's the "what do we want", "what do we need", "how will we get it", "who will be responsible", "how much will it cost", "how much time will it take" of the project.

We call this part the "glue" of the project. Without trained assistance and more importantly, an "outside" objective point of view, it is the part of planning that is most commonly treated lightly or just plain left out. When this process is completed, the project is completed in the mind's eye -- not just the final goal, but the process of the whole project. The only thing left to do is the work. And you know exactly where to start.

QTM Project Planning & Management features new information-gathering technology with several definite advantages:

- The project team comes together on a plan that is, by group consensus, realistic and attainable.
- Task responsibilities are assigned, accepted, and agreed to. Everyone is certain of their part.
- Everything is "on the table".
- The project plan is visualized and then presented in a clear, systematic form that everyone can understand and follow.
- The plan provides a framework for "if-then" scenarios to evaluate alternative courses of action.
- Quality information and information systems makes the job of management easier. Better management leads to more efficient projects which leads to more profit. In business, good planning results in more profit. "Failing to plan is planning to fail..."

Quality control systems and charts work best when used by the people doing the work.

There are three components to ongoing cooperation and team momentum:

A TYPICAL QTM INSTALLATION PROCESS:

1. Commitment to QTM program

- Determination of “flag ship” arena for QTM implementation
- Inventory of desired changes (generic)
- Establish performance criteria
- Development of specific staged QTM implementation program & proposal

2. Contract

- Develop/up date/restate company purpose/mission statement
- Company values inventory
- Assignment of “flagship” project or company department for QTM integration
- Announcement to company/department of commitment to QTM program

3. Company/department Introduction

- Introduction/enrollment of company/department key persons
- Company/department workshop(s) to introduce QTM

4. QTM department implementation

- Project/department process flowchart
- Assignment/development of project/department team & team leaders
- Team/team leader workshop(s)/training(s) - QTM process
- Development of project/department process flowchart(s)
- Development of project/process operational definitions
- Project/department Quality/Team attributes development
- Development of project/department process quality attributes
- Development of project/department team building requirements
- Team member values inventory
- Monitoring Systems

5. Ongoing QTM program

Real-time experience is the only real teacher of operational systems. The ongoing QTM program allows for the monitored tracking of the various project flow charts that are implemented as the program grows. This gives the assigned team leaders and project managers the opportunity to have expert advice to guide them while learning the systems. The ongoing program also creates the “frequency of interaction” that is necessary to obtain cooperation with the various people that will interface with the QTM systems.

- Monitor / update project(s) department(s) QTM process flow chart(s)

Process charts become antiquated and diminish in value if they are not used as current project tools. Periodical updating keeps the value of the plan alive and the project on track.

Ongoing educational program:

The Deming Management Method has as one of its foundations continual education of all people in the company. The more knowledge that is invested in a company's people, the better educated those people are and the better the company becomes.

On-the-job training is listed by Dr. Deming as one of the seven deadly diseases of business. A policy of on-the-job training creates a continual dilution of formal job requirements towards the last person's interpretations of that job.

Formal job training and formal job related education is the solution to the problem.

The QTM ongoing educational series arranges for and/or conducts the appropriate educational programs necessary to meet the needs of the organization.

QUALITY

Quality control systems and charts work best when used by the people doing the work. Therefore continuing education in the area of quality control is one of the subjects of ongoing education.

The quality educational series includes:

- The language of quality attributes - operational definitions
- Charting - Process, Fishbone, Control, Flow, Logic, and more
- Shewhart/Deming statistical quality control basic philosophy and history
- The importance of human values in the workplace and their measurement.

TEAM

Team/Teamwork. What is it? How is it defined? How can it be measured? How can it be created? What breaks it down?

In the teamwork portion of QTM ongoing education, we look at the components of cooperation, the integration of individual and group values, the study of synergy, and the dynamics of the element of fun in the workplace. People are introduced to many sources of formal team building exercises and measurement devices.

The QTM Values Inventory takes place in this series.

MANAGEMENT

“The Essence of Planning” teaches the components of planning:

- Milestone Events
- Activities
- Resource loading and leveling
- Timelines
- Responsibilities
- Project cash flow
- Management linguistics
- Flowcharting
- PERT charts
- Leadership

ONGOING TEAM BUILDING EXERCISES & ACTIVITIES

There are three components to ongoing cooperation and team momentum:

1. Brightness of the future - the vision or goal
2. Frequency of interaction - getting together as often as possible or appropriate
3. Realistic consequence - the not-so-bright consequence of failing to work well together

The ongoing team building exercises & activities satisfies the conditions for cooperation while providing the participants with a wealth of new instruments and information about team building and leadership.

BENEFITS

QUALITY

Quality programs increase market share, increase profit, and decrease costs while educating the worker and improving the quality of the work experience for all.

TEAM

Team building improves productivity and competitiveness while improving the quality of the work experience through healthy competition, acknowledgement, and fun.

MANAGEMENT

Improving the planning and management skills adds to the bottom line through efficiency. Thirty year studies reveal a 15 to 25% savings on all resources used by projects that are well planned and managed. Those resources are materials, money, time, and the various human energies used to complete any task.

QTM, QUALITY TEAM MANAGEMENT, IMPROVES THE QUALITY OF PEOPLE'S LIVES THROUGH THEIR WORK.





QUALITY TEAM MANAGEMENT

QUALITY PROGRAMS

A BRIEF INTRODUCTION TO STATISTICAL QUALITY CONTROL

The twin goals of increased productivity and virtually uniform delivery of product/service can be attained with today's technology and methodology

QTM defines Quality as "the absence of variation in any production process."

One axiom has been apparent from the beginning of man's efforts to make things. That axiom is: **NO TWO THINGS ARE ALIKE; THEY WILL ALWAYS VARY**. Any one who has ever tried to work with supposedly identical items will eventually come to this discovery.

Recognition of variation is not enough. Something must be done about variation if components are to work together properly. Exactly what can and should be done about variation is the question that the study of statistical quality control attempts to answer.

If the managers and employees of a company work together to implement the philosophy of operation outlined in the **QTM** quality systems, the twin goals of increased productivity and virtually uniform delivery of product/service can be attained with today's technology and methodology.

QTM quality systems were developed from a study of statistical quality control methods and procedures created by Walter Shewhart in the 1920's, and expanded and implemented by W. Edwards Deming in the second half of the 20th century. Dr. Deming is given credit for the founding business principles that vaulted Japan into international economic dominance in the last 20 years.

QTM defines Quality as "the absence of variation in production process." A state of virtually uniform product/service and/or service delivery can only be achieved through the careful study of the sources of variation in a process, and through action by management to reduce, or eliminate entirely, sources of extraneous or excessive variation.

Management's daily task must be to learn as much as possible about the sources of variation affecting the product/service, and then to take the necessary steps to reduce the variation. Unless this is done, the old method

of inspect and sort, rework and resort, will guarantee a lack of progress, low productivity, and an increasingly noncompetitive position.

The study of variation yields a basic discovery: WHILE EVERY PROCESS DISPLAYS VARIATION, SOME PROCESSES DISPLAY **CONTROLLED VARIATION**, AND OTHERS DISPLAY **UNCONTROLLED VARIATION**.

Controlled variation is characterized by stable and consistent patterns of variation over time. Dr. Deming called this form of variation Common Causes. Common Causes of variation in a production process are causes of variation that exist because of the production system or the way that system is managed. They arise out of the process, or out of the way the process is organized and operated. Because they are part of the system, they are the responsibility of those who control the system: the managers, and specifically, the top level of management. Common causes of variation can only be removed through action by management.

Uncontrolled variation is characterized by a pattern of variation that changes over time. Dr. Deming called this form of variation Special Causes. Special Causes of variation are causes that are localized in nature. They are not part of the overall system, and should be considered as abnormalities. Often they will be specific to a certain operator, a certain machine, or a certain batch of material.

There are two basic ways to improve the process of production.

When a process displays controlled variation (displaying common causes), it should be thought of as stable and consistent. The variation present in the process consists only of that which is inherent in the process itself. Therefore, to reduce the variation, the process itself must be changed.

There are two basic ways to improve the process of production.

As long as management has the conformance to specifications as its goal, it will be unable to reach that goal.

"Zero defects is not good enough."

When a process displays uncontrolled variation (displays special causes), it is changing from time to time. It is both inconsistent and unstable. This instability creates excessive variation that has nothing to do with the way the process was intended to operate. Therefore, the way to improve this process is by the identification and removal of the assignable causes.

Notice that these two approaches to process improvement are fundamentally different.

As philosophical guides for production, the engineering concept of variation and the Shewhart/Deming concept of variation have nothing in common. They have different objectives and different results. The engineering concept of variation has the object of meeting specifications. This naturally results in product/services that vary as much as possible, because anything within "specs" is considered "good enough." In contrast, the object of the Shewhart/Deming concept is process consistency, and this naturally results in product/services and services that are as consistent as possible. Therefore, it makes no sense to try to reconcile these two concepts of variation. Management must adopt one or the other as a guiding principle: conformance to specifications, or continuous process improvement. Dr. Deming states it this way, "It is good management to reduce the variation of any quality characteristic (say thickness, or measure of performance), whether this characteristic be in a state of control or not, and even when few or no defects are being produced. Zero defects is not good enough."

Management has been trying the engineering concept since the beginning of the industrial revolution. After almost 200 years, the goal has not been met. *The legacy of focusing solely upon conformance to specifications has been a lack of progress.* There is no reason to believe that it will be different in the future.

The Japanese experience has proven the effectiveness of continuous process improvement. Conformance to specifications has become no more than a benchmark on the path of continuous improvement.

As long as management has the conformance to specifications as its goal, it will be unable to reach that goal. If the actions of management signals that meeting specifications is satisfactory, the product/service will invariably fall short. Total conformance to specifications comes only by aiming at continuous process improvement. Thus, it is only when management supports, in both work and deed, the goal of continuous improvement, that it will begin to see increases in both quality and productivity.

CONTROL CHARTS

If continuous process improvement is the goal, how is progress to be measured? The production of 100% conforming product/service is one benchmark. Achieving a state of statistical control for the process is another. Neither of these achievements is permanent. Both are subject to reversal. Taken together, these process characteristics identify four possibilities that apply to every production process:

1. The Ideal State

A process in the ideal state is producing 100% conforming product/service and is in statistical control. The ideal state satisfies four conditions:

1. The process must be inherently stable over time.
2. The manufacturer must operate the process in a stable and consistent manner. The operating conditions cannot be selected or changed arbitrarily.
3. The process average must be set and maintained at the proper level.
4. The natural tolerance of the process must be less than the specified tolerance for the product/service.

If continuous process improvement is the goal, how is progress to be measured?

Process control charts are the means by which these changes can be measured.

The continued use of control charts will naturally result in continuing process improvement.

The only way that a producer can know that these four conditions apply to his/her process, and the only way that s/he can maintain these conditions day after day, is by the use of process control charts. Moreover, once a process is in the Ideal State, the continued use of control charts will naturally result in continuing process improvement. This will lead to ever more uniform product/service, which will yield lower costs and greater productivity.

2. The Threshold State

A process in the threshold state will be in statistical control, but it will be producing some nonconforming product/service. The traditional solution of 100% inspection is not satisfactory because it is always imperfect. As long as any nonconforming product/service is produced, some will always be delivered. Screening only reduces the amount of nonconforming product/service delivered. It cannot eliminate it entirely.

If nonconformity occurs because the producer is unable to set the process average properly, then a relatively simple procedure based upon the principles of statistical inference may be all that is needed. On the other hand, if the nonconformity occurs because the natural variation in the process exceeds the specified tolerance, the producer must either change the specifications or change the process variation. If the producer decides to try to reduce the process variation, s/he will have to remove some of the common causes of variation from the process. This means that s/he will have to modify the process itself.

Process control charts are the means by which these changes can be measured. They help the producer achieve a stable and consistent process, and help in moving the process from the Threshold State to the Ideal State.

3. The Brink of Chaos

Processes in the Brink of Chaos state are out of statistical control even though they are producing 100% conforming product/service.

Most people find this combination hard to imagine because they are accustomed to thinking that any process which makes 100% conforming product/service is okay. This state will not last indefinitely. The process is out of statistical control (you wouldn't know it unless you were using control charts). The problem with any process that is out of control is that it is subject to the effects of assignable causes. The producer will suddenly discover that s/he is in trouble, yet s/he will have no idea of how s/he got there, and no idea of how to get out.

The assignable causes "control" what the process will produce by determining when the process average or process dispersion will change. Thus, there is no way to predict what such a process will yield tomorrow, or next week, or even in the next hour. The change from 100% conforming product/service to some nonconforming product/service can come at any time, without the slightest warning. When this change occurs the process will be in the State of Chaos.

4. State of Chaos

The State of Chaos exists when a process is out of control and is producing nonconforming product/service. The lack of control means that the producer is confronted with a changing level of nonconformity in the product/service stream. A producer in this state knows that s/he has a problem, but usually does not know what to do to correct it. Moreover, efforts to correct the problem are ultimately frustrated by the random changes in the process. No matter what is tried, nothing works for long because the process is always changing. As a result, s/he finally despairs of ever operating the process rationally, and begins to speak in terms of "magic" and "art."

When this change occurs the process will be in the State of Chaos.

- and begins to speak in terms of "magic" and "art."

Any process operated without the benefit of process control charts is ultimately doomed to operate in the State of Chaos.

Entropy

All processes belong to one of these four states. Processes do not always remain in one state. It is possible for a process to move from one state to another. In fact there is a universal force acting on every process that will cause it to move in a certain direction. That force is entropy. Entropy continually acts upon all processes to cause deterioration and decay, wear and tear, breakdowns and failures.

Entropy is relentless. Every process will naturally and inevitably migrate toward the State of Chaos. The only way this migration can be overcome is by continually repairing the effects of entropy. This means that the effects for a given process must be known before they can be repaired.

On the other hand, it is very difficult to repair something when one is unaware of it. But if the effects of entropy are not repaired, it will come to dominate the process, and force it inexorably toward the State of Chaos.

Commitment to Quality Programs

A dual problem confronts every producer. The effects of entropy and the presence of assignable causes must be identified. For while entropy forces a process toward the State of Chaos, the presence of assignable causes creates a barrier to process improvement.

The only way a producer can ever meet the dual objectives of overcoming this barrier and counteracting the effects of entropy is by the use of process control charts. No other tool will consistently and reliably provide the necessary information in a clear and understandable form.

Therefore, any process operated without the benefit of process control charts is ultimately doomed to operate in the State of Chaos.

Many people are able to describe what a sample average represents, and some, if pressed, could even interpret a sample median. But this is usually the limit. People begin to get confused when asked to interpret a measure of dispersion, and for most, the combined use of averages and standard deviations to describe the behavior of data is nothing less than a mystery.

The study of probability theory is a discipline in its own right. It requires a solid background in mathematics, and can only be mastered with much study. While an understanding of probability theory is necessary for the development of statistical techniques, and is helpful in understanding how to apply the techniques in unusual situations, it is not a requirement for those who simply seek to use the techniques. For most of these individuals, an intuitive understanding of probability will usually suffice.

QTM quality process uses the simple foundational elements of statistical control in a synergistic concert with basic elements of project management and team building to render an effective, easy to learn and use system of advanced business management practices.

THE DEMING MANAGEMENT METHOD

INTRODUCTION TO THE DEMING QUALITY MANAGEMENT PROGRAM

Why is Western industry on the decline?

Why is Western industry on the decline? Why has the balance of trade of the United States of America deteriorated year by year for twenty years? The deficit in export of manufactured goods is worse than the overall figures indicate, as export of agricultural products has been on the increase. We have people; we have natural resources, experience. Why the decline?

The cause of the decline is that management have walked off the job of management, striving instead for dividends and goods performance of the price of the company's stock. A better way to serve stockholders would be to stay in business with constant improvement of quality of product and of service, thus to decrease costs, capture markets, provide jobs, and increase dividends.

Everyone doing his best is not the answer. Everyone is doing his best.

In the decade after the War [the Second World War], the rest of the world was devastated. North America was the only source of manufactured products that the rest of the world needed. Almost any system of management will do well in a seller's market. Success in business in North America was confused with ability to manage.

Management in America (not all) have moved into what I call retroactive management: focus on the end-product—look at reports on sales, inventory, quality in and quality out, the annual appraisal of people; start the statistical control of quality and QC-Circles for operations, unfortunately, detached from management's responsibility; apply management by the numbers, management by MBO. [Management By Objective], work standards. The follies of the systems of management that thrived in the expanding market that followed the War are now all too obvious. They must now be blasted out, new construction commenced. Patchwork will not suffice.

Everyone doing his best is not the answer. Everyone *is* doing his best. It is necessary that people understand the reason for the transformation that is necessary for survival. Moreover, there must be consistency of understanding and of effort. There is no substitute for knowledge.

A conjurer may pull a rabbit out of a hat, but he cannot pull quality out of a hat.

The biggest problem that most any company in the Western world faces is not its competitors, nor the Japanese. The biggest problems are self-inflicted, created right at home by management that are off course in the competitive world of today.

Recognition of the distinction between a stable system and an unstable one is vital for management. The responsibility for improvement of a stable system rests totally on the management. A stable system is one whose performance is predictable. It is reached by removal, one by one, of special causes of trouble, best detected by statistical signals.

Understanding of a stable system disclosed devastation of people wrought by the annual appraisal of performance, futility of management by the numbers, management by MBO. A numerical goal that lies beyond the bounds of capability of a system will not be reached except at the expense of some other activity in the company, thus in the end, raising total cost to the defeat of the company.

Teamwork in a company, except for putting out fires, is impossible under the existing annual appraisal of performance. Everybody, once the fire is conquered, goes back to his own life preserver, not to miss a raise in pay.

W. Edwards Deming

Washington D.C. / March, 10, 1986

THE DEMING MANAGEMENT METHOD

An Introduction to the Fourteen Points, the Seven Deadly Diseases, and Some Obstacles

“He that starts with statistical methods alone will not be here in three years.”

There are those in his audience, Dr. Deming realizes, who have come to learn solely about the statistical methods he taught during World War II and later to the Japanese. But, as he realized when those methods evaporated from American industry during the postwar period, statistical methods are not enough. As he so often says today, “He that starts with statistical methods alone will not be here in three years.”

As a statistician, Dr. Deming’s lifelong mission has been to seek sources of improvement. Given the failure of statistical methods to endure, he pondered what might have caused that failure and how to avoid it in the future. He gradually concluded that what was needed was a bedrock philosophy of management, with which statistical methods were consistent. He was ready with new principles to teach when the Japanese called him in 1950. And he continued to refine and enlarge upon them for the next three decades.

He has christened these “the Fourteen Points.” There were not, Dr. Deming says, always fourteen. When he first put them in writing twenty years ago, there were ten or fewer. In his work with Japanese companies, problems were absent that he would encounter only later in this country. It was not necessary to counsel the Japanese to ‘drive out fear,’ as in Point Nine, for example. Everyone was eager to work together for the recovery of the nation, and the employer was regarded not with suspicion but as a benefactor.

Employer and employee were “all one family,” as the relationship is often described. By the same token, his admonition in Point Twelve to “remove barriers to pride of workmanship” was not necessary in Japan. “If anybody had some ideas on improvement, there was nothing in the world to stop him. He had everybody on his side trying. It was not uphill work—batting your head against the wall to bring about improvement. There was no fear of improvement,” Dr. Deming remembers.

It was in America that he became aware of the tyranny of fear, of barriers, of quotas and sloganeering. Their existence was reflected in his Fourteen Points. A few years later came an extension—a “later awakening,” as he calls the “Seven Deadly Diseases.” Dr. Deming is continuously honing these principles. “I learn,” he says. “May not I learn?” For years, Point Seven was a mandate to “institute supervision.” He has decided of late that “leadership” is a better word.

The Deadly Diseases have recently been revamped—new ones have been added and others dropped into a lesser status into a new category, Obstacles.” The Points, Diseases, and Obstacles constitute a broad prescription for reform. Each company must work out its own adaptation, suitable to its corporate culture. It is never easy. But, Dr. Deming says, “what management can accomplish using the Fourteen Points “is so enormous compared to what you get otherwise.”

“what management can accomplish using the Fourteen Points “is so enormous compared to what you get otherwise.”

The Fourteen Points:

1. Create constancy of purpose for improvement of product and service. Dr. Deming suggests a radical new definition of a company's role. Rather than making money, it is to stay in business and provide jobs through innovation, research, constant improvement, and maintenance.

2. Adopt the new philosophy. Americans are too tolerant of poor workmanship and sullen service. We need a new religion in which mistakes and negativism are unacceptable.

3. Cease dependence on mass inspection. American firms typically inspect a product as it comes off the line or at major stages. Defective products are either thrown out or reworked; both are unnecessarily expensive. In effect, a company is paying workers to make defects and then to correct them. Quality comes not from inspection but from improvement of the process. With instructions, workers can be enlisted in this improvement.

4. End the practice of awarding business on price tag alone. Purchasing departments customarily operate on orders to seek the lowest-priced vendor. Frequently, this leads to supplies of low quality. Instead, they should seek the best quality and work to achieve it with a single supplier for any one item in a long-term relationship.

5. Improve constantly and forever the system of production and service. Improvement is not a one-time effort. Management is obligated to continually look for ways to reduce waste and improve quality.

6. Institute training. Too often, workers have learned their job from another worker who was never trained properly. They are forced to follow unintelligible instructions. They can't do their jobs because no one tells them how.

7. Institute leadership. The job of a supervisor is not to tell people what to do or to punish them but to lead. Leading consists of helping people do a better job and of learning by objective methods who is in need of individual help.

8. Drive out fear. Many employees are afraid to ask questions or to take a position, even when they do not understand what the job is or what is right or wrong. People will continue to do things the wrong way, or to not do them at all. The economic loss from fear is appalling. It is necessary for better quality and productivity that people feel secure.

9. Break down barriers between staff areas. Often staff areas—departments, units, whatever—are competing with each other or have goals that conflict. They do not work as a team so they can solve or foresee problems. Worse, one department's goals may cause trouble for another.

10. Eliminate slogans, exhortations, and targets for the work force. These never helped anybody do a good job. Let people put up their own slogans.

11. Eliminate numerical quotas. Quotas take account only of numbers, not quality or methods. They are usually a guarantee of inefficiency and high cost. A person, to hold a job, meets a quota at any cost, without regard to damage to the company.

12. Remove barriers to pride of workmanship. People are eager to do a good job and distressed when they can't. Too often, misguided supervisors, faulty equipment, and defective materials stand in their way. These barriers must be removed.

13. Institute a rigorous program of education and retraining. Both management and the work force will have to be educated in the new methods, including teamwork and statistical techniques.

14. Take action to accomplish the transformation. It will take a special top management team with a plan of action to carry out the quality mission. Workers can't do it on their own, nor can managers. A critical mass of people in the company must understand the Fourteen Points, the Seven Deadly Diseases, and the Obstacles.

THE SEVEN DEADLY DISEASES:

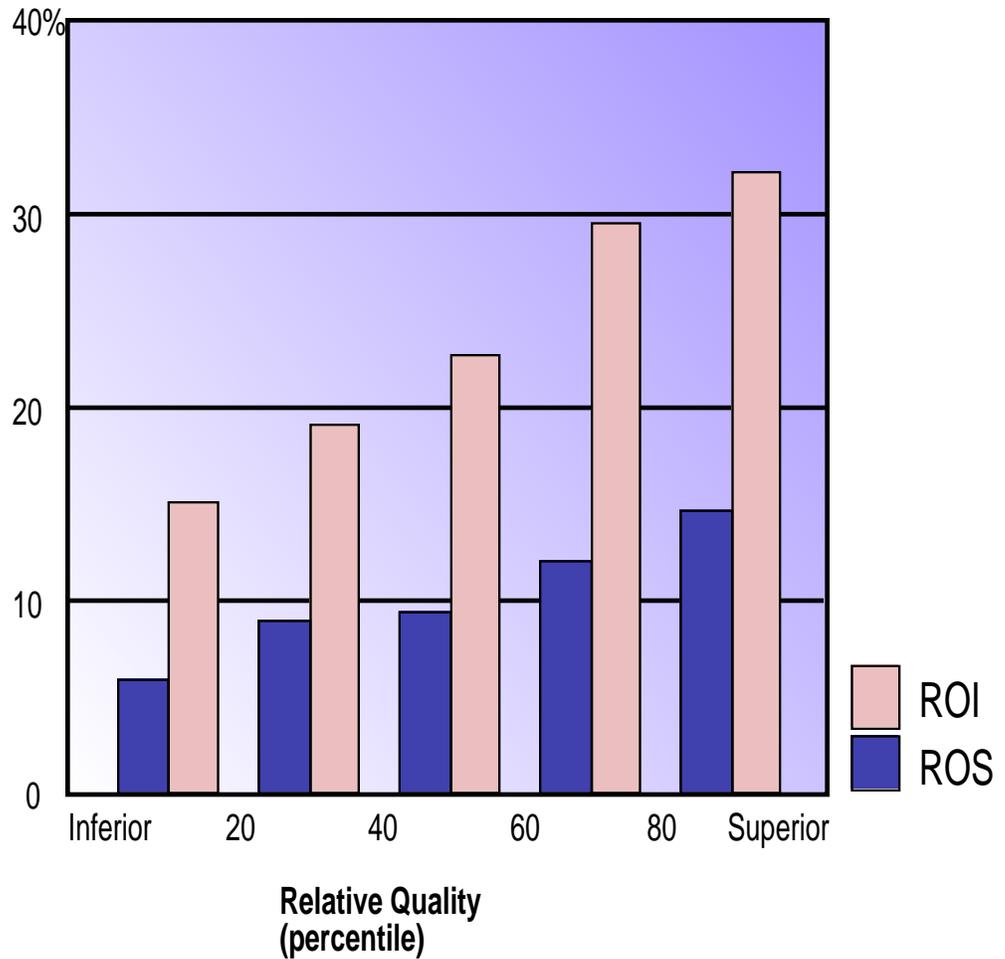
1. ***Lack of constancy of purpose.*** A company that is without constancy of purpose has no long-range plans for staying in business. Management is insecure, and so are employees.
2. ***Emphasis on short-term profits.*** Looking to increase the quarterly dividend undermines quality and productivity.
3. ***Evaluation by performance, merit rating, or annual review of performance.*** The effects of these are devastating—teamwork is destroyed, rivalry is nurtured. Performance ratings build fear, and leave people bitter, despondent, and beaten. They also encourage mobility of management.
4. ***Mobility of management.*** Job-hopping managers never understand the companies that they work for and are never there long enough to follow through on long-term changes that are necessary for quality and productivity.
5. ***Running a company on visible figures alone.*** The most important figures are unknown and unknowable—the multiplier effect of a happy customer, for example.

Diseases 6 and 7 are pertinent only to the United States:

6. ***Excessive medical costs.***
7. ***Excessive costs of warranty, fueled by lawyers that work on contingency fee.***

In addition to the Diseases, Dr. Deming identifies a lesser category of Obstacles that thwart productivity. These include: neglect of long-range planning; relying on technology to solve problems; seeking examples to follow rather than developing solutions; excuses such as “Our problems are different,” and others.

QUALITY = PROFITABILITY



Market share and profitability are driven more by quality and service (caring) than by price. As the Strategic Planning Institute of Cambridge, Massachusetts, points out:

Businesses with superior quality and service (perceived by the customer as being in the top quintal) average a ROI (Return on Investment) of thirty-two per cent and a ROS (Return on Sales) of thirteen per cent. Businesses deemed inferior in quality and service (bottom quintal) average a

ROI of twelve percent and a ROS of five percent.

Figure 2. Effect of relative quality on return on investment and return on sale (Source PIMs data base).

Note: The top quintal for quality and service has a ROI that is 2.7 times and a ROS that is 2.4 times greater than companies in the bottom quintal

Caring about quality and service is caring about bottom line profits.

FOUNDATION FOR MANAGEMENT OF QUALITY IN THE WESTERN WORLD

THE DEMING MANAGEMENT METHOD

BY MARY WALTON

Where are we? How are we doing? Let us think about the U.S., or about all North America, not just about our own selves, nor just about our company, nor about our own community. How is the U.S. doing in respect to balance of trade? The answer is that we are not doing well.

North America has contributed much to new knowledge and to applications of knowledge. The U.S., by efficient product and natural resources, beginning around 1920 and for decades, put manufactured products in the hands of millions of people the world over that could not otherwise have had them. Our quality was good enough to create appetite for our goods and services.

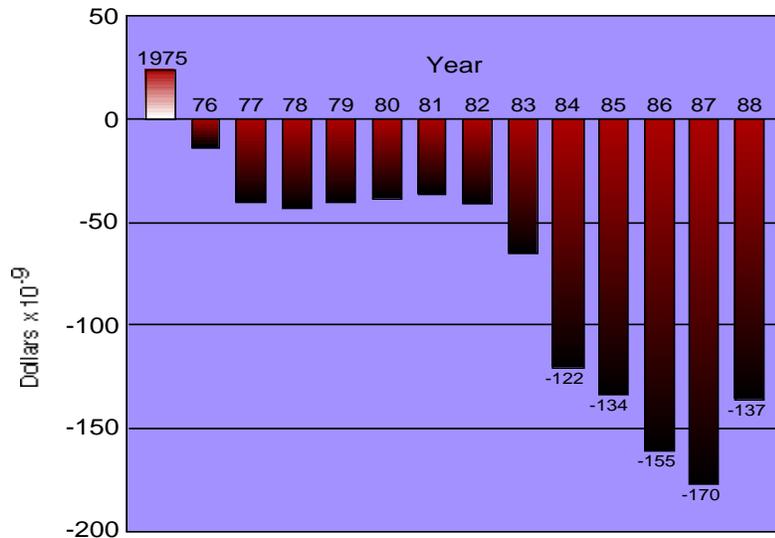
For a decade after World War II, North America was the only part of the world that could produce manufactured goods to full capacity. The rest of the industrial world lay in ruins from the War. They were our customers, willing buyers. Gold flowed into Fort Knox.

Everyone expected the good times to continue and to wax better and better. It is easy to manage a business in an expanding market, and to be hopeful. In contrast with expectations, we find, on looking back, that we have been on an economic decline for three decades. It is easy to date an earthquake, but not a decline.

What happened? It is hard to believe that anything is different now than in 1950. The change has been gradual, not visible week to week. We can only see the decline by looking back. A cat is unaware that dusk has settled upon the earth, but the cat in total darkness is as helpless as any of us.

Some industries are doing better than ever. There are more automobiles in the U.S. than ever before, and more travel by air. Do such figures mean decline or advance? An answer would have to take into account that in 1958 we had inter-city trains. There was a choice, air or train. Now, we have only limited train service, air or automobile; go by air or by automobile.

U.S. BALANCE OF TRADE (MERCHANDISE)



DEPARTMENT OF COMMERCE AND BUREAU OF THE CENSUS

There was, until a few years ago, a favorable balance of trade in agricultural products - wheat, cotton, soybeans, to name a few - but no longer. Imports of agricultural products have overtaken exports, and as someone in one of my seminars pointed out, if we could put illicit drugs into the accounting, our deficit in agricultural products would show up worse than the published figures.

One of our best exports, one that brings in dollars, is materials for war. We could greatly expand this income but for moral reasons. American aircraft have about 70% of the world market, and bring in huge amounts of dollars. Another big earner of dollars is scrap metal. We can't use it, so we sell it. Close on to it is scrap cardboard and paper. Timber brings in dollars. Timber is important, renewable. Equipment for construction is an important export, so I understand. American movies, a service, bring in dollars. Banking and other services were at one time important, but no longer. The biggest U.S. bank is today far down the list of biggest banks in the world. Banking is now important in America mostly for losses on bad loans. (As an aside, quality in banking might be improved.)

We ship out, for dollars, iron ore, partially refined, aluminum, nickel, copper, coal, all non-renewable. Scrap metal is non-renewable.

Have we been living on fat? We have been wasting our natural resources, and worse, as we shall see, destroying our people. We need them.

Our problem is quality. Around 1958, Japanese goods started to flow in. The price was good, and the quality was good, not like the shoddy quality that came from Japan before the War and just after; cheap, but worth the price. Preference for imported items - some at least - gradually climbed and became a threat to North American industry.

Were Americans caught napping? Are we still napping? Our problem is quality. Can't we make quality? Of course, and some American products are superior. We are thankful for them. Unfortunately, some good American products have little appeal beyond our borders, good paper clips, for example.

It will not suffice to have customers that are merely satisfied. A satisfied customer may switch. Why not? He might come out better for the switch.

What a company required to get ahead is loyal customers, the customer that comes back waits in line, and brings a friend with him.

What state of company is in the best position to improve quality? The answer is that a company that is doing well, future assured, is in excellent position to improve quality and service, thus to contribute to the economic condition itself and of all of us, and has the greatest obligation to improve. A monopoly is in the best position to improve year by year, and has the greatest obligation.

A look at some of the usual suggestions for quality. There is widespread interest in quality. Suppose that we were to conduct next Tuesday a national referendum:

Are you in favor of quality? (Be honest in your answer.) Yes ___ No ___

The results would show, I believe, an avalanche in favor of quality. Moreover, unfortunately, almost everybody has the answer on how to achieve it. Just read Letters to the Editor, speeches, books. It seems so simple. Here are some of the answers offered, all insufficient, some negative in results.

- Automation
- New Machinery
- Computers
- Gadgets

- Hard work
- Best efforts
- Make everybody accountable
- M.B.O., management by objective, management by the numbers, actually tampering.
- M.B.R., management by results
- Merit system (actually, destroyer of people)
- Incentive pay. Pay for performance.
- Work standards (quotas, time standards)
- They double the cost of production be they for manufacturing or for service (bank, telephone company).
- They rob people of pride of workmanship, the emphasis being on numbers, not on quality.
- They are a barrier to improvement.
- Just in time
- Zero defects
- Meet specifications
- Motivate people

Some remarks. The fallacies of all the suggestions listed above will be obvious from subsequent pages of the text. Every one of them ducks the responsibility of management. They require only skills, not knowledge about management.

If the reader could follow me around in my consultations, he would perceive that much automation and much new machinery is a source of poor quality and high cost, helping to put us out of business. Much of it, if it performs as intended, is built for twice the capacity that is needed. Some of it is poorly designed, such as: make > inspect > make inspect > make inspect > ..., where inspection may not be economically the best procedure. (See Ch. 15 in OUT OF THE CRISIS.)

Moreover, the apparatus for inspection usually gives more trouble than the apparatus for make.

Too often, the financial people in a company merely beat down costs on the thought that any cost is too high. Why do they write checks for machinery that violates good practice? They could make genuine contributions to our economy by learning the new philosophy and by joining in to help to accomplish the changes that must take place.

The biggest losses, as we shall see, are unknown and unknowable, not even under suspicion.

Just in time, along with low inventory, is good, of course. Unfortunately, efforts usually start at the wrong end. The place to start is with processes and movements of materials used. Once processes and movements are in statistical control, the plant manager will know how much of this and that he will need by 3 o'clock tomorrow. Quantity and quality will be predictable.

Zero defects, meet specifications, incoming and outgoing, are not good enough. Of course, we wish not to violate specifications, but to meet specifications is not enough. The pieces in an assembly must work together. Assemblies must work together. I may refer to page 476 in the book, OUT OF THE CRISIS.

Principle 3. Tests of components in stages of development can not provide (a) assurance that they will work together satisfactorily as a system in service; nor (b) the average run between failures of the system; nor (c) the type and cost of maintenance that will be required in service.

Knowledge about the Taguchi loss function is necessary for management. Which quality-characteristic is most critical? It is management's job to discover which quality-characteristic is most critical, conquer it, then to move on to the next one.

Wrong way. The President of a company put quality in the hands of his plant manager. The results in time became obvious and embarrassing. Quality went down, as was predictable. A plant manager can not possibly know what quality is, and even if he did, he could do nothing about it. He is helpless. He can only try to do his job, and to conform to specifications.

The President of a company wrote that: Our people in the plants are responsible for their own product and for its quality.

They are not. They can only try to do their jobs. Their product and its quality are the responsibility of the man that wrote the article, the President of the company.

The management of a company put this slogan in the hands of all employees:

"The operator is responsible for the quality of our products. The inspector shares this responsibility."

Again, the operator is not responsible for the quality of his product. Moreover, responsibility divided between operator and inspector assures mistakes and trouble. The management got rid of their responsibility by handing it over to people that are helpless to define and improve quality. Another example: a group of consultants in management advertised thus: Computerized quality information systems provide the vital link between high technology and effective decision making.

A company advertised that the future belongs

to him that invests in it, and went ahead and spent \$45,000,000 for new machinery. Most of it turned out to be a binge into high costs and low quality, but the management were obviously willing to invest in the future.

Why do the above suggestions fall short? A little ingredient that I call profound knowledge is missing from all the above suggestions. There is no substitute for knowledge. We shall soon come to suggestions for the missing ingredient, profound knowledge. Some of them (merit pay, for example) are even strongly negative. Hard work and best efforts will by themselves not produce quality nor a market.

Where is quality made? The answer is, in the top management. The quality of the output of a company can not be better than the quality directed at the top.

The people in the plants and in service organizations can only produce at best the design of product and service prescribed and designed by management.

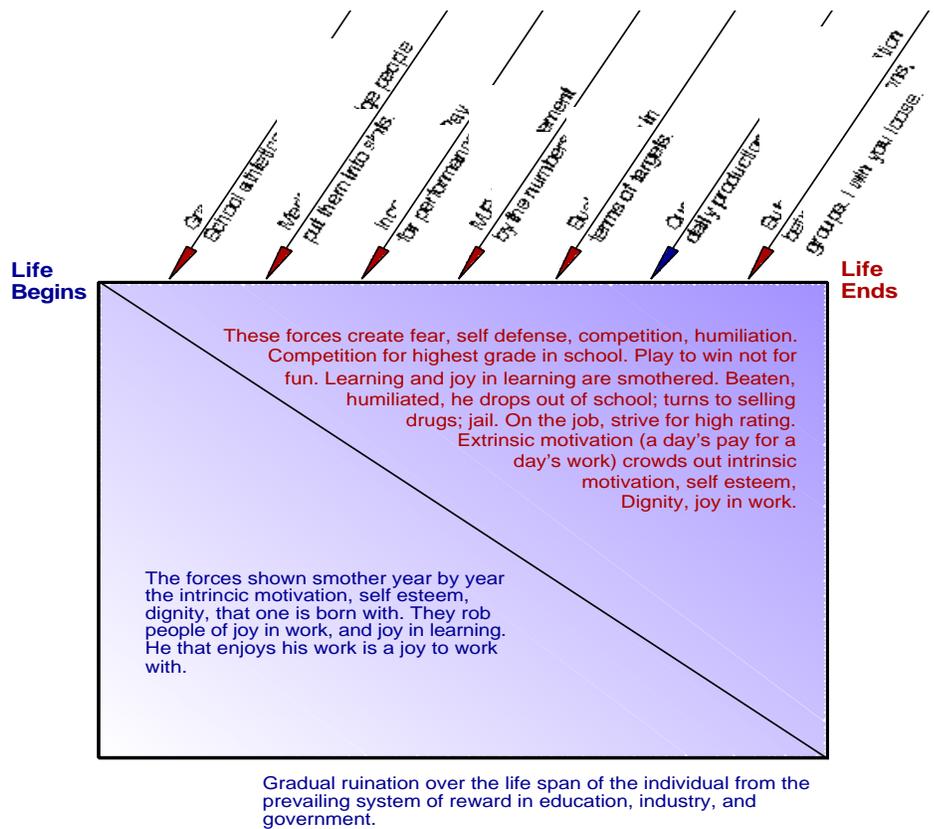
Job security and jobs are dependent on management's foresight to deliver product and service that will entice customers and build a market.

Profound knowledge. Hard work and best efforts, put forth without guidance of profound knowledge, may well be at the root of our ruination. There is no substitute for knowledge. What is profound knowledge? An attempt to supply some answers as of this date follow.

PROFOUND KNOWLEDGE

1. Knowledge for study of variation. Variation there will always be, between people, output in service and of product. What is the variation trying to tell us?

2. Knowledge of variation helps us to understand the losses from tampering. There are two mistakes.
 - (a) Treating a fault, complaint, mistake, accident, as if it came from a special cause when actually it came from common causes.
 - (b) The converse.
 3. Knowledge of procedures aimed at minimum economic loss from these two mistakes. (Shewhart control charts.)
 4. Knowledge about interaction of forces. Effect of the system on the performance of people. Dependence, inter-dependence between people, groups, divisions, companies, countries.
 5. Losses from demands that lie beyond the capability of the system (e.g., M.B.O.).
 6. Knowledge about loss functions, in particular the Taguchi loss function. Which quality-characteristic is most critical for management to work on?
 7. Knowledge about the production of chaos and loss that results from successive application of random forces that may individually be unimportant. Examples:
 - Worker training worker.
 - Executives working together on policy without guidance of profound knowledge.
 - Committees and government agencies working without guidance of profound knowledge.
 8. Losses from competition for share of market. Losses from barriers to trade.
 9. Some knowledge about the theory of extreme values.
 10. Some knowledge about the statistical theory of failure.
 11. Theory of knowledge:
 - a. Any plan, however simple, requires prediction.
 - b. There is no knowledge without theory.
 - c. There is no knowledge without prediction.
 - d. Experience teaches nothing unless studied with the aid of theory.
 - e. An example teaches nothing unless studied with the aid of theory.
 - f. Operational definitions: communication.
 - g. No number of examples establishes a theory.
 - h. There is no true value of anything.
 - i. There is no such thing as a fact. Any two people have different ideas about what to record about what happened.
 12. Knowledge of psychology. Intrinsic motivation (for innovation, for improvement, for joy in work, for joy in learning).
 Intrinsic motivation (humiliating, a day's pay for a day's work).
 Over justification: reward for an act or achievement that brought happiness to the doer, for the sheer pleasure of doing it. The result of reward is to throttle repetition. He will never do it again.
 13. People learn in different ways, and at different speeds.
 14. Necessity for transformation (government, industry, education) to leadership within the company; elimination of competition, ranking people, grades in school, and prizes for athletics in school.
 15. Knowledge about the psychology of change.
- Effects of present system of management.
- The accompanying diagram shows some of the present norms of management, and their effects. What they do is to squeeze out from an individual, over his life-time, his innate intrinsic



insic motivation, self-esteem, dignity, and build into him fear, self defense, extrinsic motivation. We have been destroying our people, from toddlers on through the university, and on the job.

Transformation is required in government, industry, education. Management is a stable state. Transformation is required to move out of the present state. The transformation required will be a change of state, metamorphosis, not mere patchwork on the present system of management. We must of course solve problems and stamp out fires as they occur, but these activities do not change the system.

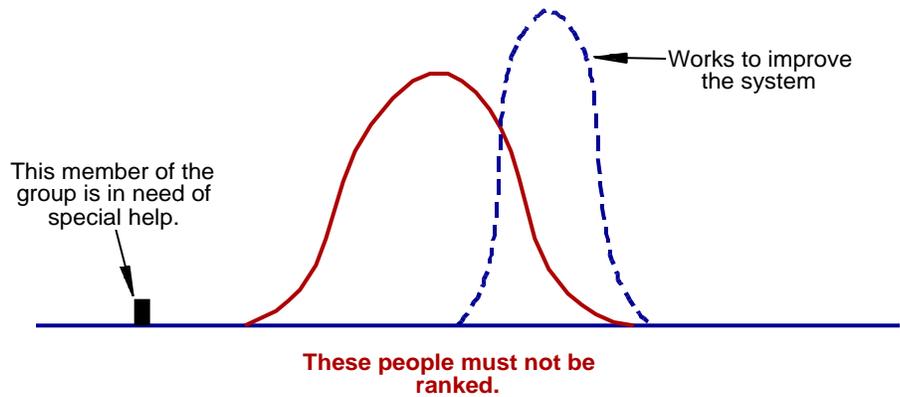
The transformation will take us into a new system of reward. We must restore the individual, and do so in the complexities of interaction with the rest of the world. The transformation will release the power of human resource contained in intrinsic motivation. In place of competition for high rating, high grades, to be No. 1, there will be cooperation on problems of common interest between people, divisions, companies, government,

countries. The result will in time be greater innovation, applied science, technology, expansion of market, greater service, greater material reward for everyone. There will be joy in work, joy in learning. Anyone that enjoys his work is a pleasure to work with. Everyone will win; no loser.

The diagram that follows portrays the effect on the individual from the prevailing system of reward. The transformation set forth in this paper will year by year build up the bottom and shrink the upper half.

The function of government will be to assist business, not to harass business.

These forces create fear, self-defense, competition, humiliation. Competition for highest grade in school. Play to win, not for fun. Learning and joy in learning are smothered. Beaten, humiliated, he drops out of school; turns to selling drugs; jail. On the job, strive for high rating. Extrinsic motivation (a day's pay for a day's work) crowds out intrinsic motivation, self-esteem, dignity, joy in work.



The forces shown smother year by year the intrinsic motivation, self-esteem, dignity, that one is born with. They rob people of joy in work, and joy in learning. He that enjoys his work is a joy to work with.

Gradual ruination over the life span of the individual from the prevailing system of reward in education, industry, and government.

Leadership. In place of judgment of people, rating them, putting them into slots (outstanding, excellent, on down to unsatisfactory), there will be leadership. The aim of leadership is to help people, to improve the service and profits of a company.

SOME ATTRIBUTES OF A LEADER

1. He understands how the work of his group fits into the aims of company. The purpose of this group is to support these aims.
2. He works in cooperation with preceding stages and with following stages toward optimization of the efforts of all stages.
3. He tries to create for everybody interest and challenge, and joy in work. He tries to optimize the education, skills, and abilities of everyone, and helps everyone to improve. Improvement and innovation are his aim.
4. He is coach and counsel, not a judge.
5. His source of power is:
 - A. Formal
 - B. Knowledge

C. Personality

A successful leader develops 2 and 3; does not rely on No. 1. He has nevertheless obligation to use No. 1, as this source of power enables him to change the system - equipment, material, methods - to reduce variation in output. (Dr. Robert Klekamp.)

6. He uses plots of points and statistical calculation with knowledge of variation, to try to understand the performance of himself and of his people. One aim is to try to learn how he himself can improve his leadership. Another aim is to learn who, if anybody, is outside the system. Simple rearrangement of the work might be the answer. Transfer to another job may require prudence and fact, as the man to be transferred may interpret this as one way to get rid of him.
7. He works to improve the system that he and his people work in.
8. He creates trust. Creates freedom and innovation. He is aware that creation of trust requires that he take a risk (Carlisle & Parker, BEYOND NEGOTIATION, Wiley 1989).
9. He does not expect perfection.
10. He listens and learns without passing judgment on him that he listens to.
11. He understands the benefits of cooperation and the ills of competition (Alfie Kohn, NO CONTEST, Houghton Mifflin, 1986).

The most important figures for management are unknowable.

It was Dr. Lloyd S. Nelson who years ago remarked that the most important figures for management are unknown and unknowable. We could add that figures for most important losses and gains are not even under suspicion.

Examples:

1. The merit system, putting people into slots, a lazy way out: actually, destroyer of people.
2. Failure to understand leadership.
3. Worker training worker.
4. Executives working with best efforts, trying to improve quality, the market, and profit, but working without guidance of profound knowledge.
5. Tampering
6. Failure to optimize efforts of people and divisions within the company, accepting, instead, suboptimization - everyone trying to maximize the profits of his own division - and consequent losses.
7. Failure of customers and suppliers to work together for ever greater and greater satisfaction of quality, lower costs, everybody wins.
8. Gains in quality and productivity throughout the rest of the company from improvement in one stage.

FAULTY PRACTICE

Reactive: skills only required, not theory of management. M.B.R. (management by results). Mind not required.

Management of outcome, too late; tampering; failure to distinguish between special causes and common causes. Immediate action on:

- Costs
- Complaints from customers
- Poor quality, in or out
- Accidents
- Emergency breakdowns
- Absenteeism

The so-called merit system - actually, destroyer of people.

Incentive pay for the individual. Pay based on performance. The incentive is numbers, not quality. Result: back-fire, loss.

PRR, problem report and resolution. Actually, this system of management by results is tampering, making things worse.

Work standards (quotas, time standards). They:

1. Double costs.
2. Rob people of pride of workmanship.
3. Are a barrier to improvement of a process.
4. Shut off any possibility to obtain data to use for improvement of output. This is so because the figures on production are forced.

(Do it, I don't care how you do it. Just do it.)

A company will of course have aims; likewise an individual will have aims. But the aim should be improvement of the system, not a number.

There are of course facts of life. Example: if we don't decrease faulty product by 5% by the end of the year, we shall not be here. This is not M.B.O.

BETTER PRACTICE

Theory of management required.

Work on the system to reduce failure at the source. Costs are not causes. Likewise for complaints from customers, poor quality, accidents, emergency breakdown, absence. Avoid tampering. Instead, distinguish by appropriate techniques between special causes and common causes.

Change the system of reward from rugged individualism - I win, you lose - to cooperation, everybody wins. Institute leadership.

Put all people on regular systems of pay. Provide leadership.

Study the system. Practice methods by which to minimize the net economic loss from the two mistakes:

1. Ascribe any fault, complaint, mistake, accident, to a special cause when in fact it came from common causes.
2. Provide leadership. Everyone is entitled to pride of workmanship. Wherever work standards have been replaced by competent leadership, quality and productivity have gone up, and people on the job are happier.

A better way is to improve the system to get better results in the future. One will only get what the system will deliver. Any attempt to beat the system will cause loss.

What should a school of business teach? The answer is, I believe, that a school of business ought to teach profound knowledge. A school of business has the obligation to prepare students for the future, not for the past. As constituted, most schools of business teach students how business is conducted, and how to perpetuate the present system of management. Most of the time that students spend in a school of business today is to learn skills. A school of business has an obligation to prepare students to lead the transformation that will help our balance of trade and our economy.



QUALITY TEAM MANAGEMENT

TEAM BUILDING

“TO HAVE AN OPPORTUNITY TO PRECIPITATE ALIGNMENT ON A TEAM THAT THEN IMPROVES RESULTS IS ONE OF THE NICER EXPERIENCES IN LIFE.”
— R. CRAFT

Team Building Introduction

Team members will use this understanding to work together toward greater team effectiveness and growth.

These qualities, though seemingly commonsensical, are hard to achieve and even more difficult to maintain.

Ever since the early 1950s, with the advent of the human relations movement, the concepts of *team* and *teamwork* have survived as one of the foundations of management. The concept of managing a *team* has transcended the human relations and human resource movements, systems thinking, participative management, employee involvement, quality of work life, and all the other theories and practices so popular at one time or another during the last thirty years.

Although the need for team development was identified some time ago, the concept of team building has changed throughout the years. Team building developed primarily out of research into the areas of group dynamics, social psychology, and laboratory training groups (T-groups) that were popular in the 1960s. These fields focused on social interaction and interpersonal relationships. As these theories and practices were applied to organizations, the focus slowly changed from concern for social interaction (process) to achieving specific results (task). Modern team-building efforts usually include concentration on both how team members relate and how work is completed. Thus, task and process receive equal attention.

Through the process of team building, a team will analyze and build a better understanding of the dynamics that exist among team members and the impact these dynamics have on task accomplishment. Team members will use this understanding to work together toward greater team effectiveness and growth.

Team effectiveness, however, can be an ambiguous concept as the parameters of what effectiveness is change with the task at hand and with the characteristics of individual team members. From an ideal perspective, an effective

team is one that is efficient, productive, and cohesive. Its work is consistently superior in terms of both quality and quantity. The team members are competent and knowledgeable in the way they carry out their duties. Problems and conflicts within the team are addressed quickly and professionally. The quality of decisions made by the team is high, and all members have a sense of satisfaction in the work they accomplish. The team is constantly learning and growing - adapting itself, as necessary, to changing requirements and multiple goals.

These qualities, though seemingly commonsensical, are hard to achieve and even more difficult to maintain. They run counter to many of our society's values and habits. "Teamwork is the quintessential contradiction of a society grounded in individual achievement." This basic dichotomy is one of the primary reasons that team building has received so much attention in recent years.

As many case histories attest, team building works. Among other things, it helps workgroup members to build upon their strengths and take better advantage of opportunities. It encourages members to strengthen their weaknesses and manage their problems together. In so doing, it promotes better understanding between individuals - a critical factor in the success of any organization.

The first step in team building is to formally engage in the process. It is with this operating philosophy and discipline that Team Technology has endeavored over the past decade to install the concept of "team work within businesses". All companies are unique, therefore installation of custom designed team programs are essential in order to maintain the distinct individual character of the company. However, the basic elements of teamwork never change.

Alignment of the team to the core values and direction of a company is a critical component of success and can make or break a project. Additional principles of teamwork that must be integrated into organizations to facilitate the optimal team platform include:

- Teams must be aligned to a common goal.
- Each team member's full participation is essential to the overall success of the project.
- Team members must be treated as family and actively supported throughout the project.
- Striving for excellence must be the operating standard.
- Commitment and loyalty to the team and project are mandatory.
- When the team wins so do each of the players.

Team Technology has developed many strategies for the integration and implementation of teamwork. We can assist your company in developing a custom team building strategy for the future.

Managing Momentum

Whether it's a football season or a factory's fiscal year, we all give a nod to the importance of momentum. "They lost their momentum after the turnover." "They're on a roll." Etc.

Other than acknowledging momentum's value, what do we do about it? Usually nothing. After all, momentum is one of those *soft* words - important, even critical, but squishy when you get up close.

Some people don't buy that cop-out, and I'm one of them. I think that most quality programs, for instance, fall far short of their potential principally because management neglects to *manage momentum*. Hence my "demand": that you (1) consider momentum to be a "hard" word, not a "soft" one; and (2) think "manage" whenever you think "momentum." In short, sustaining momentum is subject to the same discipline as annual budgeting.

Some get the point. Milliken & Co., the South Carolina-based textile maker and winner of the 1989 Malcolm Baldrige National Quality Award, does a lot right - but nothing better than managing momentum. For years, it has used local (factory, division) and corporate "sharing rallies" ("fabulous bragging sessions," as company president Tom Malone calls them) to sustain enthusiasm.

Domino's Pizza Distribution (the dough, topping and equipment provider to Domino's franchisees) has a year-round "Olympics" process, which likewise spotlights and nudges forward its quality program.

While he was at Paul Revere Life Insurance Cos., service quality guru Pat Townsend initiated a similar campaign, called Quality Has A Value. And at the stellar floor-cleaning, equipment maker, Tenant, the annual Zero Defects

1. Structured competitions and a blow-out celebration.
2. Variety.
3. Semispontaneous celebrations.
4. Small is much more important than big.
5. God (as always) is in the details.
6. Momentum quarterback.
7. Plan it!
8. Quality may be free, but momentum isn't.
9. Attitude, as usual, reveals all.
Momentum - the single most important missing link in most quality programs.

Day and the buildup thereto has played a leading role in maintaining momentum.

ALL FOUR FIRMS think that sustaining momentum is amenable to hard-nosed thought, meticulous planning and painstaking execution. Here are some common elements to those four programs and a host of others I've run across.

1. Structured competitions and a blow-out celebration. All of the best "momentum programs" feature a big-bang celebration - e.g., the finals of Domino's Olympics, and day-long celebrations for everyone at Tenant and Paul Revere. These annual galas dramatically spotlight progress. The goal is to "create lots of winners, no losers."
2. Variety. New team plans each year's big events at Tenant and Domino's, and it's a big deal to get the nod as manager of the affair. Competitions, goals, prizes and venue change each year.
3. Semispontaneous celebrations. The big, structured celebration is important. Informal, spur-of-the-moment recognition is even more vital. It must be spontaneous to be effective. But you must also make these "unplanned" events habitual. One star hotel manager, for example, religiously sends out at least 100 thank-you notes to employees every month; each act is spontaneous, but he disciplines himself to keep score.
4. Small is much more important than big. Momentum is the product of lots of small wins, not a few big ones. Rewards for big wins are easy. Ferreting out and then celebrating the little tries, successful or not, is tougher to do - but much more important.
5. God (as always) is in the details. Townsend initiated a program at Paul Revere to give a free cafeteria lunch to randomly selected employees - if they were wearing their

Quality Has Value pins the day their names were drawn. (Wearing the pins, he felt, was a sign of momentum.) Women were badly under-represented among the winners. Why? The pin, fine for men, would puncture a woman's silk blouse or dress. Pin redesign was the answer. Quality program momentum hinges at least as much on unearthing such "minor" problems as on statistical-process-control training.

6. Momentum quarterback. I'm all in favor of quality VPs. But the momentum program needs a powerful quarterback, too. This "soft stuff" - worrying about pin design - doesn't happen by accident. It needs an energetic, respected champion.
7. Plan it! If there is no written Momentum Plan (that's what I urge you to call it), then there won't be much momentum generated.
8. Quality may be free, but momentum isn't. Domino's program costs a small fortune - cash and time devoted to preliminary and final competitions. Be prepared to cough up some bucks if you're serious.
9. Attitude, as usual, reveals all. Roger Milliken, a quiet soul, gets a genuine kick out of his firm's sharing rallies. So do Don Vlcek at Domino's, Roger Hale at Tenant. If the top dogs won't participate regularly, and can't bring themselves to get enthusiastic about a little victory by a little team in a little operation far away from home, you've got a real problem.

Taken together, which they must be, these nine elements will move you a long way toward "hardening" momentum - the single most important missing link in most quality programs.

THE HUMAN SIDE OF JAPANESE ENTERPRISE
HIROSHI TANAKA
1988

*The
company
exists for the
benefit of
society*

ASICS - *Anima Sana In Corpore Sano* , 'a sound mind in a sound body' - was Kihachiro Onitsuka's dream for the youth of Japan; now it is his dream for mankind. Through his business endeavor, Onitsuka took the first step to actualize this dream nearly forty years ago. He was thirty years old, a survivor of the Pacific War. Three years with a newly formed company had exposed him to the widespread corruption of postwar Japan. If his country was to rise from the physical devastation, economic ruin, and spiritual deflation the war had inflicted, its young people needed hopes and dreams; they needed jobs. Onitsuka saw in the manufacture of sports shoes the opportunity to provide both.

He established his company with two employees, a desk and a telephone. It was one of a few hundred minute business establishments involved in the rubber footwear business in Kobe. Today, ASICS' (Tiger) products are known globally, and include, as well as footwear for most sports, a wide variety of sports equipment and apparel - over 200,000 items in all.

Onitsuka acted on his dream and actualized it. The backbone of his corporate success has been the consistent application of his corporate ideology that the company exists for the benefit of society - consumers, employees, shareholders, and all those affected by the corporation's existence. He formulated his ideas through his experience of personal hardship. ASICS' evolution is Kihachiro Onitsuka's life itself.

Onitsuka's Speech

Theories and Practices of Japanese Management

"I am honored to be speaking to you this evening on the topic of Japanese management.

Before I go into detail on my own methods used in ASICS, I would like to touch briefly on the background that has caused the Japanese style of management to become such a popular subject these days.

As you know, Japan had a very late start in its drive towards modernization, yet within a fairly short period of time it has emerged as one of the advanced industrial nations.

After defeat in World War II, Japan was able to arise from incomparable ruins to achieve a miraculous recovery. Through technological co-operation with the United States and Europe, together with a large, young labor force, Japanese industry sustained a period of high growth from 1950 to 1973.

Then, in 1973, the beginning of the oil crisis affected numerous countries, and Japan alone was able to regain her balance quickly enough to sustain favorable economic conditions.

This ability to adapt quickly to changing circumstances had led a number of people to wonder if it might be the style of management that is the cause and, if this is the case, these people feel that Japanese managerial methods should be examined more closely.

I believe that it is necessary to understand the fundamental differences between the structure of Japanese companies and that of American and European companies. These differences, I believe, lie in the history, philosophy and customs that make up the society in which companies mature.

Japanese companies in general are run on the theory that all the employees share a common bond, in a clan fashion. A term that describes this situation is *gemeinschaft*, or 'community'. The employees of a Japanese company are expected to share the company's

*Their
company is
a
worthwhile,
humanistic
place.*

We want to ensure that our company has the proper atmosphere conducive to our staff's well-being and productivity.

Workers and top management must have a deep sense of confidence in each other.

goals and share its profits and losses. The ties that bind an employee to the company are much deeper than simply a paycheck. Without signing a contract, a new employee is guaranteed employment until retirement, seniority-based wages and promotions, social welfare and other fringe benefits.

The company also instills in its employees the understanding that their new company is a worthwhile, humanistic place. Except in rare circumstances, an employee will not be fired, and so the new employees are better able to accept lower starting wages and strive to create an atmosphere conducive to productive work. Towards this end, white-collar and blue-collar workers work together in enterprise unions to promote 'coexistence and co-prosperity' within this familiar structure.

In contrast, American and European companies are run on the basis of turning a profit. The term for this is *gesellschaft* or 'corporation'. The importance of individualistic values necessitates the use of specific contracts to tie the employee to the company.

Under this *gesellschaft* system, workers are seen as commodities in the form of manpower rather than as human beings. Companies try to procure labor as cheaply as possible. On the other hand, the workers divide themselves up into lateral unions, depending on their specific craft or industry, and attempt to sell their skills for as much as possible. Here the emphasis is not on what company people work for, but rather what type of work they do.

This is just a simple explanation of some of the ways that Japanese companies differ from American and European ones. Both types have strengths and weaknesses, so it is not possible to judge which is superior.

Since entering the prolonged slow-growth period, the gaps between the various Japanese companies have become more pronounced. Many small and medium-sized enterprises are now facing bankruptcy because of the intensification of competition in the market-place. The Japanese companies that have been given high ratings, in general, have adopted the Japanese style of management as their basic framework and have added to it parts of American theories of expertise. By creating an innovative form of management, these companies have been able to retain the strengths of the purely Japanese style of management, supplemented by the American system's strengths. These companies have been able to adapt to and cope with the changing circumstances.

My company has been very fortunate in its successful development. At this point, I would like to take the opportunity to present my managerial methods to you.

I established Onitsuka Corporation, ASICS' forerunner, in 1949, and struggled bitterly for ten years before I was finally able to exhibit clearly the style of management that enabled our company to grow and prosper.

The purpose of our top management is to identify and explain to our employees our company goals, establish and maintain common bonds among all our employees, and make our company the central point for the attainment of our goals.

The goals that have been set for our management are as follows:

1. Rather than simply promoting sport, we want to become the type of manufacturer that can offer good-quality, low-priced, safe sporting goods that will be beneficial in raising outstanding citizens for our community.

We initiated a system that emphasizes human esteem

There must be absolutely no misrepresentation by the top management.

2. We want to ensure that our company has the proper atmosphere conducive to our staff's well-being and productivity. For this end there must be continual and close co-operation between our top management and staff - in other words a *gemeinschaft* approach - so that we can cope readily with the changes in society, continue to serve our community and in this way make an honest profit.

I would like to explain this point in more detail.

- (a) There are three factors, or strengths, that work together in a company: top management, employees and shareholders.

These strengths form the vertices of an equal-sided triangle, and cannot function in competition with each other. Workers and top management must have a deep sense of confidence in each other. The future of the workers is tied directly to the success of the company, and therefore it is imperative that the individual reflects the company goals and guidelines.

After ten years doing business, I voluntarily reduced my private holdings of company shares from 100 per cent to 30 per cent. Of that 70 per cent, 50 per cent was distributed to my employees at no cost, and the other 20 per cent was sold at a fair market value to my employees. This was done to ensure better co-operation with top management, because these stockholding employees would now be working both as laborers and as 'capitalists'.

- (b) In order to promote greater motivation among the workers, we initiated a system that emphasizes human esteem by promoting motivation and technical capabilities. To give credence to this idea, we did away with preferential treatment for blood relatives and university graduates, and instead instituted an open in-house education system of examinations that allows

motivated staff to advance through the ranks at an accelerated speed, depending on their initiative and ability.

- (c) In order to establish a fair system of profit distribution we introduced a bonus allotment program.
- (d) Top management and workers must work together to ensure that the lines of communication are kept open. To achieve this goal we have established a friendship club, which organizes social activities to bring workers and management together.
- (e) Through these various systems the workers are united with the top management in a community of common desires and concerns - reflecting the *gemeinschaft* system - and this, in turn, has led to more prosperous expansion.
- (f) Furthermore, we opened our company shares to our affiliated companies and kept them fully informed about corporate operations. While doing so, we also made clear the associated responsibilities and obligations attached to such a relationship. In this way we were able to protect our mutual dependence and form a co-operative system for 'coexistence and co-prosperity'.

Now, having explained the second goal of our management, namely ensuring close contact between staff and top management, I would like to turn to the third goal. This is to provide a good environment for the surrounding community by fighting pollution, raising morale, paying taxes, contributing to development of the community, and being able to coexist in a socially responsible manner.

I also set three rules for myself to obey so that my management theories could actually be put into practice.

The first rule is that there must be absolutely no misrepresentation by the top man-

You must have a code of ethics.

Think of others before yourself, and in this way you will accumulate virtue.

agement. We have set up a 'glass pane' approach where it is clearly seen that decisions are impartial, where achievements are announced within the company, and where we do not lie about the company's situation. Our staff must be aware of the true situation so that they will respond to our needs.

The second rule is that the top managerial staff must constantly practice direct, personal contact with their subordinates. By using a bottom-to-top approach to decision making, all managerial staff will feel that they are making a valuable contribution to the company, and will be able to understand the full weight of their responsibilities and the level of their authority. In other words, the top management must have strong networking skills.

The third rule is that there must not be any conflict between or any overlapping of business and personal matters. Since owners have absolute authority, they have a tendency to use company finances to pursue their own private interests. Also, they might hire an incompetent relative over someone who is much more capable.

If you follow the 'glass pane' approach to management it will be much simpler for managers to avoid abusing their power and pursuing their private interests. The employees will be more motivated because they can see readily that they will be rewarded for good work, and that bonuses and promotions are open to all on the basis of merit. In this way, we at ASICS have been able to correct some of the negative aspects of a seniority based wage and promotion system.

I would now like to summarize my ideas. We have established a *gemeinschaft* system where labor, shareholders and management form a perfect triangle. The introduction of employee shares gave our company a broader

perspective so that we came to think of ourselves as a public institution for the community's benefit, rather than simply as a family-type operation. Responsibility and authority have been passed down to lower management in order to encourage greater involvement, and our in-house education system rewards individuals who exhibit initiative and ability. Through this system of modified capitalism, we have been successful in increasing motivation and institutionalizing this innovative form of management.

I must also add that it is necessary for top management to undergo continual personal development to expand their horizons. The company's development depends on the quality of the time that the top personnel devote to the company.

Finally, I would like to raise five points that I have found to be relevant from the point of view of top-level management.

1. You must have a code of ethics. You must have good interpersonal skills, but beyond that you must be able to execute decisions promptly and decisively. This means that you must understand our obligations to society and not be tempted to confuse business and personal interests.
2. You must have foresight and highly creative powers. You must be able to look at the present situation and see beyond to what kind of developments will occur. A top-level manager should neither imitate nor fall behind others, nor should he expect others to do his dirty work.
3. You must have a sense of frontier spirit and determination. Winning means gaining the upper hand. In order to produce for the company you must have the type of personality that is hungry, willing to take risks and continually trying to open up new territory.

4. You must have the ability to handle leadership. This means being able to soothe hurt feelings, to convince your customers, staff and management that your decision is the correct one, and then to implement your decision. Constant communication allows your staff to feel confident in you, and in turn, trusted by you.
5. Think of others before yourself, and in this way you will accumulate virtue. Think first of your duty towards your community and fellow workers, and then think of yourself lastly. If you work to help others you will find that you are helping yourself at the same time. You should strive to become the type of person in whom others can put their faith.

As the president of ASICS, I deal daily with people who practice the foregoing philosophy. I hope that each member of our company has a full understanding of his role in its success, and that ASICS will become a very exciting place where we can use this sense of solidarity to work towards our own happiness as we serve our community.

I sincerely hope that some of what I have presented will be of some use to you. Thank you for your kind attention.

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Matsushita's Comments of Onitsuka's Management Philosophy

In 1979, Konosuke Matsushita founded the Matsushita School of Government and Management to prepare top university graduates to become the business and government personnel who will lead Japan into the twenty-first century. The major components of the five-year program are: fundamental philosophical inquiry, moral education, development of an international perspective, and practical training. The program includes field case

studies at Japanese corporations whose prosperity is rooted in a solid corporate philosophy. ASICS is one such corporation, Kenji Yoshida, a graduate of Osaka University who enrolled as a Matsushita student in the first year the school opened, spent some time at ASICS in 1983. Later, he and Konosuke Matsushita discussed Onitsuka's management style.

Matsushita observed that the main reason why ASICS has grown to its present status is that, from the outset, Onitsuka has never considered that his company belongs exclusively to himself. He has always managed the company as a public institution. Matsushita, too, has always considered his business to be a public, not a private, matter:

Because I started my business with just my wife and my wife's brother, I understand how easy it is for the manager/owner of a small company to think that the company is his to do with as he pleases. There is a tendency to think only about one's own income. Employees, customers, business associates all become secondary. This is one of the pitfalls of managing a small or middle-sized business.

In order to demonstrate to his employees that the company did not belong solely to its owner, after his company numbered ten employees, Matsushita set up an accounting system showing how much money was to be used by himself, and how much was to remain with the company. Sales, company expenditures and profits were clearly delineated and the books opened to the employees. The employees were skeptical. At that time, shortly before the outbreak of World War II, most small business owners did not have a clear idea of company earnings and they would customarily take whatever they needed for their own use from company funds. Clear

records were seldom kept and employees remained in the dark about company finances.

With Matsushita's system, company earnings and expenditure were reported monthly. This made employees aware of the way in which their work related to corporate income and fostered a growing eagerness on their part to do their best for the company.

Matsushita believes that:

Distinguishing between private and public is the foundation of any business. Whether you employ only yourself or tens of thousands of people, so long as you are making use of societal resources in the form of people, material and money, then you are engaged in a public, not a private, task. As long as a corporation exists in harmony with society it will grow and develop. If it doesn't it will recede. This is true regardless of the size of the corporation.

Matsushita finds many similarities between Onitsuka's management style and his own. In each corporation, management, employees and affiliated firms are *unmei kyodotai*, that is, they are interdependent entities with a common fate. Matsushita emphasizes that this term does not refer to attributes such as friendliness and harmony. Rather, it refers to 'the integration of the mission of the corporation as a public tool, and the mission of the employees to carry out their assigned tasks. In other words, the synthesis of each employee's commitment to fulfilling his mission leads to fulfillment of the corporate mission.'

Matsushita stresses that, in order to achieve *unmei kyodotai*, the manager must not be preoccupied with his own immediate benefit. Instead, he must identify and clarify the corporate mission. Likewise, employees must understand, comply with, and respect

the corporate mission and work together with management to actualize it. If there is to be trust and confidence between employees and management, it must be reflected in actions. This is how Onitsuka has always run his corporation.

"The Long Road is the Short Road"

Phase 7:
New and final proforma established and ongoing project justification.

Phase 6:
Project completion, over-budget and late delivery of product. Dissatisfied client.

Phase 5:
Overtime, mad-scrambling, and the writing of checks becomes the order of the day.

Phase 4:
Acknowledgement of improper planning. Management begins selection of recovery path.

- Lack of Quality
- Financial Loss
- Overtime
- Cost Overruns
- Penalties
- Lost Credibility
- Lack of Confidence
- No Certainty of Completion

Phase 3:
Looking for solutions, fingerpointing and laying blame begins.

Phase 2:
Project reality sets in. Questions begin to surface.

Phase 1:
Enthusiasm runs the project. There seems to be no apparent problems.

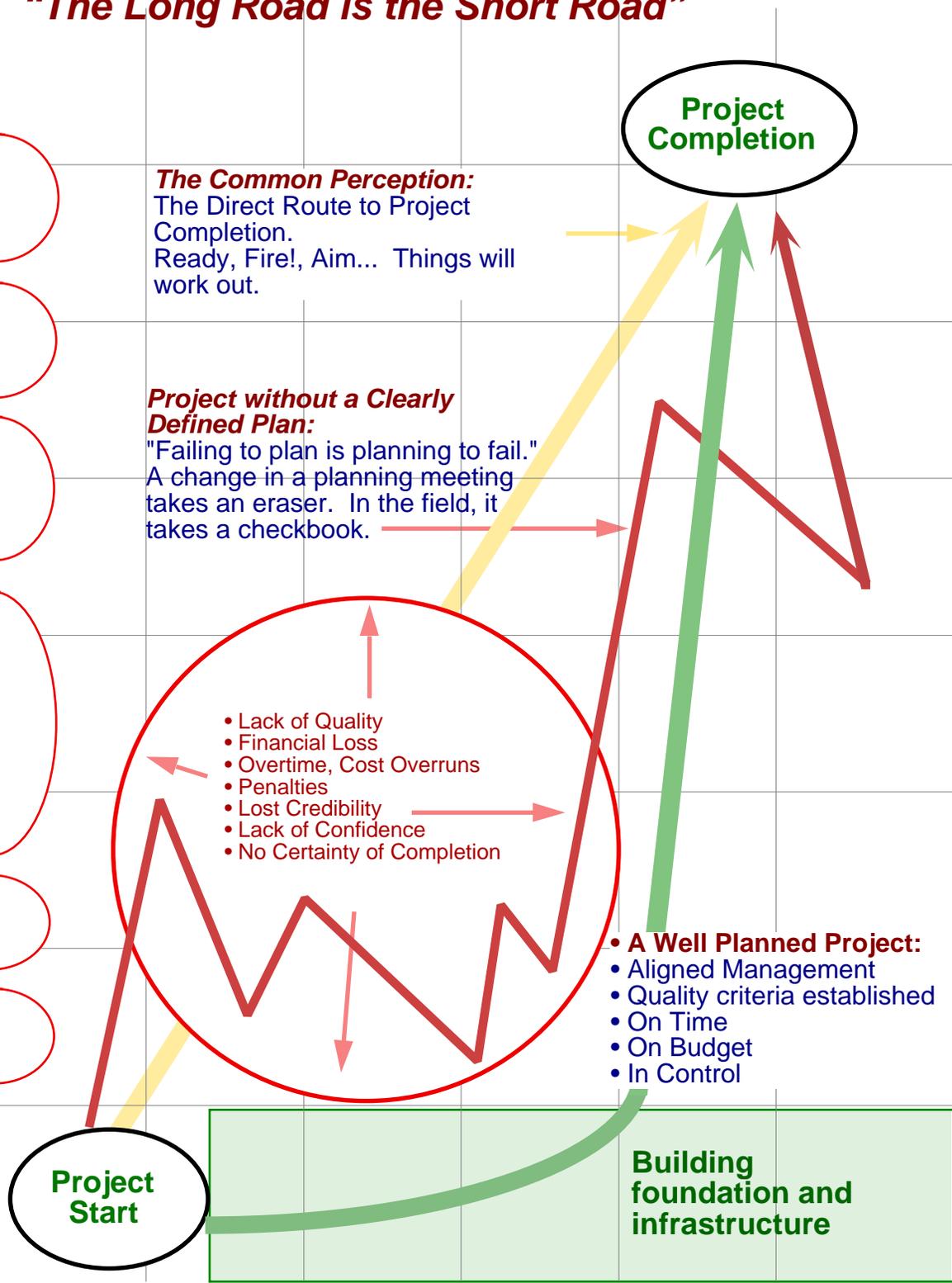
The seven steps of a project cycle without a clearly defined plan:

The Common Perception:
The Direct Route to Project Completion.
Ready, Fire!, Aim... Things will work out.

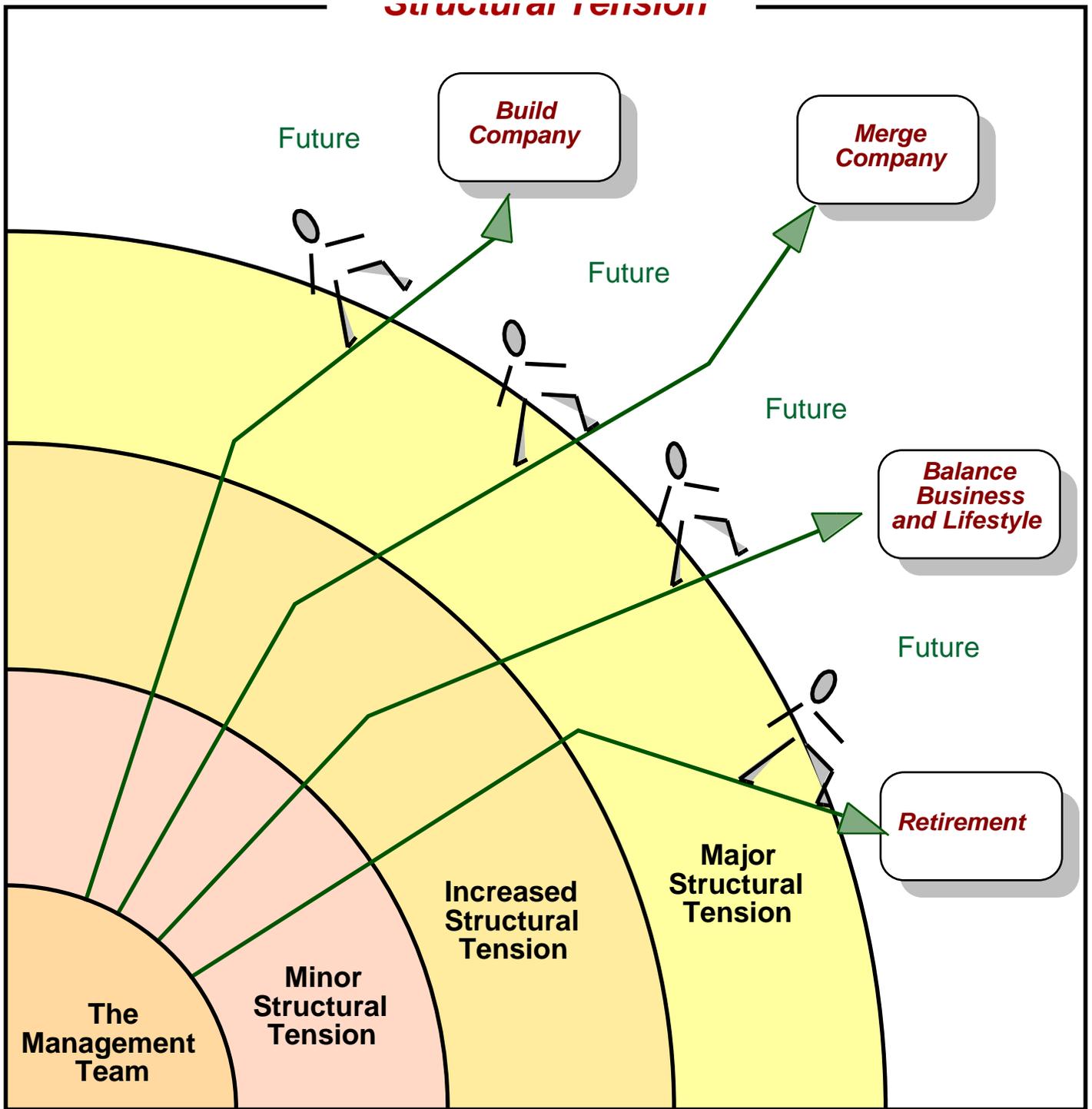
Project without a Clearly Defined Plan:
"Failing to plan is planning to fail."
A change in a planning meeting takes an eraser. In the field, it takes a checkbook.

- Lack of Quality
- Financial Loss
- Overtime, Cost Overruns
- Penalties
- Lost Credibility
- Lack of Confidence
- No Certainty of Completion

- **A Well Planned Project:**
- Aligned Management
- Quality criteria established
- On Time
- On Budget
- In Control



Structural Tension



In the beginning of projects, excitement & enthusiasm join vague completion descriptions. True differences in individual goals are not perceivable at this time.

As clarity of differing goals becomes visible and communicated through work and the passing of time, structural tension increases.

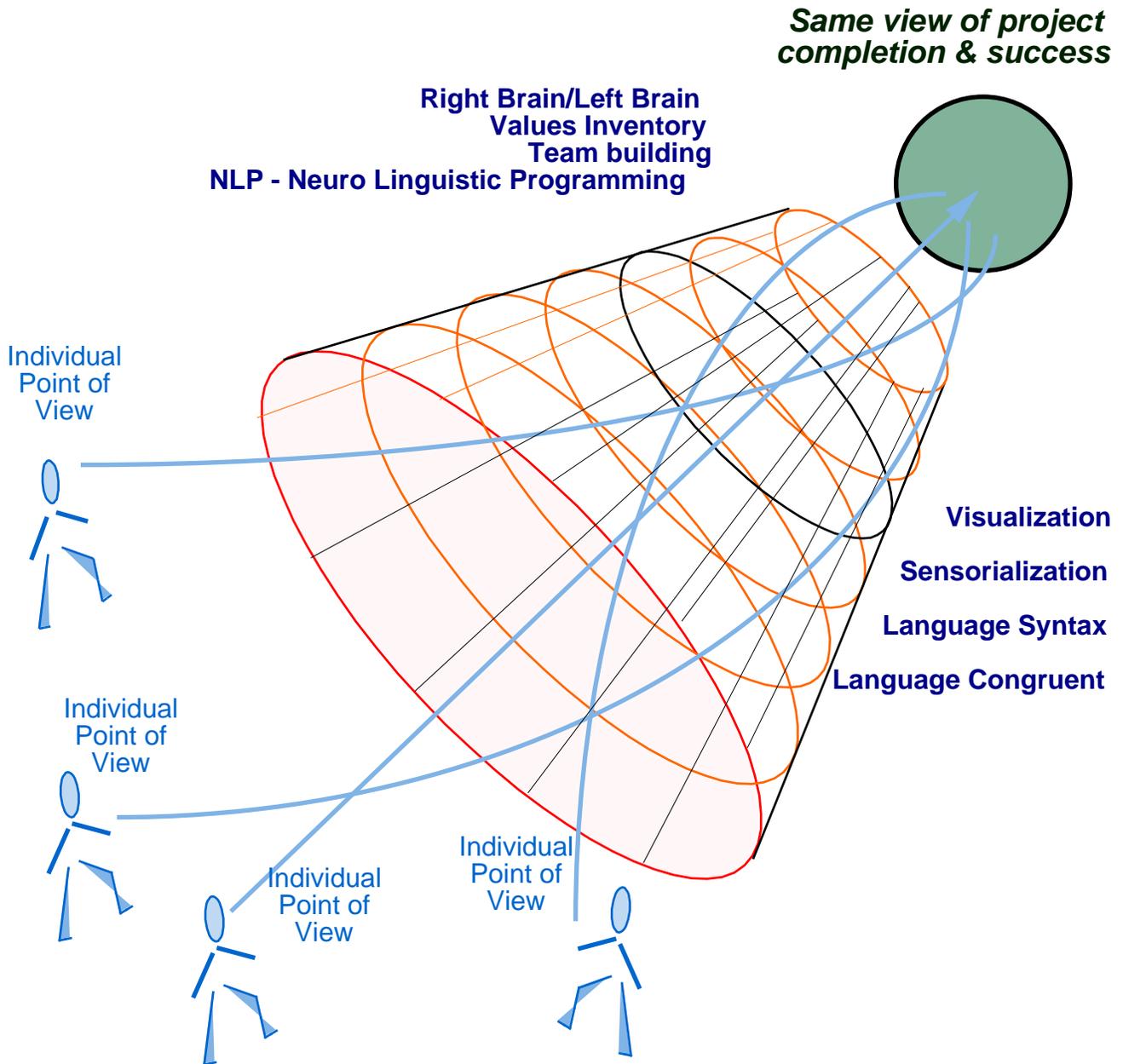
As differing goals are pursued, differences in individual goals are now apparent. Team concept and spirit drops rapidly. People stop caring.

QTM Quality Team Management

(Chart used in QTM workshops to explain the loss of project momentum due to non-alignment in the planning stages)

The Winning Moment

Focusing individual perceptions towards a common goal utilizing communication technology



(Chart used in QTM workshops to explain the tools and technology used to create project alignment and team building)



QUALITY TEAM MANAGEMENT

PLANNING & MANAGEMENT

STRATEGIC ALIGNMENT & PLANNING

Successful completion of a goal or project is predicated on clarity, intention, integrity, resources, alignment of the team and a game plan which clearly defines the strategy for completion.

We work closely with your project team to facilitate alignment of the players to the stated goal. We create, as a group, a project logic diagram that all members agree to. Resource and budget considerations are applied to the formula and all information is entered into a network-based management diagram. The team then reviews and critiques various project analyses. *The project only begins when the final edit is complete and all vendors, sub-contractors, consultants, managers, workers, and other players who can effect the successful completion of the project sign off and commit to their responsibilities.*

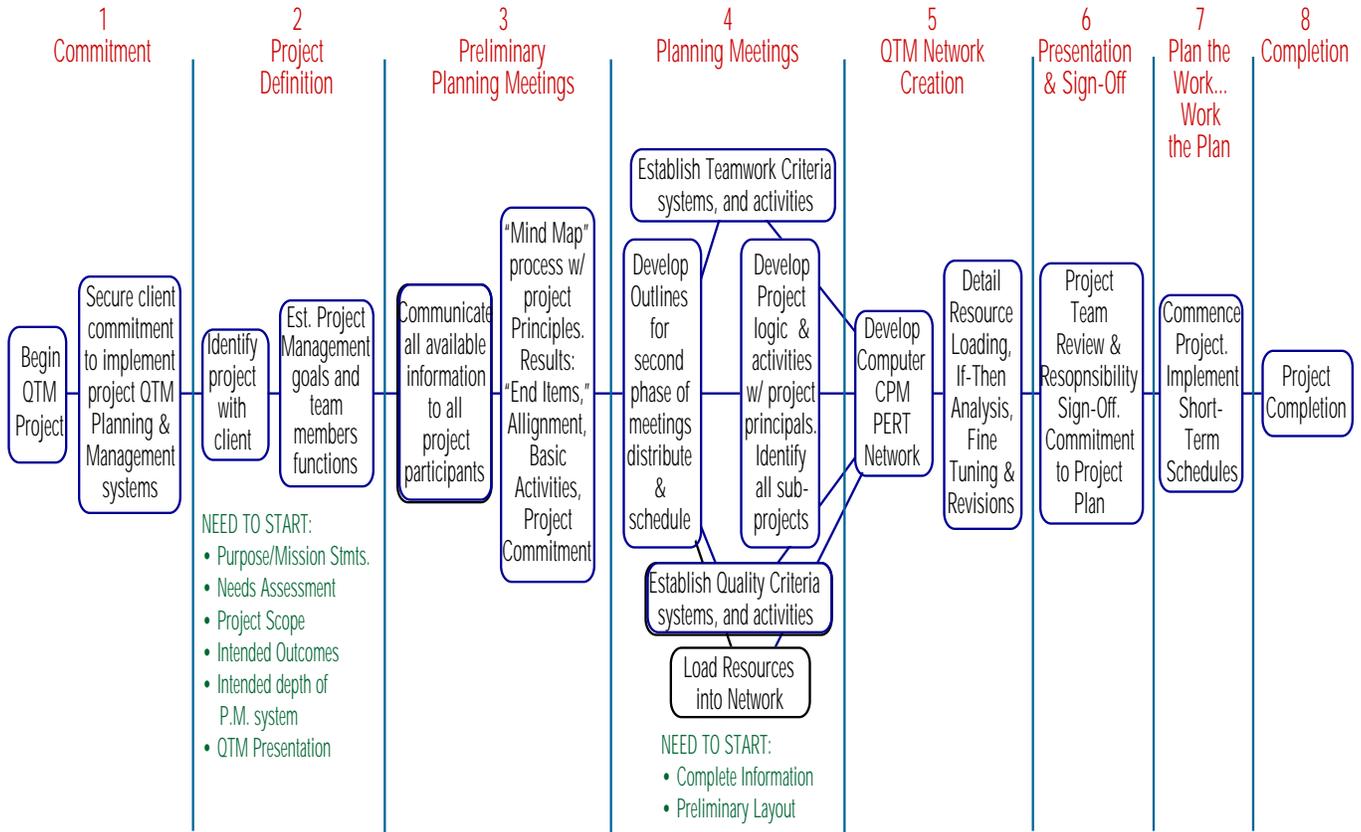
Results are the name of the game...therefore careful monitoring and updating of schedules is essential. The project manager must be relentless in the pursuit of accurate information and changes in field conditions. The project analysis software reports enhance your ability to react and modify schedules and are one of the keys to completing projects on time and on budget.

People conceptualize, plan, initiate and complete projects. People are the critical resource and must be treated with the utmost respect. Celebrations and acknowledgment events are therefore built into the budget and play a major role in successful project completion. Total teamwork and commitment determines the level of excellence by which a project will be judged now and in the future.

PACIFIC PLANNING INSTITUTE is prepared for excellence. We offer that availability to you and your team.

“The journey is the reward.”

Team Technology QTM QualPERT® Network



QUALITY EVALUATION
 Team Commitment
 Quality Commitment
 Planning/Mgt. Commitment
 # Meetings
 # Contract Revisions
 Redundant Work

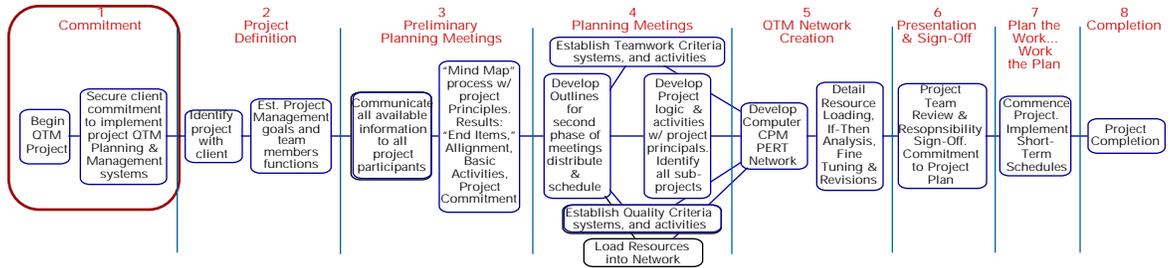
QUALITY EVALUATION
 Client Acceptance
 # Meetings
 # Changes
 Redundant Work

QUALITY EVALUATION
 Timely & attended meetings
 Prepared Team members
 Complete Information
 # Meetings
 Redundant Work

QUALITY EVALUATION
 One-Time Sign-Off
 Prompt Payment
 # Meetings
 # Changes
 Redundant Work

QUALITY EVALUATION
 On Time
 Within Budget
 Prompt Payments
 # Changes
 Redundant Work

The QTM Project Process

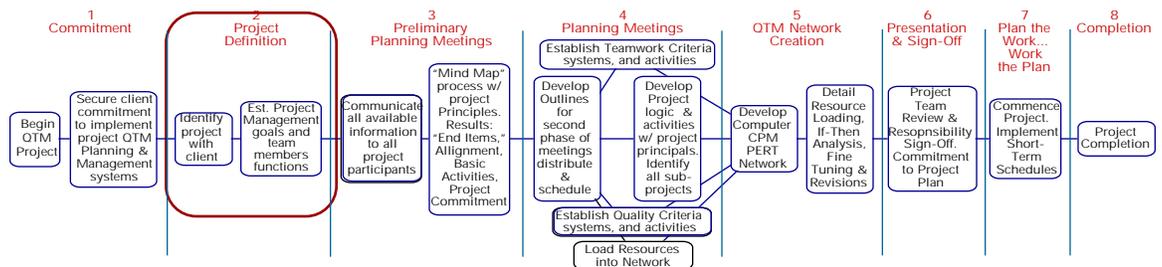


1. GAIN COMMITMENT FROM MANAGEMENT

Prior to a **QTM** Planning & Management installation, management commits the essential resources for the implementation of the process. These resources typically include:

1. Commitment to the program from top management.
2. The time to compile the required information.
3. Appropriate authority to manage effectively.

Commitment to these efforts will insure a fully functioning project management system. This system will consistently deliver a 10 - 20% savings in all project expenditures while creating client confidence.



2. IDENTIFY / ASSIGN

• IDENTIFY PROJECT

After identifying a project, the first step is to clarify project scope and intended results. Identifying the intended results in measurable terms creates:

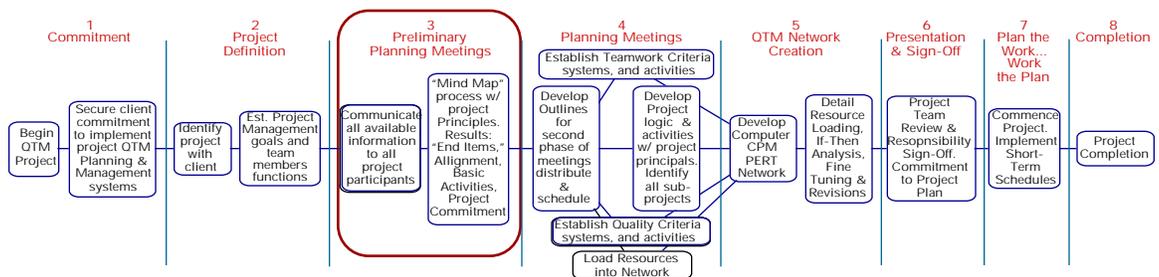
1. Criteria upon which the success of a project can be measured
2. Definitive goals
3. A project framework from which the basic resource requirements can be determined

- **ESTABLISH PROJECT MANAGEMENT CRITERIA AND GOALS/ ASSIGN PROJECT TEAM**

A project management system tracks all resources, schedules, budgets, and more. Not all projects require the complete and detailed tracking that is available. Project management criteria sets the prerequisites for design of the management system and the selection of people required to achieve the stated project management goals.

Whether the management team consists of 1 or 100, it is important to establish strong teams with defined responsibilities and authorities. In order to achieve maximum results, the goals and values of the individual team members must be consistent with the overall goals and values of the project.

3. COMMUNICATION OF MEETING REQUIREMENTS FOR PROJECT PERSONNEL



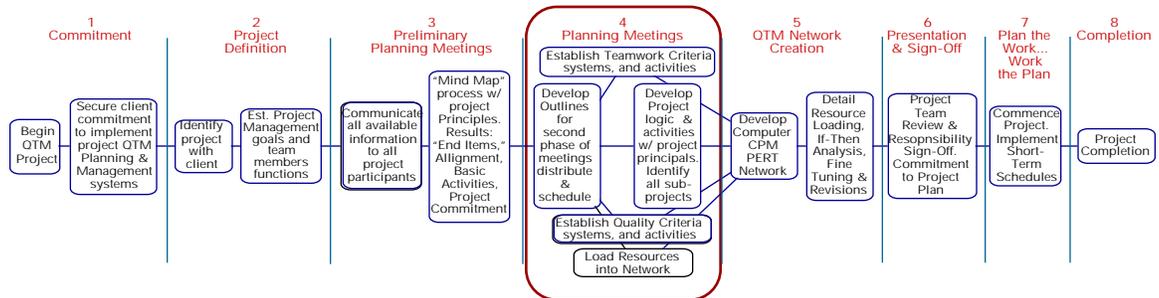
It is critical for the various project leaders to acquire accurate information regarding each component of the project. This information is assembled and distributed to all project participants before the planning meetings begin.

Planning meeting #1

Development of "Mind Map" - establishment of project "End Items."

The purpose of this session is to identify and critique all the major components of the project and identify the resources required. As a team we will identify the "milestone events" and discuss the critical components of the project and their potential impact. It is through this skillfully guided process that each team member has the opportunity to begin interacting with other members. Properly facilitated, this process leaves each project management team member with a common "view" of the entire project as well as securing a preliminary level of alignment to the project's completion.

4. DETAIL

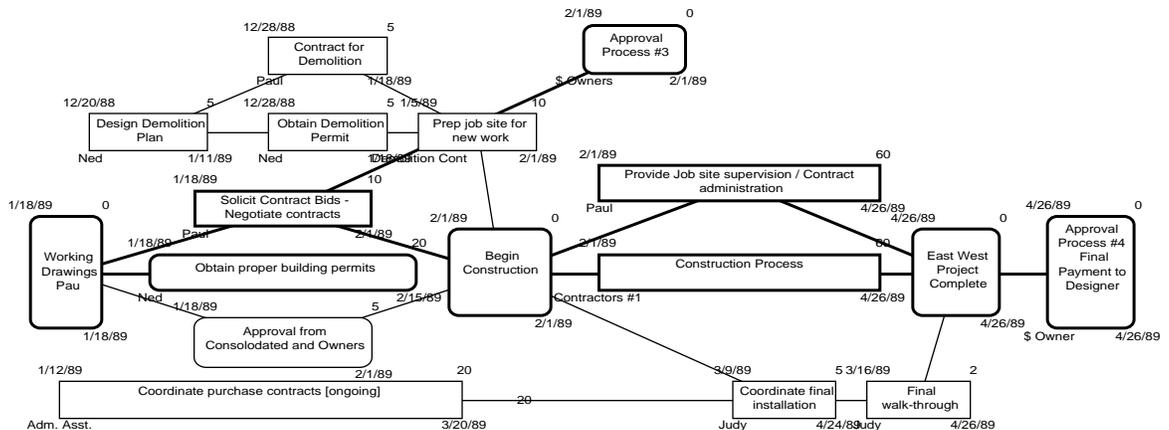


• DEVELOPMENT OF PROJECT OUTLINE

The information gathered in the Mind Map planning meeting[s] is placed in a computer "idea pro-cessor" program to generate outlines, charts, and presentation materials. This information is distributed to all project team members for their critique, commentary, and preparation for the next set of meetings.

• DEVELOPMENT OF PROJECT LOGIC DIAGRAM

In modern project planning and management, milestone events are represented on a presentation board in a graphic manner and linked together according to the interdependencies that one task or event might have on another. A "road map" of the project is created that graphically displays the project's logical flow from one task or group of tasks to another. The result is a diagram similar to a set of blueprints that a building contractor uses to build a structure. Blueprints show a contractor what materials and resources to use and their relationship to each other. QTM logic charts tell a manager about activities, events - and much more.



• **RESOURCE LOADING**

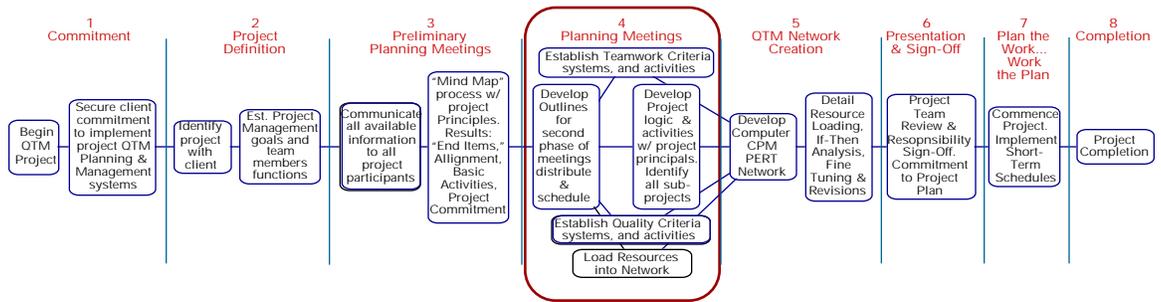
At the same time that the logic chart is being created, “Resource Loading” information is being gathered. Resources are the time, materials, money, people, machinery, etc. that a project requires. In the “End Items - Milestone Event” and logic meetings, the primary discussions are about the intended results of the project. Resource loading asks “What needs to be done?”, “Who will do it?”, “How long will it take?”, “How much will it cost?”, “Is there a deadline?”. Contingency planning involves “What will we do if we have problems with this event?” discussions. In a skillfully-led resource loading meeting, all participants “see” the project unfold in their mind’s eye and “discover” details that are left out in normal circumstances.

RESOURCE COST ENTRY FORM

Resource Name	Cost/Day	# Available	Calendar Name	Accrual Method
Architect	0.00	1.00	Project Calendar	Multiple
Berghell Associates	0.00	1.00	Project Calendar	Multiple
Civil Engineer	0.00	1.00	Project Calendar	Multiple
Electrical Engineer	0.00	1.00	Project Calendar	Multiple
General Contractor	0.00	1.00	Project Calendar	Multiple
Mechanical Engineer	0.00	1.00	Project Calendar	Multiple
Structural Engineer	0.00	1.00	Project Calendar	Multiple
Utility Companies	0.00	1.00	Project Calendar	Multiple

TASK COST ENTRY FORM

Name	Fixed Cost	Fixed Income
Begin Project	0.00	0.00
Preliminary Architectural & Struct	0.00	0.00
Electrical Working Drawings	0.00	0.00
Mechanical Working Drawings	0.00	0.00
Plumbing Working Drawings	0.00	0.00
Architectural Working Drawings	0.00	0.00
Preliminary Civil Drawings	0.00	0.00
Preliminary Utility Drawings	0.00	0.00
Structural Steel Working Drawings	0.00	0.00
Civil Working Drawings	0.00	0.00
Utilities Working Drawings	0.00	0.00
Civil & Utilities Plan Check	0.00	0.00
Complete Structural Working Draw	0.00	0.00
Receive Structural Steel Bids	0.00	0.00
Review Steel Bids and Issue Sub-cc	0.00	0.00

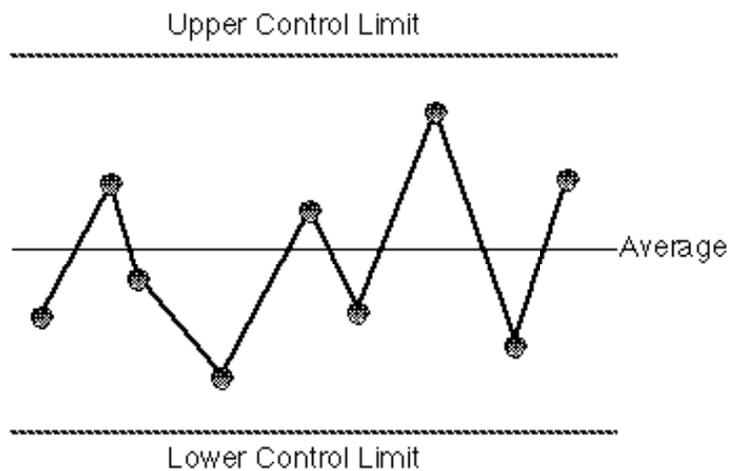


• **CREATE AND DEVELOP TEAM BUILDING CRITERIA & IMPLEMENTATION PLAN**

While the logic chart is being created, “Team Building” information is being gathered.

Team Building is one of the most valuable disciplines in the business world. Most projects and businesses are concerned with the bottom line and have few if any resources available for team building. Yet, at the heart of most business successes is the concept of "team."

Team building is a science and a skill developed from study, practice, and commitment. Team Technology, in the QTM planning and management system, makes use of proven team building procedures.

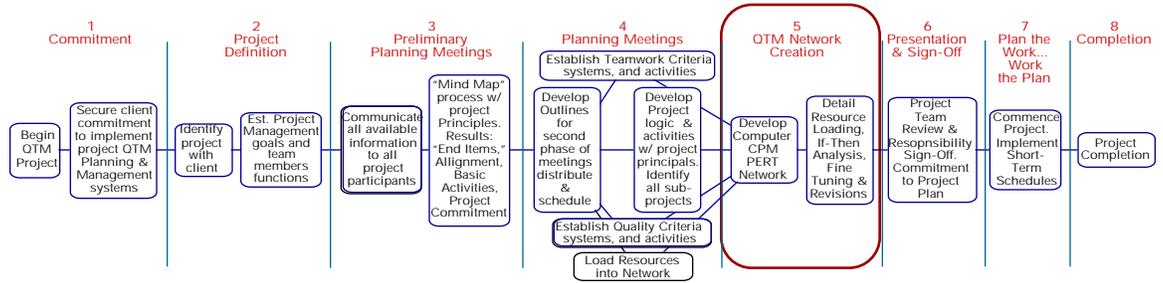


• **CREATE AND DEVELOP QUALITY CRITERIA & IMPLEMENTATION PLAN**

While the logic chart is being created, “Quality” information is being gathered.

Quality is defined as "the elimination of variation in any productive process" (Deming).

Like team building, developing quality is an exacting science with highly-defined practices and procedures that have been amply proven internationally over the past thirty years. A QTM planning and management program defines and implements the appropriate quality practices and procedures.

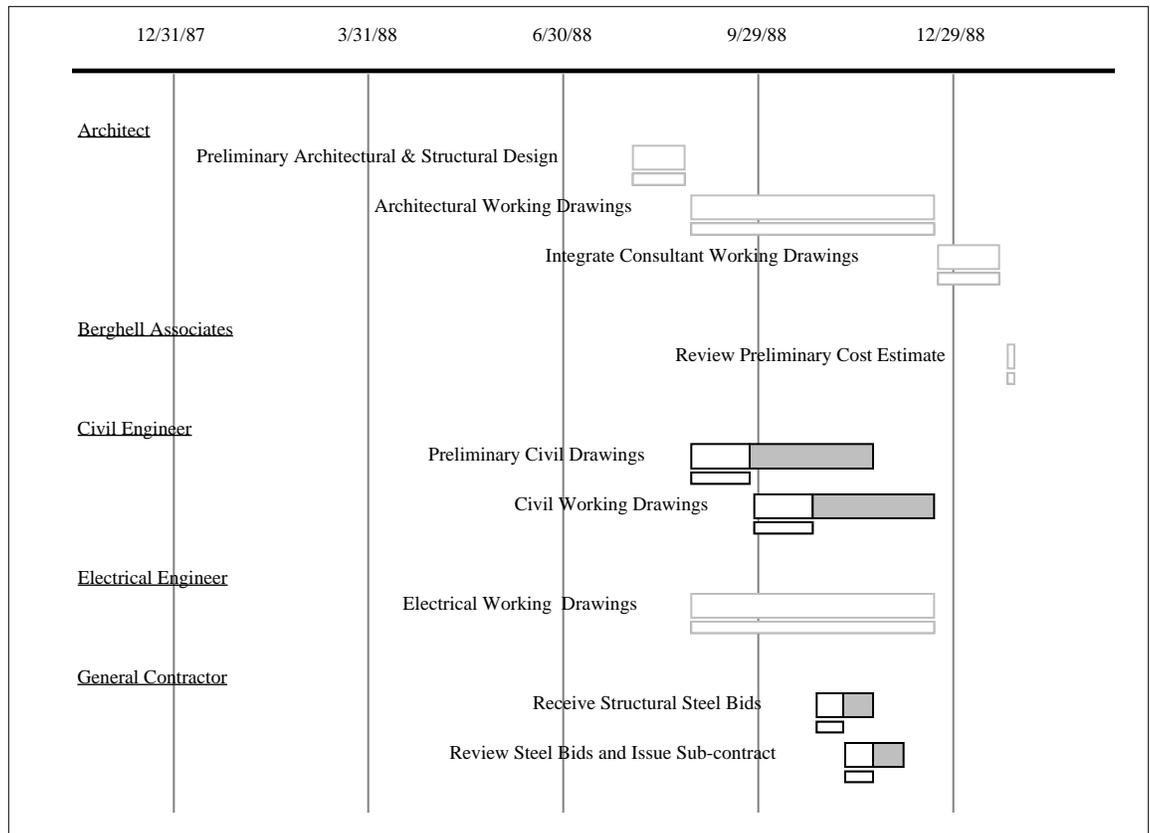


5. • COMPUTER IMPLEMENTATION OF PERT/CPM COMPUTER NETWORK AND ANALYSIS OF PROJECT

The necessary information has now been gathered to develop a comprehensive CPM/PERT network that will act as a project management blueprint. After the network has been built, computer analysis of the information offers many advantages to the management team. For instance, all resources can be checked against their availability to assure maximum resource utilization. This analysis also warns of overtime or overwork of valued resources. Project operational cash flows can be compared in simulations that can be performed to determine the best use of available funds.

Following is a sample of some of the documents derived from a comprehensive CPM/PERT network and a description of the document's use:

RESOURCE TIMELINE - THE SCHEDULE OF EVERY RESOURCE ON THE PROJECT

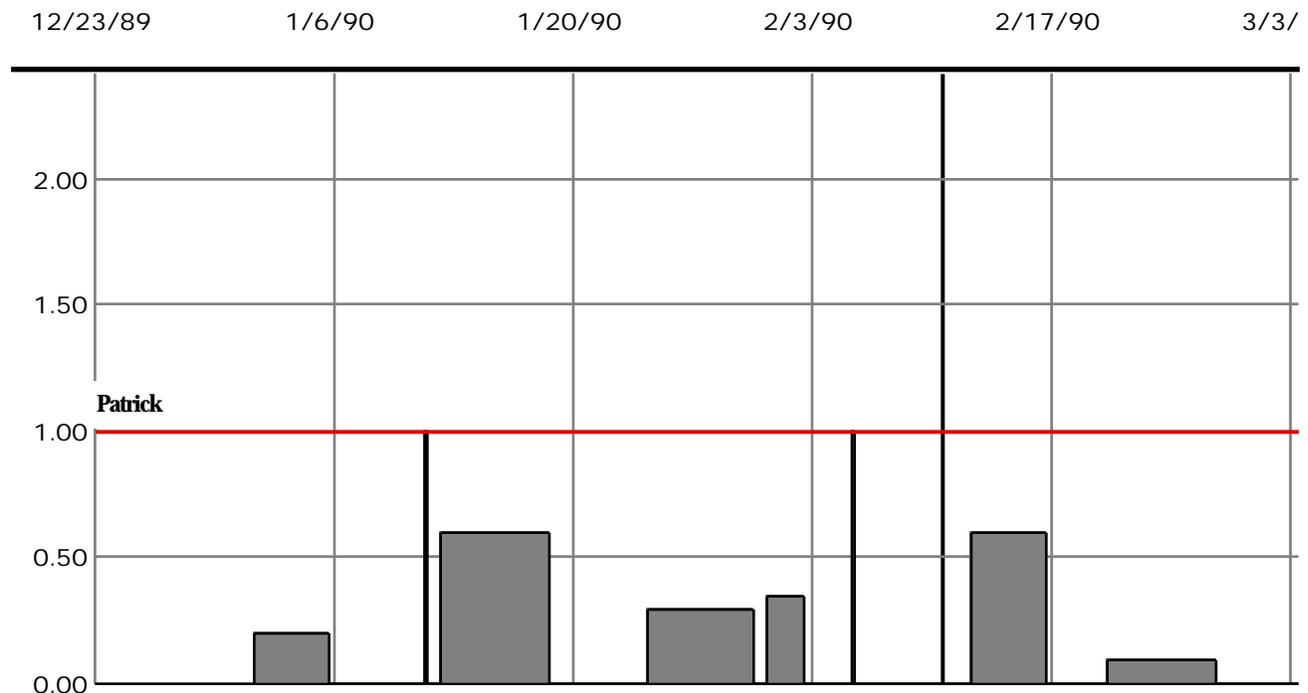


A project cash flow table is available when the task and resource cost have been entered.

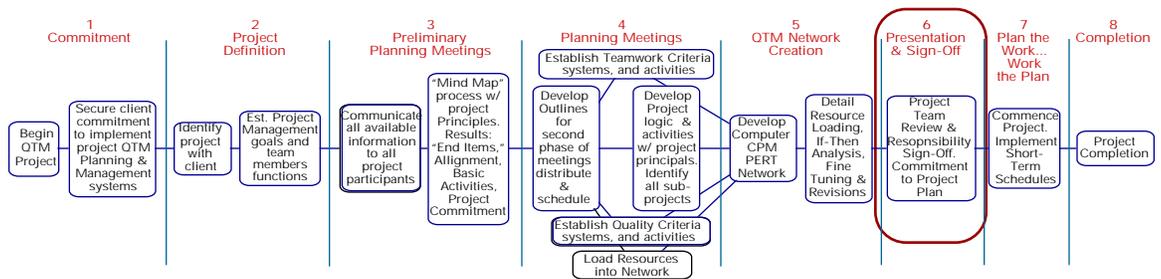
Cash Flow table

Starting	Plan Costs	Plan Income	Actual Costs	Actual Income	Ending	Plan Cumulative	Actual Cumulative
1/1/90	2080.00	0.00	0.00	0.00	2/1/90	-2080.00	0.00
2/1/90	15100.00	0.00	0.00	0.00	3/1/90	-17180.00	0.00
3/1/90	415650.00	0.00	0.00	0.00	4/1/90	-432830.00	0.00
4/1/90	110950.00	0.00	0.00	0.00	5/1/90	-543780.00	0.00
5/1/90	438300.00	0.00	0.00	0.00	6/1/90	-982080.00	0.00
6/1/90	18750.00	0.00	0.00	0.00	7/1/90	-1000830.00	0.00
7/1/90	49600.00	0.00	0.00	0.00	8/1/90	-1050430.00	0.00
8/1/90	23300.00	0.00	0.00	0.00	9/1/90	-1073730.00	0.00
9/1/90	48200.00	0.00	0.00	0.00	10/1/90	-1121930.00	0.00
10/1/90	53700.00	0.00	0.00	0.00	11/1/90	-1175630.00	0.00
11/1/90	13500.00	0.00	0.00	0.00	12/1/90	-1189130.00	0.00
12/1/90	0.00	0.00	0.00	0.00	1/1/91	-1189130.00	0.00
1/1/91	0.00	0.00	0.00	0.00	2/1/91	-1189130.00	0.00
2/1/91	0.00	0.00	0.00	0.00	3/1/91	-1189130.00	0.00
3/1/91	5000.00	0.00	0.00	0.00	4/1/91	-1194130.00	0.00

Resource Histograms show the use of each resource on the project. Resources that are over-utilized or under-utilized can easily be spotted with this tool. The computer will also level resource utilization in the event of resource scheduling conflicts.



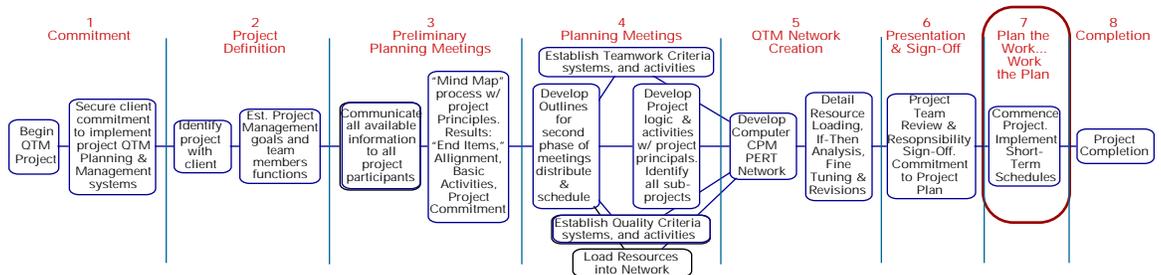
There are many other sophisticated forms of project information available from a computer-generated QTM operational planning and management program.



6. • PROJECT TEAM REVIEW & SIGN OFF

This is the final step of the planning process. All project team members sign off and agree that the logic, resources, and project completion frames are acceptable. This creates a sense of responsibility on the part of all participants involved. Each signer sees the project as a whole, the project's task and event dependencies, and acknowledges his/her part.

This process is a mini-project completion. The whole team, by developing a QTM planning and management program, have created and completed the project in their mind's eye. They have worked together discussing potential problems and solutions, and have worked together in decision-making situations. In the past decade, we have discovered that *what happens in the planning meetings is what usually happens when the plan is being implemented*. "At the planning table, a change requires an eraser - in the field, it requires a checkbook..." - David Owens.



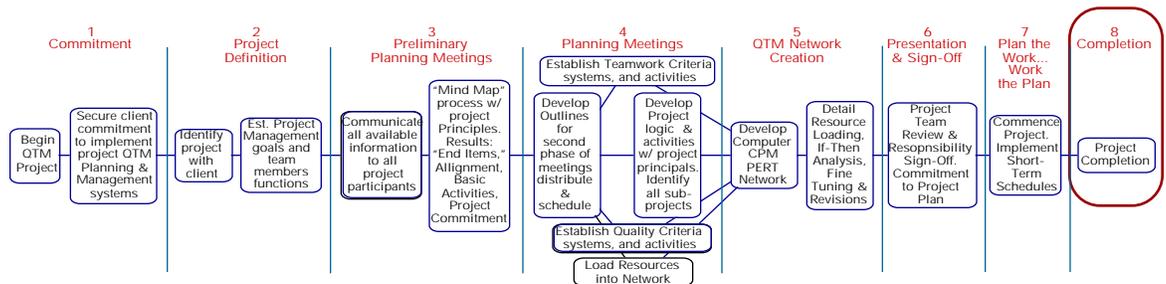
7. • IMPLEMENTATION

"Plan the work. Work the plan..." "If you don't know where you are going, you'll never know if you are lost..." "A project without a plan is like a ship without a captain - no real problems as long as the water is deep and the weather is calm..." "Failing to plan is like planning to fail..."

This is when all of the previous planning work starts paying off. Project management team members to experience *de'je vu* from time to time because they have gone over some of the scenarios that come up in the project in their mind's eye during the planning sessions.

A plan measures and records change. It is on the actual plan that the events of the project are recorded. These real-time events are then measured against the plan to see how accurate the planning assumptions were. People get a chance to remember what they were thinking in the planning session, and to see how it measures up to reality. This accelerates the learning curve in gaining experience on the job. As new information is generated, the plan extrapolates new schedules and cash flows created by unexpected circumstances.

A good plan becomes "Action Central" of the project. People rally to discuss the progress and make and record decisions for the future. A good plan graphically lets everyone know the project status, who is (and isn't) doing what, and what needs to be done. It becomes the project's assistant manager by leveling resources, generating reports for management, creating new schedules as required, and communicating project progress to all involved.



- **PROJECT COMPLETION**

By the time the project is complete, all information has been stored within the project's documents. It becomes an excellent tool for plan-to-actual analysis, historical reference, and a great reference tool for the future.

Another valuable use of the planning process is finding out if a project is feasible. Most entrepreneurs will have a plan done before committing major resources to an idea. The plan's documents are excellent presentation tools for securing funding for new projects.

The successful completion of a well-planned project represents a major commitment on the part of all project team members. Enjoy the success.





QUALITY TEAM MANAGEMENT

SUMMARY

QTM,
*Quality Team
Management,
improves the
quality of
people's lives
through their
work.*

SUMMARY

As we have mentioned before, competent use of any one of the *QTM* components yields improved results in all endeavors. Skillfully combined, these three independent disciplines add synergistically to each other when implemented as one overall system.

- **QUALITY**

Quality programs increase market share, increase profit, and decrease costs while educating the worker and improving the work experience for all involved.

- **TEAM**

Team building increases productivity and competitiveness while upgrading the work experience through healthy competition, acknowledgment, and fun.

- **MANAGEMENT**

Planning and management skills add to the bottom line through efficiency. Thirty year studies reveal a 15 to 25% savings on *all* resources used by projects that are well planned and managed. Those resources are materials, money, time, and the various human energies used to complete any task.

"Modern business tools for changing times." Its true...

QTM makes good sense and is good business. *It works.*

And... *QTM* was designed for and goes beyond just improving tangible output and "bottem line" results in business. *QTM* addresses itself to the relationship that people have with their work and the relationship that work has with life. *QTM* was and is influenced by and personally contributed to by such great contemporary futurists and thinkers as Dr. R. Buckminster Fuller and Dr. W. Edwards Deming. Larry Wilson, Antony Robbins, Tom Peters, Alvin Toffler, and Ken Blanchard are a few of the others who have participated through personal work or interaction. The *QTM* system was well researched and designed for the future that has arived.

PACIFIC PLANNING INSTITUTE believes that a "quality" experience in the workplace is fundamental to the production of a "quality" product or service. *QTM* was designed to improve the performance of any endeavor, and bring the American spirit back into the workplace.

QTM, or any of its individual components, is only for those who are serious about and comitted to long-term successful business endeavours and willing to invest in, and demonstrate that commitment.

QTM, Quality Team Management, improves the quality of people's lives through their work.

THE PPI CHALLENGE

Being competitive in today's growing global market will require substantially more than *merely* the delivery of products and services...
on time and within budget..

We must develop and create "quality" work environments that transform the human experience in the work place. Joy, enthusiasm, pride of ownership, partnership, teamwork and an endless quest for excellence are a few of the goals.

Identifying individual human values and fostering the creation of working environments and working systems that enable these values to be respected are paramount and a prerequisite in our quest as a nation to demonstrate global leadership for the twenty first century.

“ The journey is the reward ”

RANDOLPH CRAFT
PACIFIC PLANNING INSTITUTE



