Modern management techniques

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Just-in-time

Just-in-time (JIT) is an inventory strategy that strives to improve a business's return on investment by reducing in-process inventory and associated carrying costs. Just in Time production method is also called the Toyota Production System.

To meet JIT objectives, the process relies on signals or Kanban (看板 Kanban) between different points in the process, which tell production when to make the next part. Kanban are usually 'tickets' but can be simple visual signals, such as the presence or absence of a part on a shelf. Implemented correctly, JIT can improve a manufacturing organization's return on investment, quality, and efficiency.

Quick notice that stock depletion requires personnel to order new stock is critical to the inventory reduction at the center of JIT. This saves warehouse space and costs. However, the complete mechanism for making this work is often misunderstood.

For instance, its effective application cannot be independent of other key components of a lean manufacturing system or it can "...end up with the opposite of the desired result."In recent years manufacturers have continued to try to hone forecasting methods (such as applying a trailing 13 week average as a better predictor for JIT planning, however some research demonstrates that basing JIT on the presumption of stability is inherently flawed.

Philosophy:-

Philosophy of JIT is simple: inventory is waste. JIT inventory systems expose hidden causes of inventory keeping, and are therefore not a simple solution for a company to adopt. The company must follow an array of new methods to manage the consequences of the change. The ideas in this way of working come from many different disciplines including statistics, industrial engineering, production management, and behavioral science. The JIT inventory philosophy defines how inventory is viewed and how it relates to management.

1. **Transaction cost approach**: -

   JIT reduces inventory in a firm. However, a firm may simply be outsourcing their input inventory to suppliers, even if those suppliers don't use Just in time (Naj 1993). Newman (1993) investigated this effect and found that suppliers in Japan charged JIT customers, on average, a 5% price premium.
2. **Environmental concerns**: -

   During the birth of JIT, multiple daily deliveries were often made by bicycle. Increased scale has required a move to vans and lorries (trucks). Cusumano (1994) highlighted the potential and actual problems this causes with regard to gridlock and burning of fossil fuels. This violates three JIT waste guidelines:
   Time—wasted in traffic jams
   Inventory—specifically pipeline (in transport) inventory
   Scrap—fuel burned while not physically moving

3. **Price volatility**:-

   JIT implicitly assumes a level of input price stability that obviates the need to buy parts in advance of price rises. Where input prices are expected to rise, storing inventory may be desirable.

4. **Quality volatility**: -

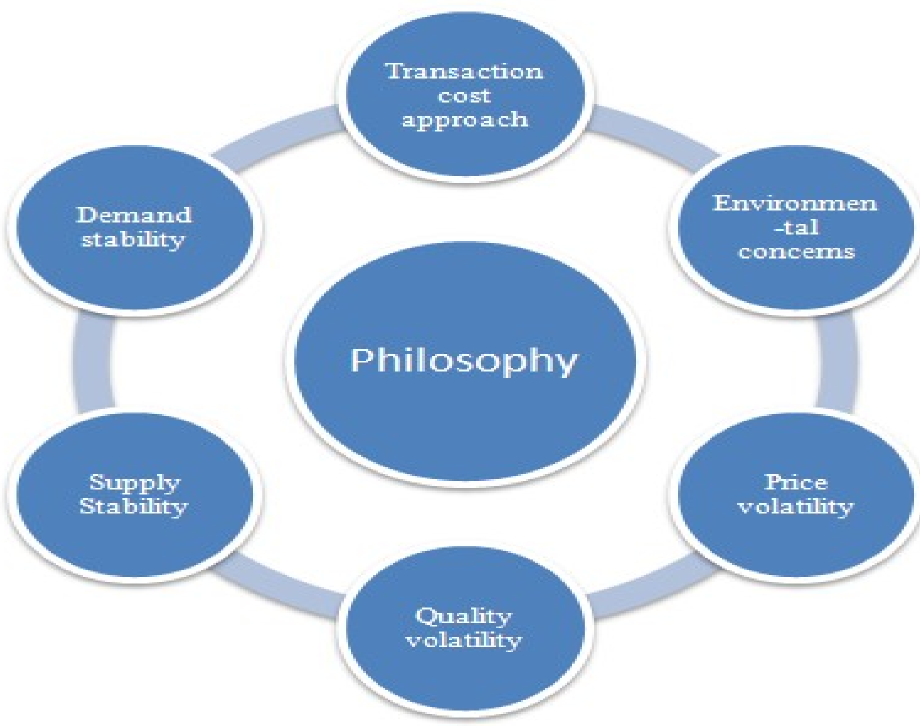
   JIT implicitly assumes that input parts quality remains constant over time. If not, firms may hoard high quality inputs. As with price volatility, a solution is to work with selected suppliers to help them improve their processes to reduce variation and costs. Longer term price agreements can then be negotiated and agreed-upon quality standards made the responsibility of the supplier. Fixing up of standards for volatility of quality according to the quality circle

5. **Demand stability: -**

   Karmarker (1989) highlights the importance of relatively stable demand, which helps ensure efficient capital utilization rates. Karmarker argues that without significantly stable demand, JIT becomes untenable in high capital cost production.

6. **Supply Stability**: -

   In the U.S., the 1992 railway strikes caused General Motors to idle a 75,000-worker plant because they had no supply.



JIT Implementation Design: -

Based on a diagram modeled after the one used by Hewlett-Packard's Boise plant to accomplish its JIT program.

1) F Design Flow Process

F Redesign/relayout for flow
L Reduce lot sizes
O Link operations
W Balance workstation capacity
M Preventive maintenance
S Reduce Setup Times

2) Q Total quality control

C worker compliance
I Automatic inspection
M quality measures
M fail-safe methods
W Worker participation

3) S Stabilize Schedule

S Level Schedule
W establish freeze windows
UC Underutilize Capacity

4) K Kanban Pull System

D Demand pull
B Backflush
L Reduce lot sizes

5) V Work with vendors

L Reduce lead time
D Frequent deliveries
U Project usage requirements
Q Quality Expectations

6) I Further reduce inventory in other areas

S Stores
T Transit
C Implement Carroussel to reduce motion waste
C Implement Conveyor belts to reduce motion waste

7) P Improve Product Design

P Standard Production Configuration
P Standardize and reduce the number of parts
P Process design with product design
Q Quality Expectations

Effects: -

- ✔ A surprising effect was that factory response time fell to about a day.
- ✔ Improved customer satisfaction
- ✔ Eliminating the risk
- ✔ Large production
- ✔ Improved the company's return on equity.
- ✔ Product quality

Benefits: -

- ✔ Reduced setup time.
- ✔ The flow of goods from warehouse to shelves improves.
- ✔ Employees with multiple skills are used more efficiently.
- ✔ Production scheduling and work hour consistency synchronized with demand.
- ✔ Increased emphasis on supplier relationships.
- ✔ Supplies come in at regular intervals throughout the production day.

5S (methodology)

5S is the name of a workplace organization methodology that uses a list of five Japanese words which are

1. Seiri,
2. Seiton,
3. Seiso,
4. Seiketsu and
5. Shitsuke.

The list describes how items are stored and how the new order is maintained. The decision-making process usually comes from a dialogue about standardization which builds a clear understanding among employees of how work should be done. It also instills ownership of the process in each employee.

Transliterated or translated into English, they all start with the letter "S".

1. **Sorting (Seiri)**

Eliminate all unnecessary tools, parts, and instructions. Go through all tools, materials, and so forth in the plant and work area. Keep only essential items and eliminate what is not required, prioritizing things as per requirements and keeping them in approachable places. Everything else is stored or discarded.

2. **Straightening or setting in order / stabilize (Seiton)**

There should be a place for everything and everything should be in its place. The place for each item should be clearly labeled or demarcated. Items should be arranged in a manner that promotes efficient work flow. Workers should not have to bend repetitively to access materials. Each tool, part, supply, or piece of equipment should be kept close to where it will be used – in other words, straightening the flow path. Seiton is one of the features that distinguish 5S from "standardized cleanup". This phase can also be referred to as Simplifying.

3. **Sweeping or shining or cleanliness / systematic cleaning (Seiso)**

Keep the workplace tidy and organized. At the end of each shift, clean the work area and be sure everything is restored to its place. This makes it easy to know what goes where and ensures that everything is where it belongs. A key point is that maintaining cleanliness should be part of the daily work – not an occasional activity initiated when things get too messy.

4. **Standardizing (Seiketsu)**

Work practices should be consistent and standardized. Everyone should know exactly what his or her responsibilities are for adhering to the first 3 S's.

5. **Sustaining the discipline or self-discipline (Shitsuke)**

   Maintain and review standards. Once the previous 4 S's have been established, they become the new way to operate. Maintain focus on this new way and do not allow a gradual decline back to the old ways. While thinking about the new way, also be thinking about yet better ways. When an issue arises such as a suggested improvement, a new way of working, a new tool or a new output requirement, review the first 4 S's and make changes as appropriate.

6. **Safety**

   A sixth phase, "Safety", is sometimes added. While it is reasonable to assume that a properly planned and executed 5S program will improve workplace safety, some argue that explicitly including this sixth "S" ensures that workplace safety is given at least a secondary consideration.

Total productive maintenance

Total productive maintenance (TPM) has been around for almost 50 years. To the "west" it wrongly thought it is a new way of looking at maintenance: to the Japanese, it is an established process. Like all processes, it has a host of acronyms and buzzwords. Some are obvious, many will require follow-up reading.

In TPM, the machine operator is thoroughly trained to perform much of the simple maintenance and fault-finding. Eventually, by working in "Zero Defects" teams that include a technical expert as well as operators, they can learn many more tasks - sometimes all those within the scope of an operator. Tradesmen are also trained at doing the more skilled tasks to help ensure process reliability.

This should be fully documented, Autonomous Maintenance ensures appropriate and effective efforts are expended after the machine becomes wholly the domain of one person or team. Safety is paramount, so training must be appropriate. Operators are often capable of high standards of technical ability; this is improved through the use of "best practice" procedures and proper training of these procedures.

TPM is a critical adjunct to lean manufacturing. If machine uptime is not predictable and if process capability is not sustained, the process must keep extra stocks to buffer against this uncertainty and flow through the process will be interrupted. Unreliable uptime is caused by breakdowns or badly performed maintenance. If maintenance is done properly (Right First Time), uptime will improve - as will "OEE" (Overall Equipment Effectiveness - basically how many "sellable" items "are" actually produced as opposed to how many the machine "should" produce in a given time).

One way to think of TPM is "*deterioration prevention*": deterioration is what happens naturally to anything that is not "taken care of". For this reason many people refer to TPM as *"total productive manufacturing" or "total process management"*. TPM is a proactive approach that essentially aims to identify issues as soon as possible and plan to prevent any issues before occurrence. One motto is "*zero error, zero work-related accident, and zero loss*".

Introduction: -

TPM is a maintenance process developed for improving productivity by making processes more reliable and less wasteful.

Original goal of total productive management:

"Continuously improve all operational conditions, within a production system; by stimulating the daily awareness of all employees" (by Seiichi Nakajima, Japan, JIPM)

TPM focuses primarily on manufacturing (although its benefits are applicable to virtually any "process") and is the first methodology Toyota used to improve its global position (1950s). After TPM, the focus was stretched, and also suppliers and customers were involved (Supply Chain), this next methodology was called lean manufacturing. This sheet gives an overview of TPM in its original form.

An accurate and practical implementation of TPM will increase productivity within the total organization, where:

(1)... a clear business culture is designed to continuously improve the efficiency of the total production system

(2)... a standardized and systematic approach is used, where all losses are prevented and/or known.

(3)... all departments, influencing productivity, will be involved to move from a reactive- to a predictive mindset.

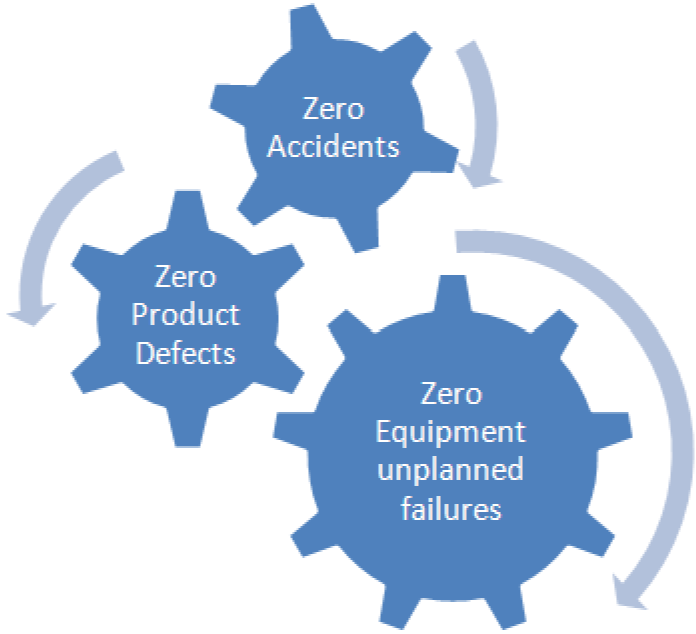
(4)... a transparent multidisciplinary organization is reaching zero losses.

(5)... steps are taken as a journey, not as a quick menu.

Finally TPM will provide practical and transparent ingredients to reach operational excellence.

Implementation: -

TPM has basically 3 goals



It sets out to achieve these goals by: -

- Gap Analysis of previous historical records of Product Defects,
- Equipment Failures and
- Accidents.

Then through a clear understanding of this Gap Analysis *(Fishbone Cause-Effect Analysis, Why-Why Cause-Effect Analysis, and P-M Analysis)* plan a physical investigation to discover new latent fuguai (slight deterioration) during the first step in TPM Autonomous Maintenance called "Initial Cleaning".

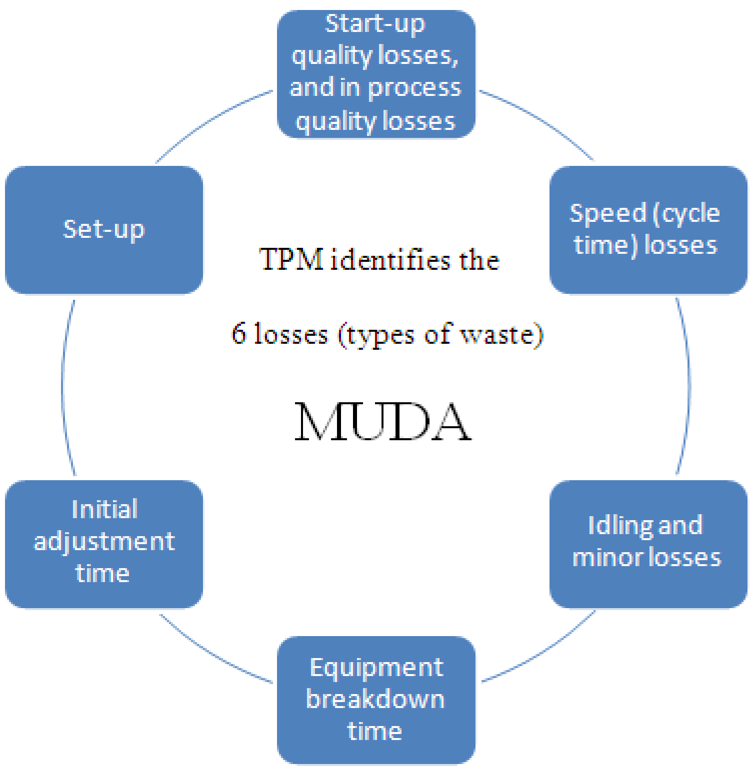
Many companies struggle to implement TPM due to 2 main reasons: -

I. insufficient knowledge and skills especially in understanding the linkages between the 8 Pillar-Activities in TPM
   1. *Education and Training*
   2. *Continuous Improvement*
   3. *Autonomous Maintenance*
   4. *Preventive Maintenance*
   5. *Quality Maintenance*
   6. *Safety, Health and Environment*
   7. *TPM in Administration*
   8. *Early Equipment Management*

I. TPM requires more time, resources and efforts than most of these companies believe they can afford.

A typical TPM implementation requires company-wide participation and full results can only be seen after 3 years and sometimes 5 years. The main reason for this long duration is due to the basic involvement and training required for Autonomous Maintenance participation where operators participate in the restoring the equipment to its original capability and condition and then improving the equipment.

An effective Fast-Track TPM Implementation Approach has been successful in a Paper Mill and Electronics Industries and documented. It circumvented this problem by assigning Project Teams to do Autonomous Maintenance for the AM Steps of 1) Initial Cleaning and 2) Eliminating Sources of Contamination and Improving Equipment Accessibility. Production Operators take over the Autonomous Maintenance after the AM Step 3 (Initial Maintenance Standards) has been established. This has been proven to reduce TPM implementation time by about 50%.



TPM success measurement - A set of performance metrics which is considered to fit well in a lean manufacturing/TPM environment is overall equipment effectiveness, or OEE. For advanced TPM world class practitioners, the OEE cannot be converted to costs using Target Costing

Management (TCM) OEE measurements are used as a guide to the potential improvement that can be made to equipment. And by identifying which of the 6 losses is the greater, then the techniques applicable to that type of loss. Consistent application of the applicable improvement techniques to the sources of major losses will positively impact the performance of that equipment.

Using a criticality analysis across the factory should identify which equipments should be improved first, also to gain the quickest overall factory performance.

The use of Cost Deployment is quite rare, but can be very useful in identifying the priority for selective TPM deployment.

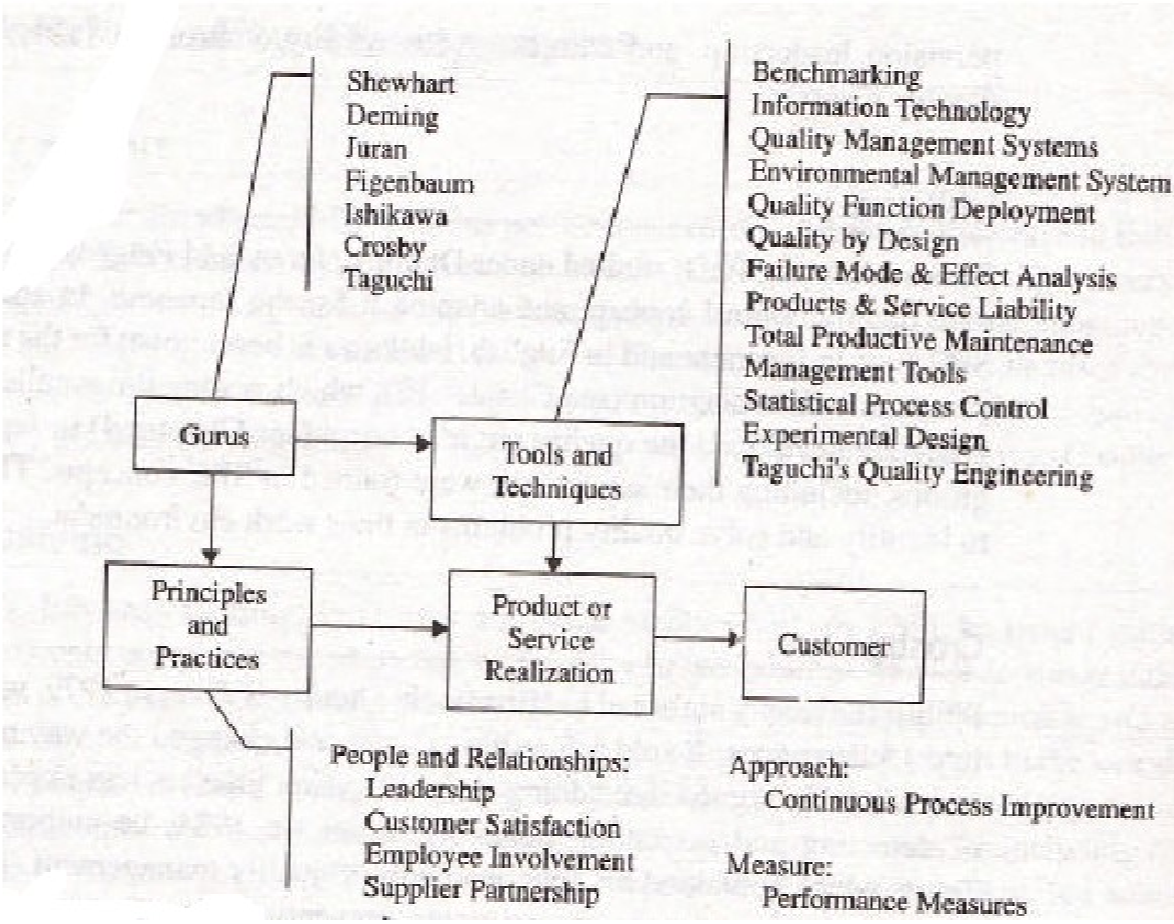
TOTAL QUALITY MANAGEMENT (TQM)

TQM is defined as both a philosophy and a set of guiding principles that represent the foundation of a continuously improving organization. It is the application of quantitative methods and human resources to improve all the processes within an organization n and exceed customer needs now and in the future. It integrates fundamental management technique existing improvement efforts and technique tools under a disciplined approach. TQM refers to a quest for quality that involves everybody in the organization.

The key aspect of TQM are given below

1. A never-ending push to improve continuous improvement (Kaizen)
2. Customer satisfaction: meeting or exceeding the customer’s expectations.

TQM Frame work: -



History of Total Quality Management (TQM):-

TQM has evolved over the past five decades by incorporating and synthesizing ideas from many sources. Through the Japanese companies were the first to introduce and use the TQM concept, many of the basic ideas underlying TQM originated in the United States. W. Edwards Deming and Joseph M. Juran are the two people most closely associated with the development of comprehensive quality management programs in Japan and subsequently in the United states. Deming was most widely noted for widely noted for teaching the importance of management responsibility for the quality system and for having companywide participation. He emphasized the need for a total quality system to build quality into the products rather than inspecting the products for quality. Juran argued that poor quality is due to poor management, and the instead that good product quality requires a companywide approach and management involvement in building quality into the products. Juarn's quality program is characterized as Quality Trilogy made up of quality planning, quality monitoring, and control. In 1946, the American Society of Quality Control was formed. At present, the society is called as American Society for Quality (ASQ). In 1950, W. Edwards Deming, a student of Shewart educated the Japanese engineers. In 1054, Joseph M. Juarn educated the Japanese companies about the management's responsibility to achieve quality. In 1960, Quality Circle concept was evolved and Japanese workers started practicing it by the late 1970s, US companies started thinking about TQM. As a part of implementing TQM many US managers were sent to Japan to learn hot implement TQM. In early 1990s, Statistical Process Control was evolved and major automotive industries emphasized the use of these techniques as a compulsory requirement for their suppliers. Approximately, at the same time Genichi Taguchi popularized the design of experiments for optimizing the process parameters and for designing robust products. In the middle of 1990s, ISO 9000 standards were popularized and accepted worldwide as a means to achieve quality.

Basic Approach:

TQM requires six basic approaches

1. A committed and involved management to provide long-term top to bottom organizational support
2. An unwavering focuses on the customer, both internally and externally.
3. Effective involvement and utilization of the entire work force.
4. Continuous improvement of the business and production process.
5. Treating supplier as partners.
6. Establish performance measures for the process.

1. **Top management:-** The fate of any company is determined by the way it is managed by its top management. The total quality business requires right people for various jobs and all the necessary resources for accomplishing the tasks. Only a committed top management can inculcate the required culture. Hence, the top management commitment occupies the number one position in the required list for effective implementation of TQM.

2. **Focus on customer:**- Today's business starts and ends with the customer and customers are treated as God of the business. The whole idea of TQM dwells around the customer and their satisfaction. An excellent place to start is by satisfying internal customers. The famous quote 'The next process is your customer' has made a tremendous impact on the manufactured products. The external customer can be satisfied only if the requirements are clearly understood and the right products/services is delivered.

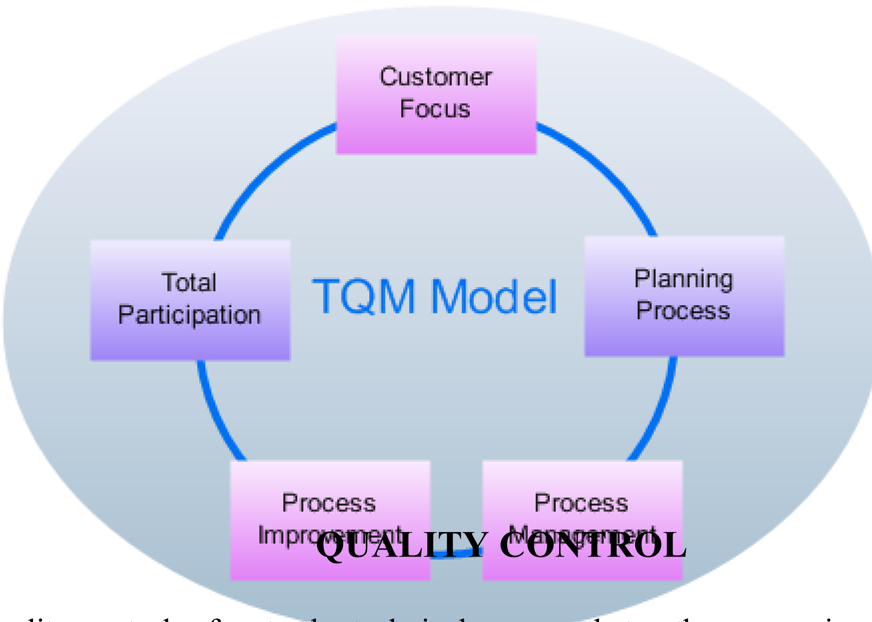
3. **Employee involvement:-** The success of any organization is always attributed to the involvement of the employees and the top management who has instated the quality consciousness into the employees. Employee involvement is an achievement make true by excellent Human Resource practices

4. **Continuous Improvement:-** Continuous improvement in all aspect of the business is the key to retain the initial success achieved by TQM practices. Training the workforce on all the latest technologies and providing them with all necessary resources results in continuous improvement.

Quality improvement projects, such as on-time delivery, order-entry efficiency, billing error rate, customer satisfaction, cycle time, scrap reduction and supplier management are good places to begin.

5. **Partnership with suppliers:-** on the average 40% of the sales in purchased products or service, therefore, the supplier quality must be outstanding. The focus should be on quality and life cycle costs rather than price. A good relation with suppliers ensures a timely supply of goods and thus lead-time can be reduced drastically.

6. **Performance Measures: -** Performance measures such as uptime, percent nonconforming, absenteeism and customer satisfaction should be determined for each functional area performance measure act as motivators for everyone in a company. Care should be taken to ensure that the performance measure is objectively set and they are used fairly.



QUALITY CONTROL

- Quality control refers to the technical process that gathers, examines, analyse & report the progress of the project & conformance with the performance requirements

- The functions of quality control encompasses:

1) Development of specifications

2) Interaction with project designers

3) Reliability & development testing

4) Quality control of incoming materials

5) Vendor QC & vendor development

6) Quality planning for control of construction process

7) Inspection & testing during construction

8) QC record accumulation procedure

9) Non-conformance control procedure

QUALITY CONTROL NORMS, TECHNIQUES & PROCEDURES

- Once quality standards & other things are laid out, inspection becomes a routine matter
- In any quality control programme, actual inspection & measurement is an undetachable factor, which is to be planned properly to meet with the overall objective of quality control.
- Various stages @ which inspection could be carried out are:
    - Material inspection at supplier's end
    - Material inspection @ stage of receipt
    - Material inspection at stage of issue
    - Inspection while execution is in progress
    - Inspection before erection & commissioning
    - Inspection of process @ the time of initial setting of machine/ equipment
    - Inspection of finished process
    - Inspection of machines/ equipments that are commissioned
    - Inspection of trial run batch
- Having decided on various stages of inspection & various quality characteristics to be inspected, it is also important to decide who will inspect, when the inspection is to be carried out, how many units to be inspected, instruments to be used for checking quality etc.

- While planning such inspection activities it is also important to decide what information is to be given to the insepector at the time of inspection.
- Some of the basic information required is design specification, product specification, quality characteristics, quality standards, tolerances & detailed inspection procedures.

QUALITY ASSURANCE

- Quality Assurance refers to the managerial process which determines the organisation's design , objectives, resources, project team, funding agencies, performance standards, feedback on the project performance , appropriate actions to deal with deviations & all steps that are taken for promoting quality awareness at all levels of project organisation.
- A typical QA programme addresses the following:
    - Organisational structure of the project team and quality assurance department
    - Identification of the coordinating personnel
    - Quality education, programme & awareness carried out
    - Quality circles
    - Responsibilities & powers of the various personnel involved
    - Training
    - Setting up of MIS for quality
    - Resolving the technical differences & disputes
    - Preparation of QA manual & their checklists
    - Vendor Surveillance procedure

- It hardly needs to be emphasized that QA is an essential prerequisite for all construction projects. Over the years accent on quality has graduated progressively from simple inspection to quality control to quality assurance to quality management
- QA goes much beyond the introduction of quality manuals & auditing for quality.

- It includes building quality in the project design , planning & selection of equipment, maintenance of machines, improving worker skills & technical/ managerial competence of engineers, motivation & commitment @ all levels.

Some of the typical training programmes that are carried out for QA are as follows:

- Excavation & earthwork
- Scaffolding & formwork
- Testing & analysis of concrete
- Inspection methods & procedures
- Standards & specifications
- Management of laboratories & quality control units
- Equipment planning & scheduling
- Supervisory skills & techniques
- Infrastructure planning for a project
- Materials Management
- Quality Audit
- Concrete making, transportation & placing techniques.
- QA demands an organizational structure where coordination & interface between various parties involved in construction is possible from the lowest to the top management level.

METHODS OF QUALITY CONTROL

The purpose of quality control is to assure that processes are performing in an acceptable manner. Quality control can be done in the following ways:

A. INSPECTION :

Monitoring in the production process can occur at three points: before production, during production and after production. The logic of checking conformance before production is to make sure that inputs are acceptable.

The logic of checking conformance during production is to make sure that the conversion of inputs into outputs is proceeding in an acceptable manner. The logic of checking conformance of output is to make a final verification of conformance before passing goods on to customers.

The purpose of inspection is to provide information on the degree to which items conform to standard. The basic issues are:

- How much to inspect and how often.
- At what points in the process inspection should occur.
- Whether to inspect in a centralized or on-site location.
- Whether to inspect attributes or variables.

B. STATISTICAL PROCESS CONTROL :

Statistical process control is to evaluate the output of a process to determine its acceptability. Managers take periodic samples from the process and compare them with a predetermined standard. If the sample results are not acceptable, they stop the process and take corrective actions. If the sample results are acceptable, they allow the process to continue. Statistical process control can be two types:

- Acceptance Sampling
- Control Charts

1. <u>Acceptance Sampling :</u>

Acceptance sampling is a form of inspection that is applied to lots or batches of items either before or after a process instead of during the process.

The purpose of acceptance sampling is to decide whether a lot satisfies pre-determined standards. Lots that satisfy these standards are passed or accepted; those that do not are rejected. The followings are some of the different kinds of sampling plan:

(i) Single Sampling Plan :

In this plan one random sample is drawn from each lot and every item in the sample is examined and classified as either 'good' or 'defective'.

(ii) Double Sampling Plan :

A double sampling plan allows for the opportunity to take a second sample if the results of the initial sample are inconclusive.

(iii) Multiple Sampling Plan :

A multiple sampling plan is similar to a double sampling plan except that more than two samples may be required.

2. Control Charts :

A control chart is a time-ordered plot of sample statistics. It is used to distinguish between random variability and non-random variability. Two types of control charts are used :

(i) Control Charts for Variables.

(ii) Control Charts for Attributes

(i) Control Charts for Variables :

Variables mean product or service characteristics such as weight, length, volume or time that can be measured. Mean and range charts are used to monitor variables.

(a) Mean Chart : A mean chart sometimes referred to as an 'X bar'

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(a) Mean Chart : A mean chart sometimes referred to as an 'X bar' chart is used to measure the mean.

(b) Range Chart : A range chart or 'R'- chart is used to monitor the mean and the variability of the process distribution.

(ii) Control Charts for Attributes :

Attributes mean product or service characteristics that can be quickly counted for acceptable quality. Two charts commonly used for quality measures based on product or service attributes are the 'P' chart and 'C' chart.

(a) 'P' Chart : 'P' chart is used for controlling the proportion of defective products or service generated by the process. The quality characteristic is counted rather than measured and the entire item or service can be declared 'good' or 'defective'.

(b) 'C' Chart : When the goal is to control the number of defects per unit, a 'C' chart is used.

QUALITY CERTIFICATION

Many firms that do business internationally recognize the importance of quality certification. The purpose of international organization for standardization (ISO) is to promote worldwide standards that will improve operating efficiency, improve productivity and reduce costs. The ISO is composed of the national standard bodies of more then 100 countries. Some 180 technical committees conduct the work of ISO.

ISO - 9000 Series :

The ISO 9000 series is a set of international standards on quality management and quality assurance. These standards are critical to doing business internationally. They must go through a process that involves documenting quality procedures and on-site assessments.

Series	Indications
ISO - 9000 (Guidelines for use)	Helps companies determine which standards of ISO - 9001, 9002, 9003 applies.
ISO - 9001 (Quality system)	Outlines guidelines for companies that engage in design, development, production, installation and servicing of products or services.
ISO - 9002 (Quality system)	Similar to ISO - 9001 but excludes companies engaged in designing and development.
ISO - 9003 (Quality system)	Covers companies engaged in final inspection and testing.
ISO - 9004 (Guidelines for use)	The guidelines for applying the elements of the quality management system.

The above table shows that, ISO - 9001, 9002 & 9003 are well - defined standards while ISO - 9000 and 9004 only establish guidelines for operations.

ISO - 14000 :

The International organization for standardization (ISO) introduced new set of standards in 1996; ISO -14000 is intended to assess a company's performance in terms of environmental responsibilities. It is developed to control the impact of an organization's activities and outputs on the environment. The ISO 14000 standards can lead to benefits such as reducing the cost of waste management, conserving energy and materials, lowering distribution costs and improving corporate image.

Kaizen

Kaizen (Japanese for "improvement" or "change for the better") refers to philosophy or practices that focus upon continuous improvement of processes in manufacturing, engineering, supporting business processes, and management.

It has been applied in healthcare, psychotherapy, life-coaching, government, banking, and many other industries.

When used in the business sense and applied to the workplace, kaizen refers to activities that continually improve all functions, and involves all employees from the CEO to the assembly line workers. It also applies to processes, such as purchasing and logistics that cross organizational boundaries into the supply chain. By improving standardized activities and processes, kaizen aims to eliminate waste (see lean manufacturing). Kaizen was first implemented in several Japanese businesses after the Second World War, influenced in part by American business and quality management teachers who visited the country. It has since spread throughout the world and is now being implemented in many other venues besides just business and productivity.

Introduction: -

Kaizen is a daily song, the purpose of which goes beyond simple productivity improvement. It is also a process that, when done correctly, humanizes the workplace, eliminates overly hard work ("muri"), and teaches people how to perform experiments on their work using the scientific method and how to learn to spot and eliminate waste in business processes.

In all, the process suggests a humanized approach to workers and to increasing productivity: "The idea is to nurture the company's human resources as much as it is to praise and encourage participation in kaizen activities."

Successful implementation requires "the participation of workers in the improvement."People at all levels of an organization participate in kaizen, from the CEO down to janitorial staff, as well as external stakeholders when applicable. The format for kaizen can be individual, suggestion system, small group, or large group. At Toyota, it is usually a local improvement within a workstation or local area and involves a small group in improving their own work environment and productivity. This group is often guided through the kaizen process by a line supervisor;

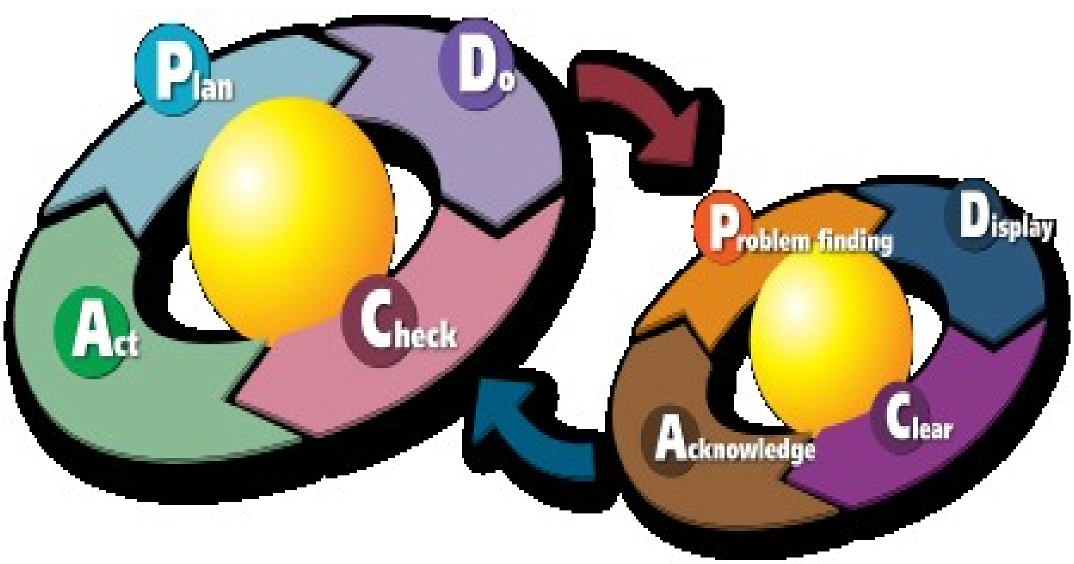
sometimes this is the line supervisor's key role. Kaizen on a broad, cross-departmental scale in companies, generates total quality management, and frees human efforts through improving productivity using machines and computing power.

While kaizen usually delivers small improvements, the culture of continual aligned small improvements and standardization yields large results in the form of compound productivity improvement. This philosophy differs from the "command and control" improvement programs of the mid-twentieth century. Kaizen methodology includes making changes and monitoring results, then adjusting. Large-scale pre-planning and extensive project scheduling are replaced by smaller experiments, which can be rapidly adapted as new improvements are suggested.

In modern usage, a focused kaizen that is designed to address a particular issue over the course of a week is referred to as a "kaizen blitz" or "kaizen event". These are limited in scope, and issues that arise from them are typically used in later blitzes.

Implementation: -

The Toyota Production System is known for kaizen, where all line personnel are expected to stop their moving production line in case of any abnormality and, along with their supervisor, suggest an improvement to resolve the abnormality which may initiate a kaizen.



The cycle of kaizen activity can be defined as:

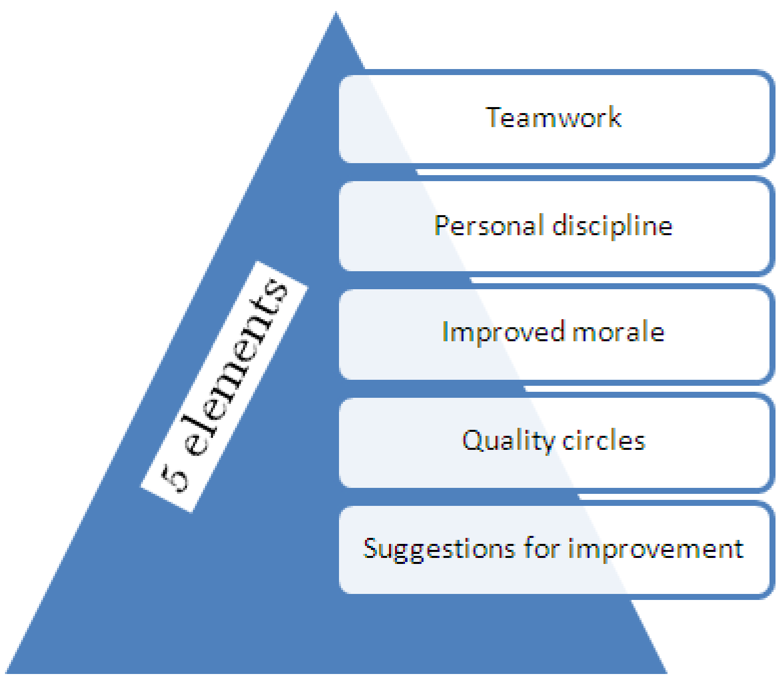
* Standardize an operation
* Measure the standardized operation (find cycle time and amount of in-process inventory)
* Gauge measurements against requirements
* Innovate to meet requirements and increase productivity
* Standardize the new, improved operations
* Continue cycle ad infinitum

This is also known as the Shewhart cycle, Deming cycle, or PDCA.

A kaizen blitz, or rapid improvement, is a focused activity on a particular process or activity. The basic concept is to identify and quickly remove waste. Another approach is that of the kaizen burst, a specific kaizen activity on a particular process in the value stream.

WebKaizen Events, written by Kate Cornell, condenses the philosophies of kaizen events into a one-day, problem solving method that leads to prioritized solutions. This method combines Kaizen Event tools with PMP concepts. It introduces the Focused Affinity Matrix and the Cascading Impact Analysis. The Impact/Constraint Diagram and the Dual Constraint Diagram are tools used in this method.

Key elements of kaizen are quality, effort, and involvement of all employees, willingness to change, and communication.



ISO International Organization for Standardization

International Standards for Business, Government and Society

ISO (International Organization for Standardization) is the world's largest developer and publisher of International Standards.

ISO is a network of the national standards institutes of 163 countries, one member per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system.

ISO is a non-governmental organization that forms a bridge between the public and private sectors. On the one hand, many of its member institutes are part of the governmental structure of their countries, or are mandated by their government. On the other hand, other members have their roots uniquely in the private sector, having been set up by national partnerships of industry associations.

Therefore, ISO enables a consensus to be reached on solutions that meet both the requirements of business and the broader needs of society.

What "international standardization" means?

When the large majority of products or services in a particular business or industry sector conform to International Standards, a state of industry-wide standardization exists. The economic stakeholders concerned agree on specifications and criteria to be applied consistently in the classification of materials, in the manufacture and supply of products, in testing and analysis, in terminology and in the provision of services. In this way, International Standards provide a reference framework, or a common technological language, between suppliers and their customers. This facilitates trade and the transfer of technology.

Standards make an enormous and positive contribution to most aspects of our lives.

Standards ensure desirable characteristics of products and services such as quality, environmental friendliness, safety, reliability, efficiency and interchangeability - and at an economical cost.

When products and services meet our expectations, we tend to take this for granted and be unaware of the role of standards. However, when standards are absent, we soon notice. We soon care when products turn out to be of poor quality, do not fit, are incompatible with equipment that we already have, are unreliable or dangerous.

When products, systems, machinery and devices work well and safely, it is often because they meet standards. And the organization responsible for many thousands of the standards which benefit the world is ISO.

What standards do ?

ISO standards:

1. make the development, manufacturing and supply of products and services more efficient, safer and cleaner
2. facilitate trade between countries and make it fairer
3. provide governments with a technical base for health, safety and environmental legislation, and conformity assessment
4. share technological advances and good management practice
5. disseminate innovation
6. safeguard consumers, and users in general, of products and services
7. make life simpler by providing solutions to common problems.

Who standards benefit ?

ISO standards provide technological, economic and societal benefits.

For **businesses**, the widespread adoption of International Standards means that suppliers can develop and offer products and services meeting specifications that have wide international acceptance in their sectors. Therefore, businesses using International Standards can compete on many more markets around the world.

For **innovators** of new technologies, International Standards on aspects like terminology, compatibility and safety speed up the dissemination of innovations and their development into manufacturable and marketable products.

For **customers**, the worldwide compatibility of technology which is achieved when products and services are based on International Standards gives them a broad choice of offers. They also benefit from the effects of competition among suppliers.

For **governments**, International Standards provide the technological and scientific bases underpinning health, safety and environmental legislation.

For **trade officials**, International Standards create "a level playing field" for all competitors on those markets. The existence of divergent national or regional standards can create technical barriers to trade. International Standards are the technical means by which political trade agreements can be put into practice.

For **developing countries**, International Standards that represent an international consensus on the state of the art are an important source of technological know-how. By defining the characteristics that products and services will be expected to meet on export markets, International Standards give developing countries a basis for making the right decisions when investing their scarce resources and thus avoid squandering them.

For **consumers**, conformity of products and services to International Standards provides assurance about their quality, safety and reliability.

For **everyone**, International Standards contribute to the quality of life in general by ensuring that the transport, machinery and tools we use are safe.

For the **planet** we inhabit, International Standards on air, water and soil quality, on emissions of gases and radiation and environmental aspects of products can contribute to efforts to preserve the environment.

The scope of ISO's work:-

ISO has more than 18 000 International Standards and other types of normative documents in its current portfolio. ISO's work programme ranges from standards for traditional activities, such as agriculture and construction, through mechanical engineering, manufacturing and distribution, to transport, medical devices, information and communication technologies, and to standards for good management practice and for services.

What's different about ISO 9001 and ISO 14001 ?

The vast majority of ISO standards are highly specific to a particular product, material, or process. However, ISO 9001 (quality) and ISO 14001 (environment) are "generic management system standards". "Generic" means that the same standard can be applied to any organization, large or small, whatever its product or service, in any sector of activity, and whether it is a business enterprise, a public administration, or a government department. ISO 9001 contains a generic set of requirements for implementing a quality management system and ISO 14001 for an environmental management system.

People Capability Maturity Model

People Capability Maturity Model (short names:People CMM, PCMM,P-CMM) is a maturity framework that focuses on continuously improving the management and development of the human assets of an organization.

It describes an evolutionary improvement path from ad hoc, inconsistently performed practices, to a mature, disciplined, and continuously improving development of the knowledge, skills, and motivation of the workforce that enhances strategic business performance. The People Capability Maturity Model (People CMM) is a framework that helps organizations successfully address their critical people issues. Based on the best current practices in fields such as human resources, knowledge management, and organizational development, the People CMM guides organizations in improving their processes for managing and developing their workforces.

The People CMM helps organizations characterize the maturity of their workforce practices, establish a program of continuous workforce development, set priorities for improvement actions, integrate workforce development with process improvement, and establish a culture of excellence. Since its release in 1995, thousands of copies of the People CMM have been distributed, and it is used worldwide by organizations, small and large. First published in book form in 2001, it is in print in several editions worldwide, and a second edition is forthcoming in 2009.

The People Capability Maturity Model: -

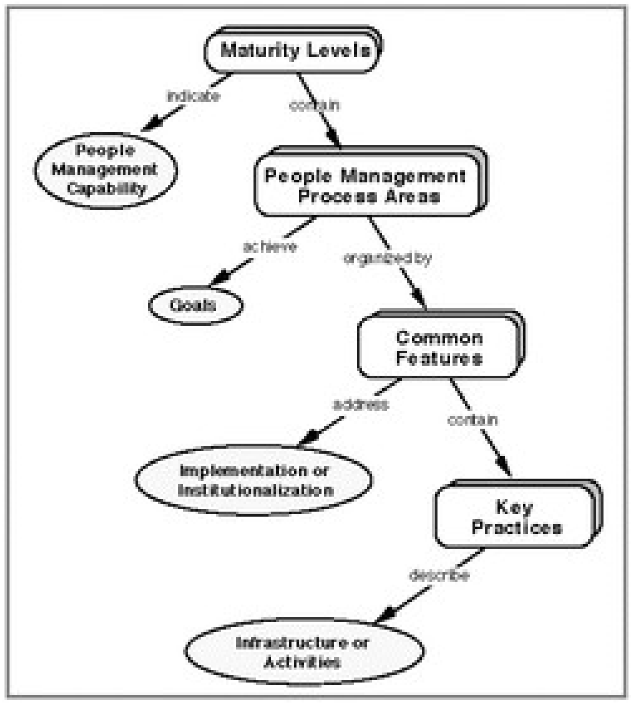
- Characterize the maturity of their workforce practices
- Set priorities for immediate action
- Integrate workforce development with process improvement
- Become an employer of choice

The People CMM consists of five maturity levels that establish successive foundations for continuously improving individual competencies, developing effective teams, motivating improved performance, and shaping the workforce the organization needs to accomplish its future business plans. Each maturity level is a well-defined evolutionary plateau that institutionalizes new capabilities for developing the organization's workforce. By following the maturity framework, an organization can avoid introducing workforce practices that its employees are unprepared to implement effectively.

The People CMM has been published in book form in numerous editions around the world.

Structure of People CMM: -

The People CMM document describes the People CMM, the practices that constitute each of its maturity levels, and information on how to apply it in guiding organizational improvements. It describes an organization's capability for developing its workforce at each maturity level. It describes how the People CMM can be applied as a standard for assessing workforce practices and as a guide in planning and implementing improvement activities.

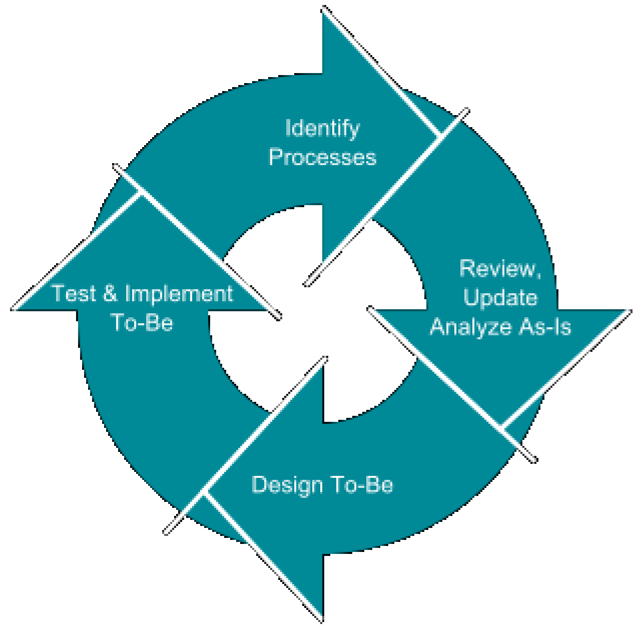


Version 2 of the People CMM has been designed to correct known issues in Version 1, which was released in 1995; to add enhancements learned from five years of implementation experience; and to integrate the model better with CMMI and its IPPD extensions. The primary motivation for updating the People CMM was the error in Version 1 of placing team-building activities at Maturity Level 4. The authors made this placement based on substantial feedback that it should not be placed at Maturity Level 3, as it had been in early review releases. Experience has indicated that many organizations initiate formal development of workgroups while working toward Maturity Level 3. Thus, Version 2 of the People CMM initiates process-driven workgroup development at Maturity Level 3. This change is consistent with the placing of integrated teaming activities at Maturity Level 3 of the CMMI-IPPD.

Business process reengineering

The analysis and design of workflows and processes within an organization.

A business process is a set of logically related tasks performed to achieve a defined business outcome. Re-engineering is the basis for many recent developments in management. The cross-functional team, for example, has become popular because of the desire to re-engineer separate functional tasks into complete cross-functional processes.



Business Process Reengineering Cycle

Also, many recent management information systems developments aim to integrate a wide number of business functions like enterprise resource planning, supply chain management, knowledge management systems, groupware and collaborative systems, Human Resource Management Systems and customer relationship management. Business Process Reengineering is also known as Business Process Redesign, Business Transformation, or Business Process Change Management.

Business process reengineering (BPR) began as a private sector technique to help organizations fundamentally rethink how they do their work in order to dramatically improve customer service, cut operational costs, and become world-class competitors. A key stimulus for reengineering has been the continuing development and deployment of sophisticated information systems and networks. Leading organizations are becoming bolder in using this technology to support innovative business processes, rather than refining current ways of doing work.

Business process reengineering is one approach for redesigning the way work is done to better support the organization's mission and reduce costs. Reengineering starts with a high-level assessment of the organization's mission, strategic goals, and customer needs. Basic questions are asked, such as "Does our mission need to be redefined? Are our strategic goals aligned with our mission? Who are our customers?" An organization may find that it is operating on questionable assumptions, particularly in terms of the wants and needs of its customers. Only after the organization rethinks what it should be doing, does it go on to decide how best to do it.

Definition: -

Different definitions can be found. This section contains the definition provided in notable publications in the field:

- "The fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance, such as cost, quality, service, and speed."
- "Encompasses the envisioning of new work strategies, the actual process design activity, and the implementation of the change in all its complex technological, human, and organizational dimensions."

Especially the continuous improvement or TQM movement, when he states: "Today firms must seek not fractional, but multiplicative levels of improvement – 10x rather than 10%." Finally, Johansson provide a description of BPR relative to other process-oriented views, such as Total Quality Management (TQM) and Just-in-time (JIT), and state:

- "Business Process Reengineering, although a close relative, seeks radical rather than merely continuous improvement. It escalates the efforts of JIT and TQM to make process orientation a strategic tool and a core competence of the organization. BPR concentrates on core business processes, and uses the specific techniques within the JIT and TQM ”toolboxes” as enablers, while broadening the process vision."

In order to achieve the major improvements BPR is seeking for, the change of structural organizational variables, and other ways of managing and performing work is often considered as being insufficient. For being able to reap the achievable benefits fully, the use of information technology (IT) is conceived as a major contributing factor. While IT traditionally has been used for supporting the existing business functions, i.e. it was used for increasing organizational efficiency, it now plays a role as enabler of new organizational forms, and patterns of collaboration within and between organizations.

BPR derives its existence from different disciplines, and four major areas can be identified as being subjected to change in BPR –

1. organization,
2. technology,
3. strategy, and
4. people - where a process view is used as common framework for considering these dimensions. The approach can be graphically depicted by a modification of "Leavitt’s diamond".

The role of information technology: -

Information technology (IT) has historically played an important role in the reengineering concept. It is considered by some as a major enabler for new forms of working and collaborating within an organization and across organizational borders.

Early BPR literature identified several so called disruptive technologies that were supposed to challenge traditional wisdom about how work should be performed.

- Shared databases, making information available at many places
- Expert systems, allowing generalists to perform specialist tasks
- Telecommunication networks, allowing organizations to be centralized and decentralized at the same time
- Decision-support tools, allowing decision-making to be a part of everybody's job
- Wireless data communication and portable computers, allowing field personnel to work office independent
- Interactive videodisk, to get in immediate contact with potential buyers
- Automatic identification and tracking, allowing things to tell where they are, instead of requiring to be found
- High performance computing, allowing on-the-fly planning and revisioning

In the mid 1990s, especially workflow management systems were considered as a significant contributor to improved process efficiency. Also ERP (Enterprise Resource Planning) vendors, such as SAP, JD Edwards, Oracle, PeopleSoft, positioned their solutions as vehicles for business process redesign and improvement.
Other criticism brought forward against the BPR concept include

- It never changed management thinking, actually the largest causes of failure in an organization
- Lack of management support for the initiative and thus poor acceptance in the organization.
- Exaggerated expectations regarding the potential benefits from a BPR initiative and consequently failure to achieve the expected results.
- Underestimation of the resistance to change within the organization.
- Implementation of generic so-called best-practice processes that do not fit specific company needs.
- Over trust in technology solutions.
- Performing BPR as a one-off project with limited strategy alignment and long-term perspective.
- Poor project management.

Business process outsourcing

Business process outsourcing (BPO) is a subset of outsourcing that involves the contracting of the operations and responsibilities of specific business functions (or processes) to a third-party service provider. Originally, this was associated with manufacturing firms, such as Coca Cola that outsourced large segments of its supply chain. In the contemporary context, it is primarily used to refer to the outsourcing of services.

BPO is typically categorized into back office outsourcing - which includes internal business functions such as human resources or finance and accounting, and front office outsourcing - which includes customer-related services such as contact center services.

BPO that is contracted outside a company's country is called offshore outsourcing. BPO that is contracted to a company's neighboring (or nearby) country is called near shore outsourcing.

Given the proximity of BPO to the information technology industry, it is also categorized as an information technology enabled service or ITES. Knowledge process outsourcing (KPO) and legal process outsourcing (LPO) are some of the sub-segments of business process outsourcing industry.

Benefits: -

- ✔ An advantage of BPO is the way in which it helps to increase a **company's flexibility.** However, several sources have different ways in which they perceive organizational flexibility. Therefore business process outsourcing enhances the flexibility of an organization in different ways.
- ✔ Most services provided by BPO vendors are offered on a **fee-for-service basis**. This can help a company becoming more flexible by transforming fixed into variable costs. A variable cost structure helps a company responding to changes in required capacity and does not require a company to invest in assets, thereby making the company more flexible. Outsourcing may provide a firm with increased flexibility in its resource management and may reduce response times to major environmental changes.
- ✔ Another way in which BPO contributes to a company's flexibility is that a company is able to **focus on its core competencies**, without being burdened by the demands of bureaucratic restraints. Key employees are herewith released from performing non-core or administrative processes and can invest more time and energy in building the firm's core businesses. The key lies in knowing which of the main value drivers to focus on – customer intimacy, product leadership, or operational excellence. Focusing more on one of these drivers may help a company create a competitive edge.
- ✔ A third way in which BPO increases organizational flexibility is by **increasing the speed of business processes**. Using techniques such as linear programming can reduce cycle time and inventory levels, which can increase efficiency and cut costs. Supply chain management with the effective use of supply chain partners and business process

outsourcing increases the speed of several business processes, such as the throughput in the case of a manufacturing company.

- ✔ Finally, flexibility is seen as a stage in the **organizational life cycle**. BPO helped to transform Nortel from a bureaucratic organization into a very agile competitor. A company can maintain growth goals while avoiding standard business bottlenecks.BPO therefore allows firms to retain their entrepreneurial speed and agility, which they would otherwise sacrifice in order to become efficient as they expanded. It avoids a premature internal transition from its informal entrepreneurial phase to a more bureaucratic mode of operation.
- ✔ A company may be able to **grow at a faster pace** as it will be less constrained by large capital expenditures for people or equipment that may take years to amortize, may become outdated or turn out to be a poor match for the company over time.

Limitations:-

- × failure to meet service levels
- × unclear contractual issues
- × changing requirements
- × unforeseen charges
- × dependence on the BPO which reduces flexibility

Threats: -

Risk is the major drawback with Business Process Outsourcing.

Outsourcing of an Information System, for example, can cause security risks both from a communication and from a privacy perspective. For example, security of North American or European company data is more difficult to maintain when accessed or controlled in the Sub-Continent. From a knowledge perspective, a changing attitude in employees, underestimation of running costs and the major risk of losing independence, outsourcing leads to a different relationship between an organization and its contractor.

Risks and threats of outsourcing must therefore be managed, to achieve any benefits. In order to manage outsourcing in a structured way, maximizing positive outcome, minimizing risks and avoiding any threats, a Business continuity management (BCM) model is setup. BCM consists of a set of steps, to successfully identify, manage and control the business processes that are, or can be outsourced. Another framework, more focused on the identification process of potential outsources able Information Systems, identified as AHP, and is explained.

Balanced scorecard

The balanced scorecard (BSC) is a strategic performance management tool - a semi-standard structured report supported by proven design methods and automation tools that can be used by managers to keep track of the execution of activities by staff within their control and monitor the consequences arising from these actions. It is perhaps the best known of several such frameworks (for example, it is the most widely adopted performance management framework reported in the annual survey of management tools undertaken by Bain & Company, and has been widely adopted in English speaking western countries and Scandinavia in the early 1990s. Since 2000, use of Balanced Scorecard, its derivatives (e.g. performance prism), and other similar tools (e.g. Results Based Management) have become common in the Middle East, Asia and Spanish-speaking countries also

Characteristics

The core characteristic of the Balanced Scorecard and its derivatives is the presentation of a mixture of financial and non-financial measures each compared to a 'target' value within a single concise report. The report is not meant to be a replacement for traditional financial or operational reports but a succinct summary that captures the information most relevant to those reading it. It is the method by which this 'most relevant' information is determined (i.e. the design processes used to select the content) that most differentiates the various versions of the tool in circulation.

The first versions of Balanced Scorecard asserted that relevance should derive from the corporate strategy, and proposed design methods that focused on choosing measures and targets associated with the main activities required to implement the strategy. As the initial audience for this were the readers of the Harvard Business Review, the proposal was translated into a form that made sense to a typical reader of that journal - one relevant to a mid-sized US business. Accordingly, initial designs were encouraged to measure three categories of non-financial measure in addition to financial outputs - those of "Customer," "Internal Business Processes" and "Learning and Growth." Clearly these categories were not so relevant to non-profits or units within complex organisations (which might have high degrees of internal specialisation), and much of the early literature on Balanced Scorecard focused on suggestions of alternative 'perspectives' that might have more relevance to these groups.

Modern Balanced Scorecard thinking has evolved considerably since the initial ideas proposed in the late 1980s and early 1990s, and the modern performance management tools including Balanced Scorecard are significantly improved - being more flexible (to suit a wider range of organisational types) and more effective (as design methods have evolved to make them easier to design, and use).

History

The first balanced scorecard was created by Art Schneiderman (an independent consultant on the management of processes) in 1987 at Analog Devices, a mid-sized semi-conductor company.Art Schniederman participated in an unrelated research study in 1990 led by Dr. Robert S. Kaplan in conjunction with US management consultancy Nolan-Norton, and during this study described his work on Balanced Scorecard. Subsequently, Kaplan and David P. Norton included anonymous details of this use of balanced scorecard in their 1992 article on Balanced Scorecard. Kaplan &

Norton's article wasn't the only paper on the topic published in early 1992. But the 1992 Kaplan & Norton paper was a popular success, and was quickly followed by a second in 1993. In 1996, they published the book The Balanced Scorecard. These articles and the first book spread knowledge of the concept of Balanced Scorecard widely, but perhaps wrongly have led to Kaplan & Norton being seen as the creators of the Balanced Scorecard concept.

While the "balanced scorecard" concept and terminology was coined by Art Schneiderman, the roots of performance management as an activity run deep in management literature and practice. Management historians such as Alfred Chandler suggest the origins of performance management can be seen in the emergence of the complex organisation - most notably during the 19th Century in the USA. More recent influences may include the pioneering work of General Electric on performance measurement reporting in the 1950s and the work of French process engineers (who created the tableau de bord – literally, a "dashboard" of performance measures) in the early part of the 20th century. The tool also draws strongly on the ideas of the 'resource based view of the firm'proposed by Edith Penrose. However it should be noted that none of these influences is explicitly linked to original descriptions of Balanced Scorecard by Schneiderman, Maisel, or Kaplan & Norton.

Kaplan & Norton's first book, The Balanced Scorecard, remains their most popular. The book reflects the earliest incarnations of Balanced Scorecard - effectively restating the concept as described in the 2nd Harvard Business Review article. Their second book, The Strategy Focused Organization, echoed work by others (particularly in Scandinavia) on the value of visually documenting the links between measures by proposing the "Strategic Linkage Model" or strategy map. Since then Balanced Scorecard books have become more common - in early 2010 Amazon was listing several hundred titles in English which had Balanced Scorecard in the title.

Design

Design of a Balanced Scorecard ultimately is about the identification of a small number of financial and non-financial measures and attaching targets to them, so that when they are reviewed it is possible to determine whether current performance 'meets expectations'. The idea behind this is that by alerting managers to areas where performance deviates from expectations, they can be encouraged to focus their attention on these areas, and hopefully as a result trigger improved performance within the part of the organisation they lead.

The original thinking behind Balanced Scorecard was for it to be focused on information relating to the implementation of a strategy, and perhaps unsurprisingly over time there has been a blurring of the boundaries between conventional strategic planning and control activities and those required to design a Balanced Scorecard. This is illustrated well by the four steps required to design a Balanced Scorecard included in Kaplan & Norton's writing on the subject in the late 1990s, where they assert four steps as being part of the Balanced Scorecard design process:

- Translating the vision into operational goals;
- Communicating the vision and link it to individual performance;
- Business planning; index setting
- Feedback and learning, and adjusting the strategy accordingly.

These steps go far beyond the simple task of identifying a small number of financial and non-financial measures, but illustrate the requirement for whatever design process is used to fit within broader thinking about how the resulting Balanced Scorecard will integrate with the wider business management process. This is also illustrated by books and articles referring to balanced scorecards confusing the design process elements and the balanced scorecard itself. In particular, it is common for people to refer to a “strategic linkage model” or “strategy map” as being a balanced scorecard.

Although it helps focus managers' attention on strategic issues and the management of the implementation of strategy, it is important to remember that the balanced scorecard itself has no role in the formation of strategy. In fact, balanced scorecards can comfortably co-exist with strategic planning systems and other tools.

Original design method

The earliest Balanced Scorecards comprised simple tables broken into four sections - typically these "perspectives" were labeled "Financial", "Customer", "Internal Business Processes", and "Learning and Growth". Designing the Balanced Scorecard required selecting five or six good measures for each perspective.

Many authors have since suggested alternative headings for these perspectives, and also suggested using either additional or fewer perspectives. These suggestions were notably triggered by a recognition that different but equivalent headings would yield alternative sets of measures. The major design challenge faced with this type of Balanced Scorecard is justifying the choice of measures made. "Of all the measures you could have chosen, why did you choose these?" This common question is hard to answer using this type of design process. If users are not confident that the measures within the Balanced Scorecard are well chosen, they will have less confidence in the information it provides. Although less common, these early-style Balanced Scorecards are still designed and used today.

In short, early-style Balanced Scorecards are hard to design in a way that builds confidence that they are well designed. Because of this, many are abandoned soon after completion.

Improved design methods

In the mid 1990s, an improved design method emerged. In the new method, measures are selected based on a set of "strategic objectives" plotted on a "strategic linkage model" or "strategy map". With this modified approach, the strategic objectives are distributed across the four measurement perspectives, so as to "connect the dots" to form a visual presentation of strategy and measures.

To develop a strategy map, managers select a few strategic objectives within each of the perspectives, and then define the cause-effect chain among these objectives by drawing links between them. A balanced scorecard of strategic performance measures is then derived directly from the strategic objectives. This type of approach provides greater contextual justification for the measures chosen, and is generally easier for managers to work through. This style of Balanced Scorecard has been commonly used since 1996 or so: it is significantly different in approach to the methods originally proposed, and so can be thought of as representing the "2nd Generation" of design approach adopted for Balanced Scorecard since its introduction.

Several design issues still remain with this enhanced approach to Balanced Scorecard design, but it has been much more successful than the design approach it superseded.

In the late 1990s, the design approach had evolved yet again. One problem with the "2nd generation" design approach described above was that the plotting of causal links amongst twenty or so medium-term strategic goals was still a relatively abstract activity. In practice it ignored the fact that opportunities to intervene, to influence strategic goals are, and need to be anchored in the "now;" in current and real management activity. Secondly, the need to "roll forward" and test the impact of these goals necessitated the creation of an additional design instrument; the Vision or Destination Statement. This device was a statement of what "strategic success," or the "strategic end-state" looked like. It was quickly realized, that if a Destination Statement was created at the beginning of the design process then it was much easier to select strategic Activity and Outcome objectives to respond to it. Measures and targets could then be selected to track the achievement of these objectives. Design methods that incorporate a "Destination Statement" or equivalent (e.g. the Results Based Management method proposed by the UN in 2002) represent a tangibly different design approach to those that went before, and have been proposed as representing a "3rd Generation" design method for Balanced Scorecard.

Design methods for Balanced Scorecard continue to evolve and adapt to reflect the deficiencies in the currently used methods, and the particular needs of communities of interest (e.g. NGO's and Government Departments have found the 3rd Generation methods embedded in Results Based Management more useful than 1st or 2nd Generation design methods).

Popularity

In 1997, Kurtzman found that 64 percent of the companies questioned were measuring performance from a number of perspectives in a similar way to the Balanced Scorecard.

Balanced Scorecards have been implemented by government agencies, military units, business units and corporations as a whole, non-profit organisations, and schools.

Many examples of Balanced Scorecards can be found via Web searches. However, adapting one organisation's Balanced Scorecard to another is generally not advised by theorists, who believe that much of the benefit of the Balanced Scorecard comes from the design process itself. Indeed, it could be argued that many failures in the early days of Balanced Scorecard could be attributed to this problem, in that early Balanced Scorecards were often designed remotely by consultants. Managers did not trust, and so failed to engage with and use these measure suites created by people lacking knowledge of the organisation and management responsibility.

Variants, alternatives and criticisms

Since the Balanced Scorecard was popularized in the early 1990s, a large number of alternatives to the original 'four box' Balanced Scorecard promoted by Kaplan & Norton in their various articles and books have emerged. Most have very limited application, and are typically proposed either by academics as vehicles for promoting other agendas (such as green issues),or consultants as an attempt at differentiation to promote sales of books and / or consultancy.

Many of the variations proposed are broadly similar, and a research paper published in 2002 attempted to identify a pattern in these variations - noting three distinct types of variation. The variations appeared to be part of an evolution of the Balanced Scorecard concept, and so the paper refers to these distinct types as "Generations". Broadly, the original 'measures in boxes' type design (as proposed by Kaplan & Norton) constitutes the 1st Generation Balanced Scorecard design; Balanced Scorecard designs that include a 'strategy map' or 'strategic linkage model' (e.g. the Performance Prism, later Kaplan & Norton designs, the Performance Driver model of Olve & Wetter) constitute the 2nd Generation of Balanced Scorecard design; and designs that augment the strategy map / strategic linkage model with a separate document describing the long-term outcomes sought from the strategy (the "Destination Statement" idea) comprise the 3rd Generation Balanced Scorecard design. Examples of the 3rd Generation Balanced Scorecard design include the Third Generation Balanced Scorecard itself, and the performance management elements of the UN's Results Based Management model.

The four perspectives

The 1st Generation design method proposed by Kaplan & Norton was based on the use of three non-financial topic areas as prompts to aid the identification of non-financial measures in addition to one looking at Financial. The four "perspectives" proposed were:

- Financial: encourages the identification of a few relevant high-level financial measures. In particular, designers were encouraged to choose measures that helped inform the answer to the question "How do we look to shareholders?"
- Customer: encourages the identification of measures that answer the question "How do customers see us?"
- Internal Business Processes: encourages the identification of measures that answer the question "What must we excel at?"
- Learning and Growth: encourages the identification of measures that answer the question "Can we continue to improve and create value?".

These 'prompt questions' illustrate that Kaplan & Norton were thinking about the needs of small to medium sized commercial organizations in the USA (the target demographic for the Harvard Business Review) when choosing these topic areas. They are not very helpful to other kinds of organizations, and much of what has been written on Balanced Scorecard since has, in one way or another, focused on the identification of alternative headings more suited to a broader range of organizations.

Measures

The Balanced Scorecard is ultimately about choosing measures and targets. The various design methods proposed are intended to help in the identification of these measures and targets, usually by a process of abstraction that narrows the search space for a measure (e.g. find a measure to inform about a particular 'objective' within the Customer perspective, rather than simply finding a measure for 'Customer'). Although lists of general and industry-specific measure definitions can be found in the case studies and methodological articles and books presented in the references section. In general measure catalogues and suggestions from books are only helpful 'after the event' - in the same way that a Dictionary can help you confirm the spelling (and usage) of a word, but only once you have decided to use it proficiently.

Software tools

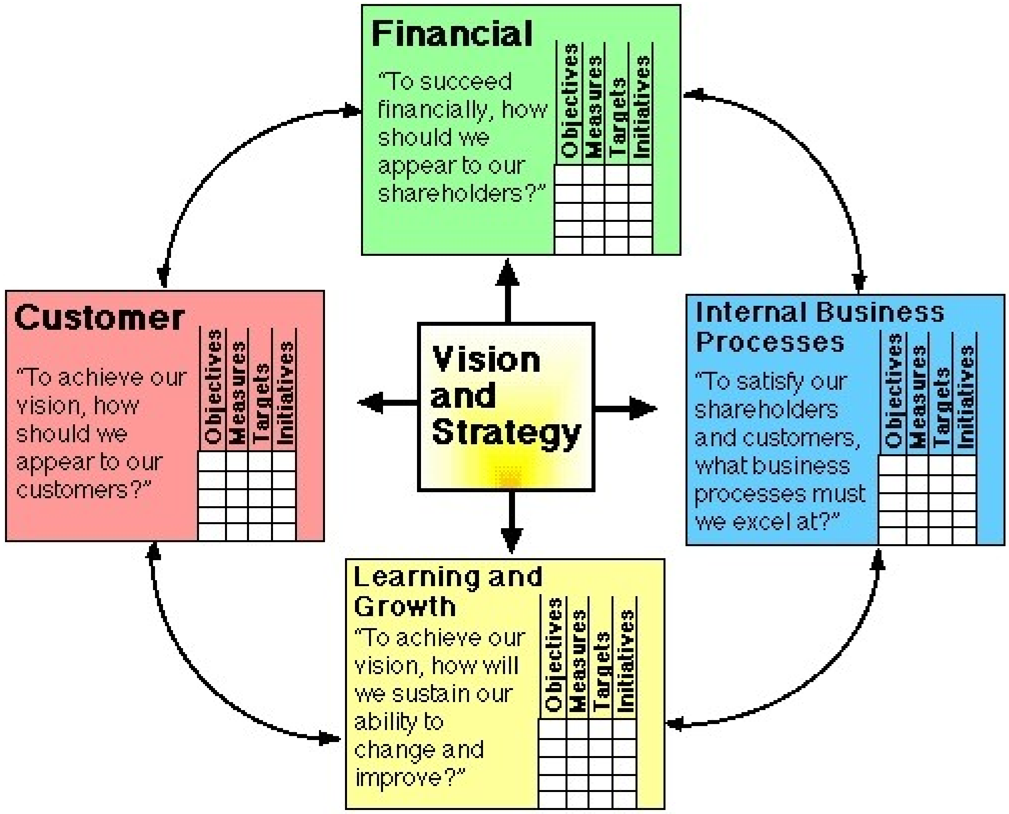
It is important to recognise that the balanced scorecard by definition is not a complex thing - typically no more than about 20 measures spread across a mix of financial and non-financial topics, and easily reported manually (on paper, or using simple Office software).

The processes of collecting, reporting, and distributing Balanced Scorecard information can be labour intensive and prone to procedural problems (for example, getting all relevant people to return the information required by the required date). The simplest mechanism to use is to delegate these activities to an individual, and many Balanced Scorecards are reported via ad-hoc methods based around email, phone calls and office software.

In more complex organisations, where there are multiple Balanced Scorecards to report and/or a need for co-ordination of results between Balanced Scorecards (for example, if one level of Balanced Scorecard reports relies on information collected and reported at a lower level) the use of individual Balanced Scorecard reporters is problematic. Where these conditions apply, organisations use Balanced Scorecard reporting software to automate the production and distribution of these reports.

A recent survey, found that roughly 1/3 of organisations use office software to report their Balanced Scorecard, 1/3 use bespoke software developed specifically for their own use, and 1/3 use one of the many commercial packages available.

There are currently over 100 vendors of software suitable for Balanced Scorecard reporting (i.e. supporting data collection, reporting and analysis).



SAP is an acronym for "**System Application & Products**" which creates a common centralised database for all the applications running in an organization. The application has been assembled in such a versatile way that it handles all the functional department within an organisation. Today major companies including Microsoft and IBM are using SAP's Products to run their own businesses.

R/2, which ran on a Mainframe architecture, was the first SAP version. Sap's products are generally focused on Enterprise Resource Planning (ERP). Sap's applications are built around R/3 system which provide the functionality to manage product operations, cost accounting, assets, materials and personnel. The R/3 system of SAP runs on majority of platforms including windows 2000 and it uses the client/sever model.

SAP provides majority of enterprise applications that includes:

1. SAP Knowledge Warehouse (KW)

2. Product Lifecycle Management (PLM)

3. Human Resource Management Systems (HRMS)

4. Supplier Relationship Management (SRM)

5. Supply Chain Management (SCM)

6. Customer Relationship Management (CRM)

7. Advanced Planner and Optimizer (APO)

8. Business Information Warehouse (BW)

Advantages: -

1. Integration

Integration can be the highest benefit of them all. The only real project aim for implementing ERP is reducing data redudancy and redudant data entry. If this is set as a goal, to automate inventory posting to G/L, then it might be a successful project. Those companies where integration is not so important or even dangerous, tend to have a hard time with ERP. ERP does not improve the individual efficiency of users, so if they expect it, it will be a big disappointment. ERP improves the cooperation of users.

2. Efficiency

Generally, ERP software focuses on integration and tend to not care about the daily needs of people. I think individual efficiency can suffer by implementing ERP. the big question with ERP is whether the benefit of integration and cooperation can make up for the loss in personal efficiency or not.

3.Cost reduction

It reduces cost only if the company took accounting and reporting seriously even before implementation and had put a lot of manual effort in it. If they didn't care about it, if they just did some simple accounting to fill mandatory statements and if internal reporting did not exists of has not been fincancially-oriented, then no cost is reduced.

4.Less personnel

Same as above. Less reporting or accounting personnel, but more sales assistants etc.

5. Accuracy

No. People are accurate, not software. What ERP does is makes the lives of inaccurate people or organization a complete hell and maybe forces them to be accurate (which means hiring more people or distributing work better), or it falls.

Disadvantages:

1. Expensive

This entails software, hardware, implementation, consultants, training, etc. Or you can hire a programmer or two as an employee and only buy business consulting from an outside source, do all customization and end-user training inside. That can be cost-effective.

2. Not very flexible

It depends. SAP can be configured to almost anything. In Navision one can develop almost anything in days. Other software may not be flexible.

ERP stands for Enterprise Resource Planning. ERP is a way to integrate the data and processes of an organization into one single system. Usually ERP systems will have many components including hardware and software, in order to achieve integration, most ERP systems use a unified database to store data for various functions found throughout the organization.

The term ERP originally referred to how a large organization planned to use organizational wide resources. In the past, ERP systems were used in larger more industrial types of companies. However, the use of ERP has changed and is extremely comprehensive, today the term can refer to any type of company, no matter what industry it falls in. In fact, ERP systems are used in almost any type of organization - large or small.

In order for a software system to be considered ERP, it must provide an organization with functionality for two or more systems. While some ERP packages exist that only cover two functions for an organization (QuickBooks: payroll & accounting), most ERP systems cover several functions.

Today's ERP systems can cover a wide range of functions and integrate them into one unified database. For instance, functions such as Human Resources, Supply Chain Management, Customer Relations Management, Financials, Manufacturing functions and Warehouse Management functions were all once stand alone software applications, usually housed with their own database and network, today, they can all fit under one umbrella - the ERP system.

Integration is Key to ERP

Integration is an extremely important part to ERP's. ERP's main goal is to integrate data and processes from all areas of an organization and unify it for easy access and work flow. ERP's usually accomplish integration by creating one single database that employs multiple software modules providing different areas of an organization with various business functions.

Although the ideal configuration would be one ERP system for an entire organization, many larger organizations usually create and ERP system and then build upon the system and external interface for other stand alone systems which might be more powerful and perform better in fulfilling an organizations needs. Usually this type of configuration can be time consuming and does require lots of labor hours.

The Ideal ERP System

An ideal ERP system is when a single database is utilized and contains all data for various software modules. These software modules can include:

Manufacturing: Some of the functions include; engineering, capacity, workflow management, quality control, bills of material, manufacturing process, etc.

Financials: Accounts payable, accounts receivable, fixed assets, general ledger and cash management, etc.

Human Resources: Benefits, training, payroll, time and attendance, etc

Supply Chain Management: Inventory, supply chain planning, supplier scheduling, claim processing, order entry, purchasing, etc.

Projects: Costing, billing, activity management, time and expense, etc.

Customer Relationship Management: sales and marketing, service, commissions, customer contact, calls center support, etc.

Data Warehouse: Usually this is a module that can be accessed by an organizations customers, suppliers and employees.

ERP Improves Productivity

Before ERP systems, each department in an organization would most likely have their own computer system, data and database. Unfortunately, many of these systems would not be able to communicate with one another or need to store or rewrite data to make it possible for cross computer system communication. For instance, the financials of a company were on a separate computer system than the HR system, making it more intensive and complicated to process certain functions.

Once an ERP system is in place, usually all aspects of an organization can work in harmony instead of every single system needing to be compatible with each other. For large organizations, increased productivity and less types of software are a result.

Implementation of an ERP System

Implementing an ERP system is not an easy task to achieve, in fact it takes lots of planning, consulting and in most cases 3 months to 1 year +. ERP systems are extraordinary wide in scope and for many larger organizations can be extremely complex. Implementing an ERP system will ultimately require significant changes on staff and work practices. While it may seem reasonable for an in house IT staff to head the project, it is widely advised that ERP implementation consultants be used, due to the fact that consultants are usually more cost effective and are specifically trained in implementing these types of systems.

One of the most important traits that an organization should have when implementing an ERP system is ownership of the project. Because so many changes take place and its broad effect on almost every individual in the organization, it is important to make sure that everyone is on board and will help make the project and using the new ERP system a success.

Usually organizations use ERP vendors or consulting companies to implement their customized ERP system. There are three types of professional services that are provided when implementing an ERP system, they are Consulting, Customization and Support.

Consulting Services - usually consulting services are responsible for the initial stages of ERP implementation, they help an organization go live with their new system, with product training, workflow, improve ERP's use in the specific organization, etc.

Customization Services - Customization services work by extending the use of the new ERP system or changing its use by creating customized interfaces and/or underlying application code. While ERP systems are made for many core routines, there are still some needs that need to be built or customized for an organization. Support Services- Support services include both support and maintenance of ERP systems. For instance, trouble shooting and assistance with ERP issues.

Advantages of ERP Systems

There are many advantages of implementing an EPR system; here are a few of them:

- ✔ A totally integrated system
- ✔ The ability to streamline different processes and workflows
- ✔ The ability to easily share data across various departments in an organization
- ✔ Improved efficiency and productivity levels
- ✔ Better tracking and forecasting
- ✔ Lower costs
- ✔ Improved customer service

Disadvantages of ERP Systems

While advantages usually outweigh disadvantages for most organizations implementing an ERP system, here are some of the most common obstacles experienced:

Usually many obstacles can be prevented if adequate investment is made and adequate training is involved, however, success does depend on skills and the experience of the workforce to quickly adapt to the new system.

- × Customization in many situations is limited
- × The need to reengineer business processes
- × ERP systems can be cost prohibitive to install and run
- × Technical support can be shoddy

ERP's may be too rigid for specific organizations that are either new or want to move in a new direction in the near future.

HRIS

- Human Resource Information System

The Human Resource Information System (HRIS) is a software or online solution for the data entry, data tracking, and data information needs of the Human Resources, payroll, management, and accounting functions within a business. Normally packaged as a data base, hundreds of companies sell some form of HRIS and every HRIS has different capabilities. Pick your HRIS carefully based on the capabilities you need in your company.

Typically, the better The Human Resource Information Systems (HRIS) provide overall:

- Management of all employee information.
- Reporting and analysis of employee information.
- Company-related documents such as employee handbooks, emergency evacuation procedures, and safety guidelines.
- Benefits administration including enrollment, status changes, and personal information updating.
- Complete integration with payroll and other company financial software and accounting systems.
- Applicant tracking and resume management.

The HRIS that most effectively serves companies tracks:

- attendance and PTO use,
- pay raises and history,
- pay grades and positions held,
- performance development plans,
- training received,
- disciplinary action received,
- personal employee information, and occasionally,
- management and key employee succession plans,
- high potential employee identification, and
- applicant tracking, interviewing, and selection.

An effective HRIS provides information on just about anything the company needs to track and analyze about employees, former employees, and applicants. Your company will need to select a Human Resources Information System and customize it to meet your needs.

With an appropriate HRIS, Human Resources staff enables employees to do their own benefits updates and address changes, thus freeing HR staff for more strategic functions. Additionally, data necessary for employee management, knowledge development, career growth and development, and equal treatment is facilitated. Finally, managers can access the information they need to legally, ethically, and effectively support the success of their reporting employees.

THINGS TO REMEMBER: -

1. HR professionals should determine if the software can import data from multiple Excel spreadsheets, databases, and paper documents and the level with which it can interface with all kinds of systems and data.
2. The software should be able to take in and filter information from multiple sources. Ideally, this process should also be automated. Many online enrollment solutions require that data be manually manipulated before it can go to a carrier to update their systems. Automation of the update format, transmission schedule and delivery method can help to eliminate billing and eligibility issues.
3. A truly capable enrollment engine will evaluate each enrollment activity and apply any necessary combination of rules, messages, prompts, and options specifically designed to

meet the exact eligibility requirements desired. The software should accommodate any eligibility rules that the company and carriers have.

4. HR should assess the technology's ability to grow as the company brings on new employees, offices, benefits changes, and rules. HR should ask about the thresholds for each of these elements.
5. Payroll and other functions often share much of the same information as benefits management. HR can obtain greater efficiencies when data and other employee information entered into one system can be shared with another system.

PeopleSoft

Enterprise Human Capital Management - Human Resources

<u>Human Resources</u>

Oracle's PeopleSoft Enterprise Human Resources offers comprehensive HR capabilities, from workforce management to compensation and talent management. Extensive business process automation and rich self-service enables organizations around the world to free up their HR teams to perform value-added services while reducing operational costs.

PeopleSoft Human Resources is part of Oracle's PeopleSoft Enterprise Human Capital Management family of applications.

Human Resources - Features List

Global Workforce Management

- Use a single application to meet national and regional requirements, with comprehensive international language, Unicode, and multiple currency capabilities.
- Meet cultural and regulatory requirements in Australia, Belgium, Canada, France, Germany, Hong Kong, Italy, Japan, Malaysia, Mexico, the Netherlands, New Zealand, Singapore, Spain, Switzerland, the United Kingdom, and the United States.
- Use Global Assignments to maintain accurate, comprehensive information on inpatriate, expatriate, and third-party national assignments.

- Manage your entire workforce, including contingent workers such as consultants, contractors, board members, interns, temps, etc.

Total Compensation Management, Reporting, and Analysis

- Design your compensation system to include salary plans, grades, and steps; multiple pay components; variable compensation plans; and benefits.
- Administer simple to complex cash- and non-cash variable compensation programs.

Secure, Integrated HRMS Data Warehouse

- Build a multidimensional data warehouse for combining your human resources, benefits, and payroll analytical reporting.
- Share data with other PeopleSoft Enterprise HCM, enterprise applications, or current business solutions.
- Leverage 150 pre-packaged HR-relevant metrics, complex derived metrics, and 19 leading analysis and reporting templates tailored to individual roles, functions, and industries.

Union Labor Management

- Manage your organization's labor agreements, including job codes affected, seniority rules, and facilities included.
- Define automated wage progression rules and processing.
- Access automated collective action administration for mass layoffs/re-calls.

Competency, Career, and Succession Management

- Identify and associate competencies with individuals, jobs, positions, and project teams.
- Identify employee development needs, then enroll employees in training programs.
- Find leadership and talent gaps in your organization, and identify and follow up on high-potential employees.

Comprehensive Health, Safety, and Labor Relations Management

- Create an accurate, up-to-date record of the steps taken to resolve labor relations problems and help your organization avoid liability issues.
- Track detailed data on incidents, injuries, illnesses, dangerous occurrences, first aid and medical-aid treatments, accident investigations, corrective actions, compensation claims, and medical examinations.

Flexible Position Management

- Run your system by administering employees or jobs, by managing positions, or by partial position management.
- Define position characteristics, including organization, location, job code and title, shift and work days, expenditures, and related budget information.
- Create accurate departmental budgets by position, job code, or the department as a whole —for any time period.

Benefits Management

- Base Benefits provides you with the tools you need to manage your employee benefit programs, from tracking and managing FMLA requests to managing 403(b) and vacation buy and sell programs.
- Set up your basic benefits system architecture and enroll employees and their dependents into the benefits system. Includes COBRA coverage.

Helpdesk for Human Resources

Helpdesk for Human Resources is a workforce support center solution that incorporates functionality to support the entire request-to-resolve process. Helpdesk for Human Resources gives HR specialists a view of every employee's case history and HR data, enabling them to quickly manage and resolve all employee HR issues in real time.

Helpdesk for Human Resources is a part of Oracle's PeopleSoft Enterprise Human Capital Management family of applications.

Helpdesk for Human Resources - Features List

- Unique Service Delivery Solution. Helpdesk for Human Resources is the only end-to-end service delivery model for Human Capital Management on the market. No other Helpdesk solution allows direct view and edits accessibility to HR data and HR software applications in real time.

- Reduce Costs by Optimizing Human Resources Practices and Solutions. A single global Helpdesk solution streamlines the entire HR software delivery process and allows HR staff to redirect their focus from administrative tasks to strategic business activities.
- Secure Integration. Pre-built secure integration between PeopleSoft HR software and CRM reduces data entry, improves data accuracy, and leverages existing system investments.
- 360-Degree View. Provide agents with a quick snapshot of the data most likely required to answer high-level questions/cases.
- Increase Workforce Productivity. Agent talents are matched with workforce issues to deliver the right answer in real time, which translates to less down time. When aligned with self-service, problem/case escalations are further reduced.
- Enhance Organizational Productivity. Leverage existing systems and investments; respond to the workforce as customers.

The Human Resource Audit

Regardless of the type of company or the size of your HR department, the HR Audit is a simple, yet comprehensive tool to analyze and improve your effectiveness as a function.

The audit is made up of four main steps:

1) Define desired HR practices for your organization

2) Assess current practices against the criterion that you have established

3) Analyze the results

4) Establish improvement goals and take action

This simple four-step approach can be repeated as the annual planning and goal setting process occurs within your company. Progress can be measured against goals and a continuous improvement cycle naturally unfolds.

Purpose(s) of an Audit

The audit can serve any of the following purposes:

__To clarify desired practices of HR work and roles within the organization (HR Department, Line Managers).

__To establish a baseline for future improvement.

__To evaluate current effectiveness.

__To standardize practices across multiple sites within a division or company.

__To assess current knowledge and skills required of HR practitioners.

__To improve performance levels to key customers within the organization.

The Audit Process

Step One--Defining Audit Statements

Definition of desired HR practices can occur through in a variety of ways.

A good starting point is to take some time and reflect on the legal requirements and programs that the department must administer. Simply listing them is a good first step.

Next, consider your areas of responsibility and traditional HR practices covered by your function: They may include HR Planning, Staffing, Performance Management, Employee Relations, Compensation and Benefits, Training and Development, Safety and Wellness,

Employee Surveys, and Communications. Finally, other areas to consider are company initiatives that the HR function may be required to support, i.e. internal customer requirements. Specifics are unique to your company, but examples could include supporting a Total Quality Management initiative, Team Based Work System, etc.

With this list in hand, a statement can be written about each major practice that you want to define. Typically, they are stated in the present tense and in a positive manner. The following examples illustrate these traits:

__The staffing process is documented so that the responsibility of each person in the process is clear and understood.

__Performance appraisals are completed for each employee in the organization.

__There is a train-the-trainer program for each major training program within the company.

__New employees complete a new hire orientation program of key company policies and procedures within the first 30 days of work.

__There is an issue resolution process that is well understood and used by employees.

As you may notice, definitions can be as complete or detailed, as the developer desires. In starting out, it is better to make more general statements and improve from year to year in those areas that you choose to raise the level of performance.

In summary, you may as many as 60-70 statements depending upon size of your company and the level of detail that you prefer to measure. Regardless of the number, you are developing a description of the level and quality of performance you desire for the Human Resource function.

Step Two--Assessing Current Practices

With the list of statements completed, the assessing current practices require you to be objective. A good approach is to look for evidence that supports or refutes each statement made. Evidence may take the form of policies and procedures, output from employee surveys, interviews with key customers, data collection from a Human Resource Information System, reports issued to regulatory departments, statistics, etc.

The first time the assessment is made, it may become apparent that the definition in step one needs improvement or modification. These changes should be noted and made a part of the next "improvement cycle."

As you review the summary of statements and your assessment, there are several analysis that can help.

Step Three--Analyze the Results

It is important to recognize strengths and opportunities for improvement. As results are reviewed, themes will emerge around specific HR areas. For example, one company may be very strong in administration and managing legal requirements. On the other hand, it may need improvement in developing higher-level systems definition. Another company may be very strong in areas Safety, Security, and Training, but need improvement in Communication practices that run across the company.

Reviewing the data in a variety of perspectives is helpful to formulate a picture of overall HR performance against the audit. It can reflect the positive effect of actions taken in previous years as well as provide information for future actions.

It may become apparent that all definitions are 'not equal in importance' The effort required to meet the definition is one factor to consider. For example, having performance appraisals for all employees may require significant effort. On the other hand, if you already have a good new hire orientation program in place, that definition is more easily met.

The contribution that meeting a definition may have to the organization is another factor to consider. For example, supporting a company initiative like Total Quality Management may be more meaningful to the organization at this point in time than other statements.

In summary, the purpose of analysis is to sort through the areas of strength and opportunities for improvement in order to take positive action steps to improve the effectiveness of the HR function.

Step Four--Establish Improvement Goals and Take Action

The ideal time to complete an audit is just prior to the annual planning process. With audit information in hand, you can be poised to take advantage of your insights into setting next year's goals.

There are two aspects of setting goals: maintenance of current good practices and development of improved practices. Knowing the capacity and capability of the HR department and system is critical in developing a realistic plan. Good practices need to become a part of the HR system and 'baked in', so that they occur in a reliable, predictable fashion. Once a process or program has reached that level, then future development can occur more effectively.

With little discretionary time available, it is prudent to review the analysis of step three and decide which one or two areas will provide the greatest overall improvement for the HR function, its customers and the organization. These need to be the areas that goals are established for the next year.

This is the point in the audit process, where definitions are reviewed and modified to create a new and improved vision of the HR system as you wish it to be. Doing this on an annual basis allows practices to be improved and benefits shared.

Examples of improved HR measures using the Audit Process:

__ OSHA incident rates

__Development and sharing of Total Compensation Philosophy

__Reduction in throughput time of filling open positions

__Employee turnover rate

__HR customer survey results

__% of training time/employee

__Reduction in throughput time of administrative requests

__Self funding variable compensation strategies

__Employee survey results

__Succession/replacement planning

__Business results

<u>Summary</u>

The HR Audit can be a powerful lever of change in your department and organization. In one sense it is simple, in that each step can be completed fairly quickly and with ease. Also, the degree of detail and definition of performance is within the control of the audit developer.

At time passes, the Audit enriches itself through better definition development and higher levels of performance expectations. It takes on a systems approach because it is comprehensive, inclusive of all traditional HR practices, yet accommodating to the uniqueness of company cultures and business initiatives.

Finally, it moves HR professionals into an active state of defining their direction, making sense of their choices, and contributing to the business in a more definitive way.