



QUALITY

Striving for Excellence

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President's Page

Leadership and Management Tools



The business world is currently obsessed with leadership. All our lives depend on leadership, whether it is related to the health of a nation, well being of an organisation or individual fortunes.

Leadership effectiveness is a derivative of its commitment, style, the role play and a host of other managerial qualities. Senior leaders indeed guide and sustain all functions under their command. They also demonstrate the commitment through intense communication with their workforce, at all levels, and encourage high performance through participative roles and responsibilities, through conscious efforts in setting and meeting stretch goals and targets.

Leading performances across the organisations are tremendously influenced by the scientific

adoption and adaptation of several tools and techniques. Their effective implementation is ensuring excellent results in both manufacturing and service organisations.

During the early period of managing quality, the direction was provided by Gurus like Edward Deming, Joseph Juran, Phil Crosby and Armand Feigenbaum. Each of them propounded their own quality philosophies and practices in managing quality. Though their techniques varied and opinions differed, the focus on enhanced results through quality improvement surely laid firm foundation in establishing the usefulness of quality management. Today, everyone knows that quality pays in measurable terms, both on top and bottom lines.

Experience of later years proved that it would be a mistake to concentrate solely on the views

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Our next issue is on 'Supply Chain Management'

Management Tools and Techniques

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Case examples on best practices from Indian companies undertaking world-class journey

Compiled by

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Business and/or quality excellence award winning companies provide best examples of application of management tools, techniques and concepts which have earned them world-class status. Subsequent paragraphs provide highlights on some of them.

- ❑ Moser Baer India Limited (MBIL) got the RGNQA Award and also Commendation Certificate of Ramkrishna Bajaj National Quality Award (RBNQA) in 2006. RBNQA is the Indian equivalent of MBNQA (Malcolm Baldrige National Quality Award) of the USA on business excellence.
- ❑ Some of the good practices followed by MBIL are summarised hereunder.
- ❑ As per Mr. Deepak Puri, CMD of MBIL the entire organisation rests on four pillars — “our Focus is Customer, Cutting edge is Technology, Challenge is Cost Leadership and Core is Quality”.

Some fast facts about MBIL are :

- ❑ India based company with nearly two decades of experience in removable data storage
- ❑ Lowest cost producer in the world.
- ❑ Number one in domestic market.
- ❑ World’s second largest optical media manufacturer.
- ❑ Supplier to all 12 OEM/ODM leading storage media brand in the world.
- ❑ Revenue growing at 5-year CAGR of 42%.
- ❑ Focussed on optical & magnetic data storage media and diversified to photovoltaic and entertainment business.
- ❑ First to market HD-DVD.

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Good practices of MBIL and other world-class companies are summarised below :

1. Knowledge Management :

Explicit knowledge available with the company is transmitted to individuals as per identified training needs. At MBIL good works done by Six-Sigma or Kaizen teams are documented and put on net, which can be accessed on 24x7 basis.

They have a mechanism to capture tacit knowledge of persons during the separation through structured exit interviews.

Certain other companies such as Legrands (I) have started doing this during the annual performance appraisal up to HOD level, wherein top three areas of one’s contribution and the process followed are documented and is made available round the clock through LAN.

2. Corporate Social Responsibility :

MBIL budgets and spends 1.5% of sales value for CSR. Mrs. Nisha Puri, wife of CMD and a director oversees its implementation. Presently their areas of work include :

- 2.1 *Drishti* : Eye camp, cataract operation, donation of spectacles;
- 2.2 *Disha* : Counselling and career guidance for under-privileged youth, night school for adult education;
- 2.3 *Udaan* : Scholarship for poor & meritorious students;
- 2.4 *E-Shiksha* : Computer education to villagers and tribal people;
- 2.5 *Swastha Uthan* : Healths check-up & supply of medicines, blood donation;
- 2.6 *Balwadi* : Essay competition, drawing competition, sports activities for under-privileged children;
- 2.7 *Trishna* : Providing bore wells to certain villages where villagers have to walk 2

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- # to 3 kms for fetching water.
- 2.6 E-Waste and other hazardous waste management.

Couple of more examples on CSR is given below :

The one I found quite interesting was at Birla Cellulosic, Kharach, Gujarat. They adopted a village and allotted ten families to each of MBA final-year students specialising in HR. Their job was to teach them 5S (mainly housekeeping) and basics of autonomous maintenance like cleaning, oiling, tightening and straightening. Their main task was to assist the head of the family in writing his personal mission. The one I liked the most was : (1) I will not drink (2) I will send my children to school (3) I will not abuse my wife (4) I will plant 5 trees and look after them.

I understand the village became a ‘Model Village’.

Another one was ‘Operation Muskan’ administered by UCL-Dahanu, one of the sister units of ACG (Associated Capsules Group). Children having split lips are considered as curse to the family by tribals around the place. Joining hands with local Rotary Club, this project was undertaken. Three railway bogies were hired and parked at Dahanu station rail siding. One was converted into an operation theatre, pathological testing was carried out in another and the third one was used by nurses and doctors including waiting-room for patients. A temporary camp was built nearby to provide food and shelter. 103 operations were performed in one week by doctors who were Rotarians free of cost. Medicines were purchased at concessional rate by UCL. Before/After photographs were taken. Smiles on the tribals’ faces and reunion with families were really touching.

3. Benchmarking :

To start with, internal benchmarking is carried out by MBIL between their two major companies in India. Some of the product quality parameters are benchmarked with RITEK (no. one manufacturer) products. Legrand (I) carries out product benchmarking with their major competitors — Schneider and Havells.

For service parameters like response time for closing a complaint towards continual improvement, the average of a year is taken as maximum for the next year by many companies.

Customer like Mitshubishi Kagaku Co. Ltd. Japan, audits MBIL against well-defined parameters and rate them in relation to other suppliers. As per this assessment both units of MBIL ranked higher than all other suppliers.

4. Succession Planning and Career Progression :

As per Corporate-VP, HR, of MBIL “towards succession planning for each position up to a certain level, at least one person is groomed in either of their units and/or at corporate office. Career paths are chalked out for fast-trackers.”

5. Competency Mapping :

External consultants carry out competency mapping of executives and skill matrix of technicians and operators. Training plans are thereafter drawn up to bridge the gaps.

6. Local/Global Help Desk :

Since both the factories of MBIL are located away from the city, lot of executives’ time used to get wasted in settling personal matters like getting passport and visa, ticket booking, getting gas connections, admission of children, etc. These are now centralised through local/global help desks of the Personnel Dept. This has helped executives in concentrating on their work — ‘A win-win situation’.

7. 360 Degree Feedback System :

At MBIL this is introduced for 18 senior leaders including internal board members. An outside consultant was used for this assignment.

8. Strong R&D Focus :

MBIL spends 2.1% of sales on research and development activities. They have 12 patents and 9 more are in the final stage of approval.

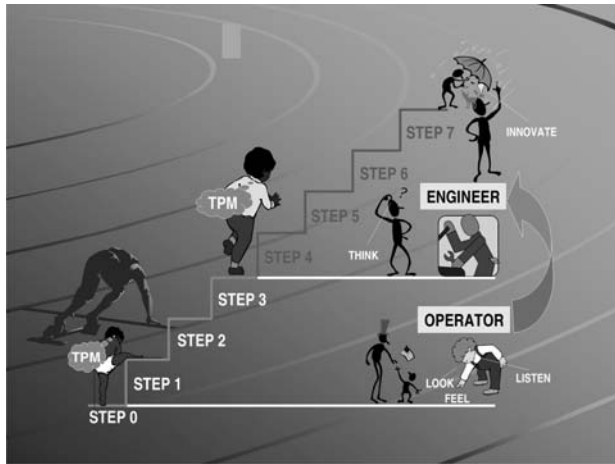
9. Innovation Culture :

The picture on next page was taken from TPM journey of an organisation is self-explanatory.

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One struggles at the initial stage and moves up step by step. Operators' focus is short-term, engineers have to think of medium-term, whereas managers have to innovate for long-term sustainability of the organisation. The job of top management will be to support the innovative culture. This is exactly what is being done at MBIL and other world-class companies.



10. Integrated Management Systems :

MBIL has integrated ISO 9001 on QMS, ISO 14001 on EMS, and OSHAS 18001 on Occupational Safety and Health.

11. Corporate Governance :

MBIL has adopted most of the recommendations of IFC on good corporate governance. One of them is to bring 30% professional external persons on the Board.

12. World-class Practices :

They practice 5S and JH throughout their factory. For the last one and half year, they also have undertaken Six-Sigma initiatives, headed by an Ex-GE person.

All process control data are captured and analysed using Minitab for fast decision making. All the above initiatives along with systems are working under Business Excellence Division headed by a VP.

13. Future Proof Machines :

MBIL is able to convert, say, a CD line to a DVD line with marginal investment. This is one of the reasons for their cost leadership.

14. Layout and Infrastructure :

Factory is well laid out. In CD, DVD production areas, class 10000 and at certain places even class 1000 air count is maintained.

15. Good Knowledge Base :

Out of 5023 persons as many as 1200 are Green Belt holder and 15 are Black Belts. According to MBIL this number is expected to double in the next two years' time.

16. Applications of Advanced Statistical Techniques :

DOE including Taguchi method is used in identifying major sources of variability. Multiple regression, test of hypotheses, reliability engineering, DFMEA & PFMEA and similar other advanced statistical techniques are used as diagnostic tools.

17. Workforce satisfaction survey :

Not a regular feature in many companies. Some do it using internal resources as a formality to handle trivial issues like workmen's opinion on facilities for canteen, leave travel, loans for vehicles, etc. RBNQA : 2008 has extended its scope from just the internal employees to the entire workforce comprising all people actively involved in accomplishing work of the organisation, such as permanent, part-time, temporary and telecommunicating employees as well as contract employees supervised by the organisation and volunteers as appropriate.

Workforce satisfaction survey is done in each year by Jindal Steel Works. Parameters include empowerment, job security, career development & growth opportunities, reward & recognition system, trust, desire to achieve stretched goals, team-working, two-way communication, strong social commitment, etc. Towards continual improvement, adverse trends on survey results are acted upon.

18. External Customers' Satisfaction Survey :

Nothing new. Practically all forward-looking companies get it done mostly by professional external agencies like IMRB or Gallop at least once in two years. However, it has been found that award winning companies take the findings

of the survey seriously and chalk out a time-bound action plan. They become the winners.

19. Proactive Visits to Customers :

In Associated Capsules Group (ACG), the managing director, Mr. Jasjit Singh personally leads a team of all nine company heads plus heads of Corp. QA and Marketing for proactive visits to customers in India and abroad. This top management team spends two days in each month (about 8% of their time) for this exercise. One basic question is asked by Mr. Singh, "We have come here to learn how to serve you better". Senior members of the customer including chief of R&D and MD respond to it in an unbiased manner. Lot of leads for future developments such as development of vegetarian capsules, development of machine for filling liquid in capsules, converting tablets to capsules, etc. used to be obtained. This approach built partnership relationship with customers over a period of time which resulted in substantial increase in its market share.

20. Maintenance of Process Control Charts :

Effective process control, as we know, is the crux of building quality into the product. Based on intuition, judgment, feel & experience and later validated through Multiple Regression Analysis, out of 30 odd process parameters, five parameters namely, temperature, viscosity, RH, dew point and air flow were identified as critical ones. In all three capsule companies of ACG, initially X bar-charts were plotted along with respective upper and lower control limits on each of these five parameters at every machine. But operators found it difficult to interpret and act on them. Later a single chart was maintained with central line aligned to the target value and upper and lower control limits were replaced by upper and lower specification limits. Rather than plotting the range, upper and lower values of the sample were plotted along with sample average. These charts were maintained by operators themselves and were being critiqued by Mr. Singh himself during his monthly walk around meetings. After initial resistance, slowly it developed into a culture and ACG became third in the world in terms of quality of its capsules.

21. Making ISO a Work Culture :

According to a survey by QCI, over two-thirds of organisations having ISO certification are not reaping any benefits. Two major reasons brought out in the survey are unethical consultant and non-professional certifying bodies.

At ACG it was a different ball game. Once management decided to go for ISO, a knowledge base was prepared within the organisation by having over 40 IRCA (UK)-certified lead assessors across the group with head of Corp. QA as a registered QMS auditor. In fact most unit heads and functional heads were certified lead assessors.

Secondly professional certifying bodies like BVQI and RW-TUV were chosen.

Targets and stretch goals on all quality objective assessment parameters were aligned to KRAs (key result areas) of respective heads of departments. Each such parameter had at least one format with associated record which was monitored by operating personnel. For example, customer complaint format had provision for root-cause analysis leading to proper corrective and preventive actions. Thus it was a 'bottom up' rather than 'top down' approach for ISO.

Monthly figures on all parameters were compiled and trended. Adverse trends were acted upon in monthly HOD meetings. Unresolved issues were discussed in quarterly management review meetings which were chaired by the COO of the respective companies.

22. Proactive Visits to Suppliers :

Similar to proactive visits to customers, I found the heads of manufacturing of good companies regularly visit major suppliers along with SCM (supply chain management) personnel. This has helped them resolving long-standing problems related to input materials' inherent quality. Of course such visits must be made after thorough preparation with specific end result in mind. Normally a rolling plan for the quarter and a firm plan for a month is made.



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23. Making factory 'Visual':

Hindustan Levers (presently Unilevers) took to 5S and TPM to make their factories visual. A number of their units in India won TPM award from JIPM (Japan Institute of Plant Maintenance).

They came out with innovative ideas and integrated PLC logic with process controls, such as water falling from mermaid's pot will stop if DG water circulation stops, teddy bear will cry if air pressure in the packing line drops, etc.

To start with, they ensured three things, namely, (a) nothing on floor (b) no leakage of air, water, oil, steam, gas, electricity, and (c) PEEP (place for everything and everything in its place) in system. This helped to have a neat and clean factory with 'one-touch pick-up' which improved their efficiency as well as effectiveness.

They also had physical cut-outs of samples of all hydraulics, pneumatics, electricals & electronics, hardwares, gears, etc. at their exclusive Target-Oriented Training Centers.

President's Page

(Continued from page 1)

of any one Guru. Though all have useful things to say, the practitioner has to distil out their views to arrive at the most appropriate tools and techniques suitable to his or her organisation. This has led to development of several other techniques including the latest Six Sigma methodology, whose usefulness as a breakthrough technique is globally accepted.

The seven tools of quality that were originally assembled by Kaoru Ishikawa for the use of quality circles in Japan, are of immense value even today. They are often described as the first-line attacking force for quality improvement. They are practised worldwide. The later version

24. Performance Appraisal System:

A number of Birla organisations use Balance Score Card (BSC) system for performance appraisals. Its organisational-level BSC flow to departmental-level BSCs and then to individual-level BSCs up to senior manager level. As per BSCs, all key process parameters are captioned into four perspectives. They are customer perspective, financial perspective, learning & growth perspective and internal process perspective.

Individuals are evaluated against well-set objectives and targets benchmarked with world-class players. Based on quarterly evaluations, they are grouped into four categories — star performers and performers who are above average, and poor. Star performers are put on the first track and are provided additional training inputs to eventually groom them for key positions in the organisation. Average and poor performers are counselled.

They follow performance-based reward system which is now quite common to almost all forward-looking companies.

of ten problem-solving tools propagated by Juran, the seven management QC tools, and the subsequent application of a large number of more sophisticated ones, proving helpful in the methodologies like Six Sigma, have demonstrated to the world the usefulness and effectiveness of quality tools in improving the analytical capabilities of quality teams and in sharply defining and solving the problems.

It is due to the use of these tools that the quality levels are significantly rising, along with enhanced reliability, reduced defects and improved profits. The key is to their dogged use in processes and quality analyses, enabling organisations to fully utilise the technology and resources at their command, leading to sustained efficiency and enhanced effectiveness.



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Energising Employees for Improved Performance

Dr. Purshottam Poddar

Why Energise ?

- ✎ All employees want to feel valued and appreciated for their work, their knowledge and their skills.
- ✎ A manager's limited time with his/her employees must be positive and meaningful.
- ✎ Managers today must create supportive work environments to foster desired behaviours and outcomes.
- ✎ The more 'High-Tech' our work environments become, the more 'High-Touch' managers must be with their employees.
- ✎ Downsizing, rightsizing and reengineering create environments in which employees' trust need to be rebuilt.

Building Morale

- ◆ **Energised employees** are a **vital force** in any successful organisation.
- ◆ At the core of an **energised work force is the quality of one-on-one relationships** that individual workers / staff have with their managers.
- ◆ Managers need to show **Trust, Respect and Consideration** to them on a daily basis.
- ◆ Getting best out of workers is above all a product of the '**Softer**' side of **Management**.
Hard Side — Material, Machine, Equipment
 Soft Side — People, Process, Policy.
- ◆ **Softer side of Management** — How individuals are **Treated, Inspired and Challenged** to do their best work.
- ◆ **Softer side of Management** — The **Support, Resources and Guidance** that is provided by managers to help make good employees' performance a reality.

- ◆ **Work environment** and the **degree** to which it serves to enable or inhibit individuals in getting work done is also important.
- ◆ It does not necessarily take much to bring out the **best in people** — **Simply asking for their opinions, and providing them with timely information** that is important to them can be **very effective**.
- ◆ **Break the 'Utility Mindset'** — 'If it worked last year or five or ten years ago, then do not fix it'. As a way of sending a message to employees who held on to this **Mindset**, a C.E.O. had a special rubber stamp made with the image of a **Dinosaur**, which he would put when a letter memo or proposal exhibited this **MindSet**, and returned it to the author.

Empowerment

- ⇒ **Giving employees the Responsibility and the Authority** to get things done their way — can unleash tremendous amount of energy. This is specially true in field work and dealing with customers.
- ⇒ **Employees** want to feel they are **Trusted and Valued Members** of the organisation.
- ⇒ **Smart Business People** know that it makes sense to **empower** people, even if they make a mistake or two along the way.
- ⇒ Examples of empowerment
 - ◆ Share customers' letters and comments with employees.
 - ◆ Let employees visit vendors' facilities to learn more about their manufacturing processes to improve incoming product quality.
 - ◆ Let employees participate in plant tours and customer presentations.
 - ◆ Let the employees from different areas of the organisation serve together on problem solving and productivity task forces.



One-to-one Communication

- ▶ **Communication is truly the glue** that holds an organisation together.
- ▶ **Well-informed employees are good and productive.** Employees are good and productive because they **feel involved**.
- ▶ Manager of a holiday inn — with an abysmal occupancy rate of 60 percent — decided to communicate the hotel's occupancy rate to all employees every day. Within 12 months, the rate climbed to **85 percent**. **Employees literally became helpful and friendly and carried guest's bags.**
- ▶ **Employees who are 'In the Loop'** are employees who are **energised vital part** of the organisation.

Soliciting Suggestions

- 👉 A good way to **involve and energise** employees is through **employee suggestions**.
- 👉 Various systems & programmes — such as **total quality management, continuous improvement, or simply the good old suggestion box** — encourage employees to make suggestions that will **improve a company's products and services while reducing costs**.

Employees' suggestions not only help the company, they also help employees by **improving working conditions, removing the organisational hurdles that come in the way of workers doing excellent work and giving employees a measure of control over their jobs.**
- 👉 However, **it is important that employees' suggestions are taken seriously and those that have merit are quickly implemented.**
- 👉 This sends a message to employees that they are **valued**.

Training & Development

- * **Best organisations provide their employees**

training to learn new skills, gain new ways of viewing the work, and meet and network with co-workers.

- * **Breaking out of their day - to - day activities** is very energising in itself.
- * **When employees get opportunities to learn and better themselves, it electrifies an otherwise stagnant group of individuals.**

Interesting Challenging Work

- ❖ **Let's Face It** — Employees doing the **same tasks** over and over again **find themselves in a rut**.
- ❖ **Remember how you felt** when you first started in your job — **Excitement, Anticipation and Occasional Nervousness** about starting something new.
- ❖ We can help our **employees retain or recapture** that feeling by allowing them to take on **new interesting challenges without assigning them to entirely new jobs**.

Assign small projects/start ups which require learning new tasks, working under pressure, dealing with new groups of people *e.g.*, **creating a task-force of a pressing problem**.
- ❖ **Make small strategic assignments** which emphasise **presentation and analysis skills** *e.g.*, **doing a competitive analysis; doing a problem prevention analysis**.
- ❖ **Have your employees take on coaching assignments** that require learning something new *e.g.*, **designing a training course; teaching someone to do something new; doing a study project**.

We all need to have a clear purpose and well-defined goals. We also need to define the boundaries as well as operating principles.

Together Everyone Achieves More.



HR Challenges in Technology Management

Sharu S. Rangnekar

Synopsis

Technology management comprises the following phases :

- * Technological innovation to create a product that would satisfy a 'need'
- * Commercial management to convert
- * need into want by product promotion
- * want into availability by product distribution
- * availability into sales by salesmanship
- * sales into profit by cost-control
- * Technology improvement through research & development to maintain technological superiority.

In earlier times, in technological breakthrough individual genius (*e.g.*, Thomas Edison) played a key role. However, at present, R & D is becoming increasingly a group-activity. Commercial management always involved group efforts. Thus, the management of human resources plays a vital role in technology management.

Analysis of the team efforts reveals :

- * Leadership through creation of Sense of Mission, Sense of Action and Sense of Loyalty,
- * Motivation through Sense of Identity, Sense of Importance and Sense of Development.

The rising tempo of technological change has created a challenge for the matching change in our human resource management. Individuals, organisations and nations can win in the technological race only if they meet the HR Challenges in Technology Management.

HR Challenge : Leadership for Teamwork

To understand this challenge, the best way is to look at those who are providing leadership for

teamwork. They can be seen at all levels — right from first-line supervisor to the chairman/ managing director. These leaders seem to inculcate the following three senses :

- ✓ Sense of Mission
- ✓ Sense of Action
- ✓ Sense of Loyalty

Sense of Mission

To get the sense of mission, the leader must have a feeling that he is doing something great. Then he can transfer the mission and the relevant dedication to others.

This percolating sense of dedication is very important. Everybody needs some glory in his job. Just getting salary, perquisites and amenities is never enough — in addition to that people want a halo, the glory, *i.e.*, a feeling "I am doing something great!" To the extent people feel they are doing something important and great, they get the 'Sense of Mission'.

Dr. Kurien was asked, "Why is it that the Amul Dairy has been such a success while most of the other co-operative dairies have failed ? After all, every dairy deals with milk". Dr. Kurien said, "No, Amul is not milk — not even cheese, chocolate or butter. Amul is a socio-economic experiment. We are doing something which is glorious — converting the whole district of Anand into something different. The way people believe it is what makes it a success". Everybody needs a halo or glory that the Sense of Mission gives.

Sense of Action

The second aspect is Sense of Action. A few years ago there was an oversimplified book on management called 'One-minute Manager'. It gave three interesting messages. It said, a 'One-minute manager' must give the goal in one minute; if the subordinate does it well, he must give him appreciation in one minute; if he does not do it well, he must reprimand him in one



minute. Typically, a manager gives several jobs at a time. A subordinate might be given five jobs. In the evening he comes and says, "I have done four jobs — only one is remaining". What does the manager say, "Oh no! That fifth one I required today — the other four you could have done tomorrow!"

Many times the manager describes the job in so many words that the person gets confused. One job at a time — described in one minute and there is a good chance that the subordinate will do it well. If he does it well, give him one-minute appreciation. Many times the manager forgets to give appreciation. Sometimes he feels that the subordinate is paid for doing his duty — so what is there to appreciate? Sometimes he feels that if he appreciates his subordinate, the subordinate may ask for increment or promotion. So he avoids appreciation. However, when it comes to reprimand, he gives a long one. Such a long harangue is generally counter-productive. To create a Sense of Action, one-minute goal, one-minute appreciation, and one-minute reprimand are necessary.

Sense of Loyalty

In one's life, one works under two fears. The first fear is "If I don't do something, somebody will hurt me". The second fear is "If I don't do something, somebody will be hurt". The second fear becomes more important as we become stronger. The sense of loyalty has to be based on this fear. Persons creating loyalty seem to create motivation through a sense of identity, a sense of importance and a sense of development.

Sense of Identity

Once a person feels that the organisation is his organisation, there is no reason for creating any further motivation. That feeling itself is a motivating factor. The best example of this is the housewife. We talk of bonded labour. Has anybody seen labour more bonded than the housewife? First to get up in the morning to get milk, last to go to bed. No holidays — Sundays, festival days, everybody says: "Extra dish is required today". So extra work. The one who works like this is not even born in that family. She was born somewhere else, brought up there

for twenty odd years. One fine morning, afternoon or evening, we throw some rice at her, bring her into the house and say; "This is your house". Very silly trick! But it works!! Within twenty days when she talks of 'my house', she does not mean the house she had been in for twenty years, but the house she has been in for twenty days!!! And once she thinks it is her house, we do not have to put 'standing orders': 'This house shall be kept clean at all times'. She nags the husband, children and servants to keep it clean. The sense of identity is a very powerful motivator.

We can see this in industry also. Take the case of TISCO. During the Janata regime (1977-79), George Fernandes and Biju Patnaik suggested TISCO should be nationalised. The biggest shout came from the workers of TISCO. They said: "You are not going to nationalise our company". What is our company? All the 70,000 workers of TISCO together did not own even 1% of the shares! It is the feeling of identity.

How can this feeling be created? This is not a new problem that we are facing only in industry today. It is a very old problem — starting with religion. How do people of a religion feel that they belong to the same group? The trick used is physical work together. People working physically together get a feeling of identity.

In a church as soon as the service starts, people get up, sit down, sing together. This working together creates an identity. At Haj, Muslims from all over the world gather. Each Muslim coming from a different country has a different cultural background. But once he goes there, goes around the holy stone so many times according to the rituals along with everybody around him, he starts getting a feeling of identity. This is probably why all important Hindu temples are at the top of the hills. Tirupati, Sabarimala, Badrinath, Kedarnath, Vaishno Devi. The reason is: people should climb together.

The physical work together is a very powerful method of creating identity. Such identity is created by the army. Motivation is a great challenge for the army. In industry what we mean

by motivation is that a person who gets paid for 8 hours and probably works for four hours — if he can be made to work an additional hour, we say he is motivated. In military, when we talk of motivation we mean that the soldier must risk his life! When a commander tells a soldier to go and capture the enemy post, the soldier knows the enemy is not standing with a white flag in his hand. He is sitting with a machine-gun. If he starts doing a cost/benefit analysis: what are the chances of my capturing the post, getting a medal, getting promotion and what are my chances of catching a bullet and lying horizontal for ever, will that army have any chance? The soldier must risk his life! To create that motivation through identity, the army uses some very interesting methods. First is the uniform: people wearing the same uniform, looking largely alike is one method creating identity. Number two: lot of physical work together — drill, marches. During peacetime, the army is not relaxing. The soldiers are often marching with the officers along.

This creates a feeling of identity amongst the army.

In Japan, this idea is used in industry very effectively. Firstly, everybody wears a uniform — right from the chairman to the sweeper, same colour, same cloth, same uniform — so that a visual identity is created. Secondly, as soon as the siren goes and the factory is started, everybody gets together, stands together and sings the company anthem. (In India, we have problems in people singing the national anthem. Somebody has to put a record on and when the record goes on, people stand at attention as if they are paying respects in some funeral! If you ask somebody, “Why don’t you sing?” he will say, “With my voice, how can I sing?” But if you start an arati of God, he will join. Why? The God is his. The nation is still on probation. We have not ‘confirmed’ it.) In Japan, people are ready to sing the company anthem — so identity with the company is already established. The third thing they do: as soon as the company anthem is over, the public address system comes: 1, 2, 3, 4 — they do physical exercises together for three minutes. What happens? Think of a sweeper — sweeping the chairman’s

room. The siren blows — the chairman and the sweeper stand together, sing the company anthem, do physical exercises together. The sweeper thinks: “This chairman, I don’t know how many levels he is above me. But he is still a part of my team; we have the same uniform, sing the same song and do the same exercises”.

Sense of Importance

Again the housewife is the best example of motivation through sense of Importance. Every housewife feels she is very important. Without her, the house is going to fall! In the first year or two after marriage, she occasionally goes to the maternal place; thereafter she does not want to go out. I remember the first time I was invited at Kathmandu, they wrote: Please bring Mrs. Rangnekar along. I told my wife, “You have to come along, you are invited”. She said, “How can I come along? Who is going to look after the house? Who is going to take milk in the morning? Do you think children will get up in the morning and take milk? In fact, do you think they will get up at all? They put the alarm on, I have to put it off and wake them up! And the servants have to be told the same thing every day — otherwise they don’t do anything. Children won’t do that — the house will be in a mess”. Unfortunately the children heard it. They said, “Nothing doing, Mummy! You go”. For four days we were in Kathmandu, every morning she would get up and say, “Let us book a trunk-call to Bombay and find out what is happening? But thanks to P & T, not one call went through! Fifth day we returned to Bombay, rushed home, opened the lock. She was expecting the whole house to be in a mess. Nothing was in a mess. But I am a management expert not for nothing! I told her, “Good! We came on the fifth day. Another two days and the house would have collapsed. She was very happy. Always remember. Your wife goes somewhere, comes back after a few days and asks, “How are things?” Don’t say, “We enjoyed”. Always put a long face and say, “We somehow carried on!”

This is important because of ego. In all spiritual discourses, we are told: “forget your ego”. In management, we do not forget ego. We pamper



and exploit the ego. How does the boss get work done by anybody? He takes him aside and says, "I don't want to give this work to anybody else. You are the chap to do it!" What he really means is that you are the only stupid chap who will work fourteen hours a day and complete it. But immediately it creates the motivation. So the feeling of importance is vital.

We know the phrase: "Power corrupts and absolute power corrupts absolutely". Let us look at another phrase: "Powerlessness corrodes and absolute powerlessness corrodes absolutely". Many people ask me: "How do you recognise sick units? Do you study the balance sheets?" I say: "In India I don't think anybody believes in balance sheets. I go to the factory; I see the pipes are leaking, drums are leaking, cement in the open getting spoiled. I ask the worker: "What is happening?" He says, "*Na koi dekhta hai na koi sunta hai* — nobody is bothered!" I say, "Why don't you tell your Manager?" He says, "He also cannot do anything". Everybody is powerless. Whenever there is a feeling of powerlessness, you cannot get motivation. Where people feel that they have power, they can do something. They get motivation.

Sense of Development

The third important aspect is the Sense of Development — the feeling of growth. I am working here, I am growing here, I am learning something new. This is a great motivator, particularly for youngsters. Youngsters of today are very ambitious. They want to go right up to the top! They don't mind if they don't reach the top in this company; they would think of another company. They must go up. To the extent they feel they are learning, they are motivated and ready to work. Whenever they feel they are stagnated, they are getting nowhere, demotivation comes in.

In this respect, I would like each one of you to think of your own career. Sometimes when you

start your career, you get a boss who says, "You look like a bright young man, go and do things. If you have problems, come and see me". You are developing and you are motivated. You would not work only for 8 hours, but 9 hours, 10 hours, 11 hours!

Then you get another boss who says, "Have you done this before? If you have not done this before, don't do it. I shall do it or I shall get somebody else to do it. You do only what you have done before". You get a feeling of stagnation. You just start watching the clock. If the office ends at 5 p.m., at 4.45 p.m. your desk is clean! Then you get a third boss. He says, "Although you have done this before, check with me. Don't send any letter out. Give me the draft". What happens? You get totally demotivated with a feeling that you are learning less and less — in fact your capabilities are decreasing! This is the time you take every possible leave — privilege leave, sick leave, casual leave. The other day I met a clerk. He said, "Sir, I have not enjoyed my sick leave this year". I said, "I never knew anybody enjoyed sick leave!" But under the third type of boss, people may really enjoy sick leave!

Conclusion

As Dr. Reddin once put it: "All management is man-management". The management involves creating Sense of Mission, Sense of Action and Sense of Loyalty. To get loyalty, Sense of Identity, Sense of Importance and Sense of Development have to be inculcated. These are the HR Challenges in Technology Management.

Author

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NCQM NEWS

Welcome aboard — New Members

Corporate Members :

- CM0511 Secure Meters Limited Udaipur
Mr. Rai Mohan Bhattacharjee
- CM0512 Aegis Logistics Ltd. Mumbai
Mr. Girish Gurkhe
- CM0513 Goldstar Group Construction
& Consultancy Mumbai
Mr. Atul Shah

Individual Members :

- MI0463 Dr. Raj Mohan Hosur
- MI0464 Mr. Nilesh Baban Patil Palghar
- MI0465 Mr. Mohan Kondiba Shinde ... Mumbai
- MI0466 Ms. Shilpa Shreekant Gandhi Mumbai
- MI0467 Mr. Deepak Narayan
Thanekar Mumbai
- MI0468 Ms. Manisha Kishore Avasthi .. Nashik
- MI0469 Mr. Raj M. Verma Mumbai
- MI0470 Mr. Sanjeev K. Agarwal Mumbai

Senior Members :

- SM0060 Mr. Prabuddha Dasgupta ... Bangalore
- SM0061 Mr. Jaywant Vidyakant
Vaidya Mumbai
- SM0062 Ms. Minakshi Shrikant
Kulkarni Thane

NCQM conducted following programmes :

1. Lean Manufacturing - August 25, 2008
2. Internal Quality Audit
ISO 9001 : 2000 - Sept. 8-9, 2008
3. Internal Quality Audit
ISO 9001 : 2000 - Sept. 19-20 2008
4. Being Cost Effective
Through 5 S & 7 W - Sept. 26, 2008
5. Benchmarking HR
Initiatives for HR
Practices - October 17, 2008
6. ISO 9001 : 2008 Update
(Half Day 9.30 am to
1.00 pm) - October 18, 2008

For further details please contact :

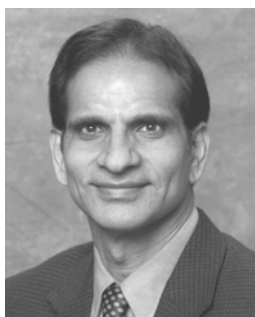
Programme Coordinator,
National Centre for Quality Management,
Mumbai, OR download the brochure from
www.ncqm.com



Mordica Memorial Award goes to Dr. Yalamanchili

Dr. Bhaskar Yalamanchili, a ferrous industry professional with an impressive combination of plant experience and education, is the winner of the 2008 Mordica Memorial Award.

Director of Corporate Quality for Gerdau Ameristeel (Gerdau), he is responsible for coordinating process/product quality and quality assurance of Gerdau's 18 plants. He previously served as Manager Product Development & Technology for its plant in Beaumont, Texas, where he served in quality assurance when it was



Dr. Bhaskar Yalamanchili

the North Star Steel Beaumont plant.

Prior to joining North Star Steel, he was the chief metallurgist for Iron & Steel Company of Trinidad and Tobago (Mittal) from 1982 to 1985; developmental and melt-shop metallurgist at Atlantic Steel Company (Gerdau) from 1978 to 1982; rolling mill metallurgist at Super Alloys plant (MIDHANI) at Hyderabad from 1976 to 1978; and quality control metallurgist at Mukand Iron and Steel, Bombay from 1974 to 1976.

(Continued on page 16)



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Certificate Course
in
Dimensional Metrology
for
Training Operators and QC Inspectors working in Industry

Organised and conducted by :

National Centre for Quality Management

Jointly with

Don Bosco Institute of Technology

16th February to 24th February 2009

1. Need and importance

Measurements of dimensions are important both during manufacture, assembly and for acceptance of items outsourced or procured. With increase in foreign trade by way of exports, jobs are inspected and dispatched to avoid any problems later.

Knowledge of metrology is essential for selection of appropriate instruments, ensuring accuracy of measurements by correct use of instruments, for calibration of instruments and assessing measurement uncertainty.

Data collection, Data analysis and problem identification skills are required from QC inspectors to take fact-based decisions and to improve Quality.

2. Target group

- I. Operators in various trades such as Fitter, Turner, Machinist, Millwright who may have ITI/NCTVT qualification
- II. QC Inspectors who may have ITI/NCTVT qualification or a diploma qualification.
- III. Operators and QC inspectors who have come up with field experience and do not have formal training in basics of metrology and use of instruments.

Above modules provide for both theory and practice of Dimensional Metrology and meet skill requirements for Inspection in engineering industry.

Persons trained in these skills will improve

their performance and will be accepted/preferred by industry. We expect industry will depute their employees for such training.

The courses will be conducted at Don Bosco Institute of Technology, Kurla.

NCQM will administer the programmes, admit delegates and monitor the same.

The course certificates will be issued under joint names of both. Marks/grades will be assigned as per scheme.

3. Course Objective

Objective is to create awareness to

- a] Inherent variation by actual measurements on number of jobs.
- b] Concepts of Repeatability, Reproducibility, need for calibration, Limits, fits and interchangeability

These will be explained through instructions, demonstrations and practicals.

4. Course Schedule

The courses are of modular nature of 27 Hours duration.

These are planned once in six months for a batch of 20 participants.

Class duration (2.5 hrs per day) to enable students working in shifts to attend the classes.

Time : Mon. to Mon., 5:30 p.m. to 8 p.m. with a 15 min. break (Sunday : full day).

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5. Course Validation

The courses has been validated by getting

feedback from participants, and faculty during November.

6. Coverage

S. No.	Day	Topic	Number of hours	
			Theory	Practical
1	Mon	Role of Measurement — An Introduction	1 hr.	nil
		Basic Mathematics and Basic Statistics	0.5 hr.	1 hr.
2	Tue	Interchangeability — Specifications, Type of Fits,	1.5 hrs.	1 hr.
3	Wed	Basic Mathematics and Basic Statistics	1 hr.	1.5 hrs.
4	Thu	Role of measurements — types of measuring instruments, applications + demonstrations	1 hr.	1.5 hrs.
5	Fri	Traceability and Calibration	1 hr.	1.5 hrs.
6	Sat	Characteristics of Measurements and Choice of Instruments	1 hr.	1.5 hrs.
7	Sun	Characteristics of Measurements and Choice of Instruments		6.5 hrs.
8	Mon	Evaluation and Review — MCQ's + Practicals	1 hr.	1.5 hrs.
		Total	8 hrs.	16 hrs.

For developing hands-on skills —

- 10 sets of instruments and 10 different types of jobs (each 10 Nos.) will be provided in a tool box for each work bench. Two students will share the same.
- A set of instruments will be provided for demonstration of measurement of other features.

7. Course Fees

Fees proposed Rs.4000/- per participant.

(DIPTQM) for graduates in any discipline or diploma in Engineering and Technology.

8. Registration

Register with NCQM before 2nd February 2009. Depute eligible staff.

Conducted six month part time courses, 'Diploma in Quality System and Management (DQSM)' in association with Engineering/Management Institutes.

About NCQM

In the field of education, over years, NCQM has developed and delivered several participative training modules. Further, through the conductance of Best Quality Enhancement Team (BEQET) awards, it has been promoting quality enhancement in academics, administration and infrastructure areas of educational institutions.

Conducts the course 'TQM & ISO 9000 for Faculty of Educational Institutes' for promoting Quality Culture in Educational Institutions.

Developed course material for ISTE, 'Train the Trainer'.

Regularly conducts distant learning course, 'Diploma in Total Quality Management'

Instituted 'BEQET' Awards to encourage Quality Enhancement in Educational Institutions. Successfully promoting quality practices in the award-wining organisations.



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About Don Bosco

The Salesians of Don Bosco have been working for the last 100 years, across the length and breadth of India, as facilitators of young by educating them for livelihood skills. Don Bosco efforts are not merely reactive, they are proactive. The Salesians have established no less than 80 technical institutes in the last hundred years, almost one every year since the time the Salesians first arrived in India. In the early years, establishing educational institutes was no easy task and their first technical schools were launched and sustained with much difficulty and against all odds.

The early pioneers earn salutes for their vision and courage.

Among the goals Don Bosco have set themselves, the primary one is to draw forth the underprivileged, to harness their skills and talents, and deign them worthy of great societal contributions. This goal is being achieved by the various technical institutes run by the Salesians all over India.

With the milestone of centenary year of the presence of Don Bosco comes a newfound enthusiasm to commit to the cause of education for livelihood skills and empowerment for the young, especially the marginalised.

Don Bosco believes that there is great fortune at the bottom of the pyramid of Indian society, but it takes concentrated and combined efforts to actualise it. Don Bosco look forward to supporting government schemes, partnering with business communities, and society at large to achieve this target.

But above all, Don Bosco seek your support and solidarity to build on, and to boost the phenomenon that is modern India.

The countrywide network will give a great boost to the Salesian India through our services in skill training for the youth of the country.

Don Bosco who began this mission of assisting the underprivileged to become honest and productive citizens be our continuing inspiration.

The training courses are :

Formal Courses :

Machinist, Turner, Electronic Mechanic, Radio-T.V. Mechanic, Computer Operator & Programming Assistant, Telecommunication Engineering Technicians Certificate, Mechanical Engineering Technicians Certificate.

Functional Vocational Courses :

Motor Mechanic, Welding & Fabrication, Refrigeration & Air Conditioning, Computer Hardware, TIG & MIG/MAG, Electricals, Electronics.



(Continued from page 13)

Dr. Yalamanchili holds advanced degrees related to the industry like a Ph.D. in engineering from Lamar University, an M.S. in process metallurgy from Georgia Institute of Technology; an M.S. in physical metallurgy from Indian Institute of Technology; and a B.S. in metallurgy from Banaras Hindu University.

He has published 26 technical papers, including co-authoring a 2004 award winner, and holds a patent in producing low-carbon wire rod with boron. He is a past Chairman of the West Indies Chapter of ASM, a past Chairman for American Society for Quality Control, Beaumont, and a past President of the India Association of Southeast Texas.

Beyond his contribution to the wire and cable industry, he has been an active WAI member for many years, serving on its Ferrous Management Committee and as Chairman of the Ferrous Awards Committee.

“Dr. Yalamanchili possess a rare and valuable mix of other personal strengths including professionalism and a strong work ethic,” wrote one nominator for his selection. “He has been a leading example of the true industry leadership that exemplifies his skills and vision, which makes him a deserving nominee for the Mordica Award,” wrote another.

Dr. Yalamanchili is a Foreign Individual Member of NCQM.

(Courtesy : wainews)

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Organisational Productivity

Prof. H. C. Patel

Management concepts have evolved over the years since early stage of industrialisation in the beginning of the century. F. W. Taylor's approach was to divide work into a number of tasks and get more production through respective tasks. Inspectors checked and accepted products. Time-and-motion study techniques were used to decide standard output. These concepts have undergone radical change.

Behavioural approach has recognised the contribution of people, which can be ensured by involving people and recognising them.

TQM (Total Quality Management) philosophy and practices are being adopted for managing business. These focus on customer satisfaction and continuous improvement. Organisation has been considered as a system of interlinked network of processes which are intended to meet objectives set by top management. TQM concepts have built-in quality of products and services, productivity and cost economy leading to excellence in performance.

Productivity of Resource and approach are outlined in this article.

Productivity :

Productivity is defined as the ratio between output and input. The definition applies in an enterprise, an industry or an economy as a whole. The concept of productivity is basic to understand how effectively we are using available resources in an organisation producing goods or services as output.

Both output and input are quantified using unit of time or time span. Inputs deployed are of different types, each having different measurement units. Productivity ratios can be computed for each such factor. We thus evaluate factor productivity of men, materials, machines, land space and similar inputs. The output has to be 'as specified' and confirming. We need to differentiate between production and

productivity. The output can increase by deploying additional resources in the same proportion. In that case, productivity remains unaltered. Factor productivity can improve if output increases without deploying additional inputs or if we deploy less resources.

Our aim is to improve productivity in the organisation. Higher productivity can contribute to higher standard of living. Goods and services are produced at lower cost, resulting in gain to community as a whole. We can increase supply of consumer goods and capital goods. It improves profitability of the organisation.

Organisational productivity :

Output in an organisation is dependant on variety of inputs which are interdependent. Productivity in an organisation as a whole, is influenced by the combined effect of these inputs.

Importance given to each input depends on the organisation and the country. The basic design of the plant is important to attain higher productivity to reduce cost per unit output and to be competitive in market place. An automated equipment or plant can have higher output at higher cost of capital, but may require fewer people compared with semi-automated/manually controlled plant requiring more operators. Both may have the same quantity output. Productivity of equipment and productivity of people will differ. A well-designed product may use less quantity of material for a given output per year. Likewise, a marginal input of labour can improve utilisation of plant machinery and thus can result into higher output as well as higher annual production.

The role of information technology (IT) is also significant in improving organisational productivity. A well-integrated management system (Enterprise Resource Planning) can result into flatter organisation structure and faster on-line decisions.



It is necessary to recognise interdependence of various resources and develop effective organisation to ensure higher productivity.

Productivity of resources in organisation :

Approach to improve productivity of various resources and importance of each is outlined herewith :

Materials :

Raw materials and auxiliary materials constitute 40% to 70% cost of finished product in industry, depending on the type of product and nature of industry. Material input can be minimised at product design stage. Product design dictates choice of processes for manufacturing and affect costs. Use of standards and standardisation facilitates availability of materials and procurement of the same at competitive price. Strength-to-weight ratio criteria is used to judge product design and develop lightweight products.

A well-designed process can give higher yield, thus improving utilisation of materials. Appropriate layout of sheet and use of progressive tooling can result in improved utilisation of materials wastage, damage, deterioration or loss of material during storage and handling, as well as rejection due to improper process control means poor utilisation of materials and lower productivity. Poor packing/packaging design result into damage/breakage of products during loading, unloading and transportation. Productivity of materials is affected by design, process of manufacture, storage, handling, packing and transportation.

Machines — equipment :

A product may require a number of successive processes and assembly operations involving a number of components and sub-assemblies. Some products require continuous processing and flow through the plant. Some others are processed in batches. Chemical processes need utilities, such as compressed air, soft water and steam. Almost all need electrical energy and/or motive power.

Machines and plant are designed for a specified (rated) output per unit time. Some machines/

equipment are used to produce a range of products up to design capacity and in optimum batch size. Productivity of machines/equipment can be judged by such factors as : Output per hour; Capacity utilised *vis a vis* rated capacity for given range; time utilisation in terms of available hours over a years. When number of machines are connected in series for processing, if outputs of each are not balanced, some machines are not utilised fully. Machines/equipment may remain unutilised during loading and unloading periods. To keep machines/equipment in good condition and to ensure continued suitability, it is necessary to maintain these. Planned and preventive maintenance and ensuring availability of spares and consumables ensures availability of machines and plant equipment. A robust design of machine can ensure reliability and sustained performance, thus resulting in higher productivity.

Men — Direct and Indirect Labour :

Output of various processes deployed in an organisation depends on men who handle/operate machines/equipment and handle materials. Men are employed both for processing material and information. Men also carry out non-manufacturing processes such as storage, handling, preservation, packaging and delivery operations . . . People must carry out processes using standardised methods and procedures to give output as per norms. People must be competent on the job through education (knowledge), training (skills) and experience to do things right with efficiency.

Productivity of men depends on many complex factors unlike that of materials and machines. Organisational climate and working environment affects productivity of people. Attitudes and interest of people to work varies. If people are convinced, interested and involved, they can enhance productivity. Casual, indifferent attitude hampers productivity and quality of output. Group behaviour can be different from individual behaviour and can influence productivity in organisation. Whiling away time at work, idleness and absenteeism hamper productivity.

Both speed and accuracy are important and can be ensured through training. People can be

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empowered to manage their processes and to work in teams for enhancing people productivity.

Land space :

In most industry organisations, storage space for materials, finished goods and work-in-process occupies large areas as compared to space required for manufacturing operations. Further space is needed to house office and administration personnel, procurement, marketing personnel as well as support services. Design of workplace and good plant layout can minimise distances of materials to be moved at and between processes and can ensure smooth flow of materials. The amount of materials moved from issue till despatch per unit of output in an engineering industry is very high, depending on number of processes involved. An effective production planning system can minimise work-in-process inventory due to incompleting orders being processed.

Design of storage areas to utilise vertical space and provide adequate passages for movement can ensure productive utilisation of space. Unwanted items and obsolete equipment need to be identified and disposed of, so as to make space available for productive work. Good deal of office space is occupied by old records which need to be disposed of.

“A place for every item in its place” is the approach. With increasing activities, addition of products and diversification, every organisation needs to review space utilisation to ensure and enhance productive use of land and buildings. Review of materials in stores can identify slow moving and non-moving items. A-B-C analysis can give sound procurement policies. Inventory control techniques can reduce need of materials to be stored. Inventory turnover provides an index of effectiveness of procurement policies.

Energy :

Energy in one form or the other is required for production of desired output as well as for other administrative activities in an organisation. Primary source of energy is electricity. Organisations also provide DG sets as stand-by to support critical processes in case of power failure.

Utilities such as air conditioning, compressed air, steam and circulating water for cooling require energy inputs. Stable uninterrupted power (UPS) is required for operating computer system. Cables and pipeline transmit the necessary power and other inputs from source to the point of usage. But for continuity of electric power and other inputs, manufacturing operations are uninterrupted. Any deficiency in the supply (voltage, pressure, temperature, flow rate) affect production, output and productivity. Capacity limits of these is a constrain on output. Depending on the extent of utilisation of these, there are line losses. Poor maintenance of these, leads to breakdown and inefficient operation. Part-load efficiencies of these are lower. Further, leakages at various joints and connection adds to loss. These factors reduce productive use of energy.

Energy audits can assess efficient and effective use of energy and suggest ways and means to improve productivity. Consumption of electrical energy including captive generation per unit output need to be controlled.

As can be seen from the above details, factor productivity of resources can be improved by reducing waste of all types and eliminating unwanted activities.

Approach to productivity :

During earlier years of industrialisation, major focus for enhancing productivity was on men who were responsible for operations using materials and machines. Tasks were broken down into elements of operation and analysed to evolve better work methods. Dr. Lillian Gilbreth brought in concepts of motion economy. H. B. Maynard defined Methods Engineering to improve standards of accomplishment. Industrial Engineering evolved as a science with work study as a major technique.

Total work content needs to be analysed to enable us to eliminate unnecessary contents and to develop better design of work place and jobs. Table 1 explains how overall work contents can be broken down and analysed using various techniques. Total time required to get output consists of time for basic work content,

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additional time due to defects in design or specification of product (refer A in Table 1), time required by inefficient methods of manufacture or operation (refer B in Table 1) and ineffective time due to poor management or worker's lack of control. (refer Table 2)

TABLE 1
Total work content

Basic Work Content
A. Added work due to : 1. Bad design of product 2. Lack of standardisation 3. Incorrect quality standards 4. Removal of excess materials
B. Inefficient methods of manufacture/ operation : 1. Wrong machine 2. Process not operated correctly 3. Wrong tools 4. Bad layout 5. Operator's bad work methods

Time involved can be reduced by improving product design using system design concept, value engineering techniques and adopting standards and standardised materials, components and assemblies to reduce variety. Just adequate tolerances for functional design need be prescribed to save time and reduce costs. Process design and identifying parameter for process control can lead to efficient operations. Material handling and plant layout techniques will reduce materials to be handled, provide for smooth flow and improve operations. Training of operators can reduce rework and scrap.

Improved maintenance practices, inventory control system and procurement policies can reduce, wastage and improve operations. Compliance to requirements of safety, health and

TABLE 2
Ineffective time for completion of task/product

Due to Management : 1. Short runs and idle time for product change-over, stoppages, rework 2. Ineffective planning and work allocation 3. Unavailability of requisite input materials 4. Poor maintenance and B/D of machines resulting in inefficient machine operation 5. Bad environmental conditions affecting safety and health hazards 6. Lack of instructions/decision Due to lack of control of worker : 1. Absenteesm, idleness 2. Poor workmanship causing defects, rework 3. Stoppages due to accidents causing damage to equipment and absence at work
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environmental regulations improves working conditions. Adequate HRD policies can develop people, create interest in work and reduce absenteeism.

Productivity movement :

To promote concepts and practices of productivity, the Govt. of India established National Productivity Council (NPC) — a tripartite body of Labour, Management and the Government representatives in 1956. Local Productivity Councils were then established in various States and industrial locations. Regular training programmes and conferences/conventions are organised to create awareness.

A 3-Js training in job instructions, job methods and job relations was developed to train supervisors. The focus was primarily on industrial production and labour productivity. During early stages of industrialisation, new jobs were created improving employment opportunities. In any organisation, improved efficiency and productivity was viewed by labour and trade unions as a threat to existing employees. Outlook of trade unions and workers

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to productivity improvement was not encouraging. This resulted into conflict of interest between management and labour.

International Labour Organisation (ILO) has given recommendations on productivity in manufacturing industries in 1952 to safeguard workers' interest and promote productivity. These relate to :

- (i) Advance planning of changes in processes/equipment.
- (ii) Reduce/suspend new recruitment, consider re-training of redundant workers and give preference to them while filling vacancies in other departments.
- (iii) Move them to other places where jobs are available.
- (iv) Improve, if necessary, organisation of employment services.
- (v) Develop unemployment insurance schemes to protect living standards.

To ensure proper implementation of productivity enhancement, Joint Productivity Committees (JPC) and Works Council were instituted in industry organisations. Managements who could successfully negotiate and convince the workers about need and benefits, were able to implement such proposals. Since the country had protected economy and seller's market, industry could dictate price to customer.

Productivity measurement :

Factor productivity indices (output/input) or ratios can be determined for various resources easily and can be used to assess improvement in productivity of that resource over a time span. These are useful to diagnose and identify factor responsible for low productivity. Productivity concepts have been extended to other areas. Organisation and Methods (O&M) techniques have been evolved to assess office productivity and effect improvements.

Since output of an organisation is dependant on overall effect of combination of all resources, assessment of productivity of organisation level

becomes complex. A mix of technology, system, skilled manpower, materials and management determine the output. Comparison of various industry unit producing similar products was difficult. Statements such as "Labour productivity of USA is three times that of India" gave distorted picture without qualifying the extent of automation and proportion of capital used by USA firms.

Total productivity index :

D. S. Sardana and Prem Vrat have suggested a Performance Objectives — Productivity (PO-P) model to measure productivity of a system. It is possible to compute total Productivity Index (PI) as a measure of the extent of actual performance of organisation against optimal output termed as objective output. The overall system is divided into sub-systems, each having Key Performance Areas (KPA). Each of the KPA has to meet defined Performance Objectives (PO), both qualitative and quantitative. Weightages are assigned to each sub-system (W_u), to each KPA within sub-system (W_{vu}) and to each PO of KPA (W_{yvu}). Objectivated Output is potential output to be determined using one or more of the following criteria :

- (i) Annual growth/improvement targets
- (ii) Benchmarking against industry norms
- (iii) Expert opinion
- (iv) Group consensus.

Objective output should be realistic, achievable, acceptable to the performers as well as compatible with other business objectives. As per PO-P model :

$$PI = \frac{\sum W_u \sum W_{vu} \sum W_{yvu} \times \text{Actual Performance}}{\text{Objectivated Output}}$$

A case study of Bank — service organisation identified six sub-systems *viz.* (i) Deposits (ii) Credits (iii) Investment (iv) Recovery and Risk (v) International banking and (vi) Goals and Values. It is thus possible to compare productivity in similar organisations using appropriate weightages.





International Conference on Service Quality Excellence Challenges & Strategies

16 & 17 February 2009

25/26, Institutional Area,
Sector 4, Kharghar, Navi Mumbai.

Announcement : II
ICSQ 2009

The ITM Group was founded at Mumbai by Dr. P. V. Ramana in 1991, as the Institute for Technology and Management. ITM is one of the first truly private, non-aided and not-for-profit B-schools in India. ITM quickly expanded its footprint, establishing its Bangalore campus in 1992; Chennai in 1993 and Warangal in 1994.

In the years to come, ITM established several institutions, including the ITM Global Leadership Center (2002) and ITM Institute of Financial Markets (2003) among others.

ITM is also a premier provider of executive education, with the presence of ITM Executive Education Centers in Mumbai and Chennai.

- > ITM Group of Institutions
- > ITM Business School
- > ITM Global Leadership Centre
- > ITM Institute of Hotel Management
- > ITM Institute of Financial Markets
- > ITM Institute of Health Science

National Centre for Quality Management was established in 1985 by a group of eminent industrialists and professionals as a non-profit organisation devoted to promote quality at national level. It is a premier professional institution engaged in promoting Quality culture in Indian economy through services like training, education, seminars, publications, research and advisory services. It is a society registered under Bombay Public Trust Act, 1950. It has its headquarters in Mumbai and extension centres in Ajmer, Chennai, Gurgaon, Hyderabad, Kolkata, Navi Mumbai, New Delhi, Pune & Rajkot. An Executive Director heads the organisation and respective committees under the Governing Board guide NCQM's various activities.

Over the years, the service sector has assumed a pre-eminent position in many parts of the borderless world. Both in terms of overall employment and intra-country trade, the service sector far outdistances other sectors. Quality is an increasingly important element that differentiates between competing services. Unlike tangible goods, many services are not easily measured or tested for quality. Often, one cannot even assess their quality until after consuming them. However, leading service organisations are obsessed with service excellence. They seek some shelter from price competition through quality service. They use it to be different and to earn their customers' loyalty.

This International Conference aims at creating a platform for exchange of knowledge on service quality systems, practices & tools/techniques deployed by organisations across various sectors.

Topic of discussion :

Service Quality Management Practices

- HR and Culture of Quality
- Corporate Social Responsibility
- Quality & Environment Management Systems
- Impact of Technology and Innovation
- After-sales & Customer Service
- Measurement of Service Quality — Techniques and Case Studies
- Service Quality as Corporate Strategy

Research papers/Articles may include case studies, Country-specific experiences, modelling, International comparisons and applications.

For further details, please log on to :

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The conference is proposed for Functional Managers, Quality Management Trainers/Practitioners/Consultants in all sectors (Government/Non-Government, profit/non-profit organisations)/Corporate Managers, Hoteliers, Leading Restaurants, Fast Food Chains, Bankers, Insurance Managers, Health & Medicare Professionals, Managers in Corporate Hospitals, Multiplex/Mall Operators, Airline Managers, Ticketing/Reservation Professionals, Call Centre/BPO Managers, etc.

Registration

Registration fee includes conference kit, participation in conference proceedings, conference lunch & dinner, etc.

Rs. 1500 for P. G. Faculty, Faculty, Executive Programme Students (Non-Residential)

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