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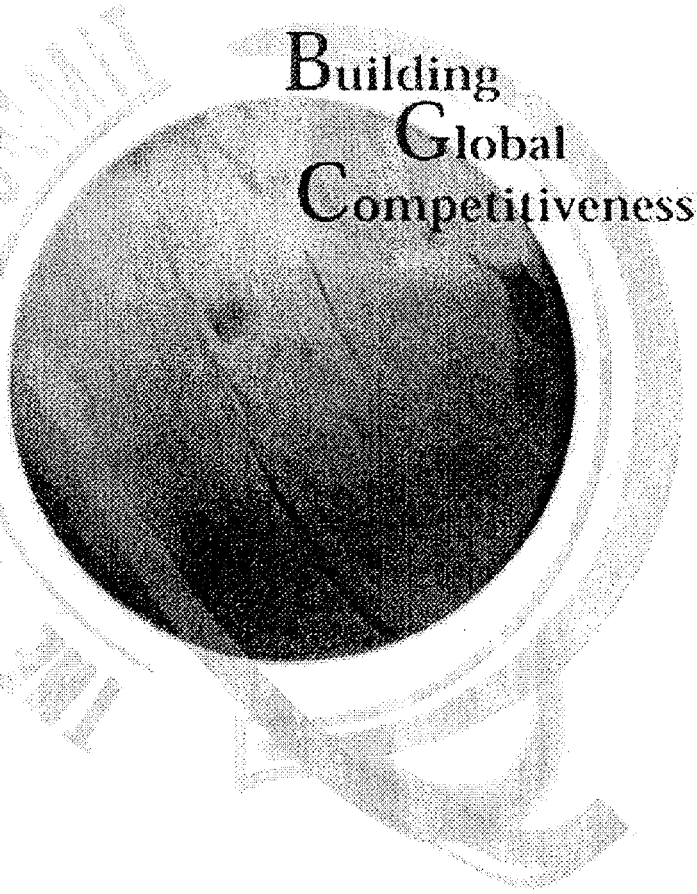
Building Global Competitiveness



8th Quality Summit

16 - 18 November 2000
Bangalore

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EXECUTIVE SUMMARY

From the Chairman

CII Technical Committee on Quality

N. Ramanathan
Chairman
TQM Technical Committee

It has been the privilege of CII to lead, through its TQM Division, the movement towards building a globally competitive India. The management approaches required for building capable and competitive organizations are known, and proven. Unfortunately, they still represent the road less traveled. They offer no magic cures, no 'instant puddings', only long and hard work on fundamentals, without recourse to short cuts. On the other hand, these are many miracle drugs on offer for the credulous chief executive. Therefore, even the more committed corporations seem to lose steam through diversions. For the single-minded, the outcome would be the creation of a world-class organization, one that has sustainable competitiveness against all comers.

Fundamentally, Total Quality Management (TQM) is an approach that aims to secure loyal customers by creating quality. In the process, it also strives to eradicate non-conformance and wastes of all forms, with the total involvement of everyone. The consequences represent a 'win-win' for all stakeholders. By integrating principles, methods, systems and tools into one unified, coherent approach, TQM offers a technology for creating extraordinary organizations. We are here using the label 'TQM' in its broadest sense, covering all the wisdom incorporated in Lean Thinking, Total Productive Maintenance, and in related stains of thought.

The Quality Summit is a great forum in which chief executive and manager from industry, and leaders in government, health-care and education share their experiences and renew themselves, in an atmosphere that generates profound thinning and the energetic will to accomplish greater deeds.

This Summit, the eighth, is dedicated to the theme of building global competitiveness. As with the previous summits, we have sessions which address the concerns of chief executives and senior manager, while thee are workshops too, of great interest to TQM professionals and line managers.

There are plenary sessions on being competitive and world class, with speakers from Asia, Europe and USA. Top manager from India explain their experiences in creating competitive organizations. Then there are speakers from industry whose successes with particular systems – Six Sigma, Theory of Constraints, TPM and Value Engineering – are there to share. There are plenary sessions on building competitiveness through Strategic Planning, IT applications and People Management. We also have conceptual sessions on Theory of Constraints and on New Products Development. An organization can scarcely be considered world class, unless it demonstrates high success rates and speed with product development.

The Summit is also time to recognize and honour those few companies who have demonstrated that they have reached crucial milestones in their journey towards business excellence, as assessed by the rigorous CII/EXIM Award process.

Management thinkers have, for decades, attempted to define excellence in management, without quite succeeding. The business excellence model is in that sense a triumph, enabling the assessment of excellence without being prescriptive. There is much to learn from organizations which have won recognition based on this model.

The hallmark of a great company is that displays what Deming called constancy of purpose. Its leaders exhibit clarity on where their organization should go, and they are actuated by well-articulated philosophies which are in harmony with Natural Law. They establish a model of management for themselves, and stay with it, for long, so that there are no confusing signals down the line, and the initiatives managers take do not cancel each other out, but are complementary and contribute to the whole.

On the other hand, it is so easy to diagnose a company in trouble (even if it were fortuitously making profits.). First, take a look at the housekeeping. Only if that is in good shape do we need to search further. Next, ask what portion of their sales will come in the last three days of the month. In a company that is not founded on the bedrock of principles, and that includes customer orientation, the month-end push for sales would be the indicator of underlying problems.

Next, ask how many customer complaints they register in a month. The absurdly low number that is the likely answer would betray complacency, and inability to listen to customers. Further conversations might show that a variety of management methods and initiatives have swept through the company, unluckily, to little avail.

Many organizations, in terminal stages, cannot "see" what ails them, leave alone grasp what they could do, in the first place, to survive, and then to become strong. Trouble is no guarantee for changes of approach. More likely, troubled companies would simply go down under and disappear. What a waste! Why is it that so many leaders cannot see their methods of management are the cause of their problems, so tinkering with the method would not help. They need a change of paradigm. There are people who can help them. If they seek help, and are willing to give up some of their deeply held beliefs and ideas, then they too can aspire to join the select club of great corporations.

I hope that this Summit will see rich interaction between those who have forged ahead with a powerful management approach, and those who are on the fence, or are on the other side. Out of this interaction, may more organizations step into the road which offers no shortcuts.

India needs to build a critical mass of industrial enterprises which are world class and competitive. Then the movement would snowball, into a competitive and successful India.

Charting Change

Perspectives, Strategies, Directions

The 1990s have seen India embark upon an ambitious liberalization programme. Buoyed by easier access to technology, capital and markets, Indian industry has acquired a global focus and engineered an economic upsurge.

As India's premier business organization, CII has been at the forefront of this change, helping industry find new solutions and enhance its competitiveness through Products, Market Opportunities, Research & Development, Partners and competitors, Finance for Present and Future Growth, Governmental Regulations and Policies.

All these once familiar parameters have been changing at an astonishing speed. Every passing day has introduced major changes in long established routines of managing the forces of economics, finance and commerce. Combined with the multi-dimensional global information technology revolution, these changes have posed a threat to those unwilling to adapt and created opportunities for those with the courage to face the challenge of globalization.

CII has played and continues to play a proactive role in India's development process - partnering industry and government alike through information and analysis based advisory and consultative services. The credibility it has built up over the past 100 years of its existence ensures that this voice of Indian industry is always heard.

Today, India is a land of opportunities. It has the economic resilience to successfully weather spillover effects of crises in other parts of our fast shrinking world.

As we enter the new millennium, CII rededicates itself to the avowed objective of being a facilitator of change and help Indian industry in integrating with the global economy.

Catalyzing Development

Development is best engineered when government, industry and society contribute as one in identifying challenges and work in partnership to find solutions. CII has taken on the role of a catalyst in this process and focused its efforts on three main objectives:

- Working closely with the central and state governments.
- Creating a better environment & developing and expanding business opportunities for industry and membership projecting a positive business image.

Policy Focus

CII specialized committees on individual subjects present industry perspectives to the government and play a vital role in policy formulation related to a wide range of issues like:

- Taxation and finance.
- Export & international trade.
- Public sector reforms.
- Industrial policy.
- Financial sector reforms and capital markets.
- Industrial relations.
- Foreign investment.
- Energy.
- Environment.
- Technical education & training.

The Small Sector

CII works towards keeping small enterprises at the forefront of change with updates on the latest in technology, market opportunities and finance. Its MoU with the Small Industries Development Bank of India promotes ancillary linkages. CII has also evolved a unique, tailor-made "cluster approach" that helps SMEs implement ISO 9000 Quality systems.

The Federal Core

CII operates through a federal structure: the national council, regional councils, state councils & zonal councils. It also has specialized committees, industry divisions and affiliated associations and institutions. The federal structure facilitates interaction with all sections of industry and business and makes CII recommendations more representative and acceptable.

Developing Sectoral Synergies

Over 100 sectoral associations and institutions are affiliated to CII Associations Council (ASCON). This apex operating body is responsible for collection, analysis of data and monitoring the health of various sectors of the economy. ASCON serves as a platform for sectoral networking and works towards consensus and unity of thought amongst all players with regard to fiscal, monetary and other government policies. Following are some of the sectors that are covered under the ASCON ambit:

- Agriculture and food processing.
- Information technology.
- Capital goods.
- Chemicals & petrochemicals.
- Pharmaceuticals.
- Telecommunications.
- Steel.
- Textiles

Efficiency and Competitiveness PLUS

Globalization has brought in its wake-heightened competition, technological and environmental imperatives and the need to maintain quality standards at par with the rest of the world. Specialized CII departments manned by experts offer corporate services and help members' access world best practices in the following fields:

- Total Quality Management (TQM).
- Total Cost Management (TCM).
- Environment Management.
- Technology Development.
- Energy Management.
- Corporate Governance.
- HRD.
- Technical Education & Training.

More for India

The Social Development & Community Affairs Council (SDCA) pledges the allegiance of all CII members to this credo that goes beyond the production of quality goods to cultivating quality lives and establishing a business norm that instills a responsible attitude. Through its initiatives in healthcare, literacy, education and community development, SDCA assists member companies in identifying and executing corporate citizenship programmes.

Global Business Networking

CII has successfully created fora that facilitate business interaction, sharing of information and the creation and pursuit of opportunities worldwide.

Forging Partnerships Worldwide

CII International Division seeks to provide a global perspective to Indian industry and build upon it, to establish mutually beneficial economic linkages. Its objectives are achieved by networking closely with foreign governments and industry, Indian embassies and counterpart organizations abroad.

Major Activities:

- Providing effective platforms for interaction between the Indian and international business community, the Government of India and international business and political leaders via annual events such as The Partnership Summit and India Economic Summit (organized jointly with the World Economic Forum).
- Disseminating vital information related to markets, distribution and joint venture possibilities to Indian and foreign companies.
- Coordinating economic development programmes with multilateral funding and development agencies like UNIDO, ADB, IFC & World Bank, UNDP, UNFP, FAO, USAID, Ford Foundation, etc.

Fair Advantage

As part of its efforts to promote Indian industry and enhance its global competitiveness, CII Trade Fair Division organizes world class international fairs which showcase the best of Indian products and services abroad at "Made in India Shows" and also gets the best of the world to display their wares in India. Its flagship event, the biennial Indian Engineering Trade Fair (IETF) is Asia's largest all industry fair. After over two and a half decades of mega success, IETF now enters the new millennium with a new identity – INDIA EXPO, more reflective of its ever-widening product coverage. CII also organizes a number of specialized fairs. Among the sectors covered are:

- Automobiles.
- Environment.
- Information technology.
- Agriculture and food processing.

- Mining.
- Welding.
- Railways.
- Telecommunications.

Confederation of Indian Industry

CII is a non-government, not-for-profit, industry led and industry-managed organization. Founded over 100 years ago, it is India's apex business association with a direct membership of 3800 companies from the private as well as public sectors and indirect membership of a large number of sectoral associations. CII represents over 80% of India's organized industry. With 23 offices in India and 9 abroad and working relationships with 165 counterpart organizations in 75 countries, CII serves as a reference point for Indian industry and the international business community.

Strategic Orientation : Towards a New Beginning

Gr. Capt. R. S. Chaudhry
TQM Division
CII, New Delhi

This article is an extract from the book "Managing Corporate Culture – Leveraging diversity to give India a Global Competitive Edge" authored by Mr. Karl Ulrich, Gp. Capt. R S Chaudhry and Kishan S. Rana and published by McMillan India Limited, Delhi. This book is a result of the research survey conducted by CII and Roland Berger & Partners on Indian Companies in the year 1998.

There are different opinions on how and why it came about, but the manner in which India embarked on the path of liberalization has been impressive. Some believe it was outside pressure that forced India to take to reforming its economy; others aver that it came about because almost everyone felt that the economy was like a slothful giant that needed to be shaken awake. Whatever the reason, starting 1991 the government abolished the license system for most industries and opened up the economy for foreign investment.

Corporations are more conscious than ever before that their strategic orientation – in concept and content – needs urgent overhaul. Before 1991, India was a seller's market and Indian companies most concentrated their energies on production and utilization of capacities. Consequently, there was concentration on optional utilization of production resources.

In this scenario, the function of marketing remained alien. It is only in recent times that companies have had to develop competitive strategies to survive in a developing and constantly evolving market. 'There is growing realization that we will have to focused. There is no other way out for Indian enterprises,' said Jamshyd Godrej, former CEO, Godrej & Boyce, in this regard.

Action Agenda

Indian companies would need to develop a holistic approach to corporate strategy in order to become competitive, not only in domestic markets but also globally. This can be done through a focused approach to addressing the key weakness of inward looking aspects of their current strategies, such as excessive attention to production and cost-cutting, and little or no emphasis on product, service and business system innovation, etc.

Tailor corporate strategy to suit market conditions

There has to be a strong focus on customer and market needs. Indian companies specializing in service industries are still far behind in customer service and need to upgrade themselves considerably to meet the standards of the global service providers entering India. This can be done if Indian companies basically let go of their chalta hai (it's all right) attitude of indifference towards customer service' within their organization.

Internationalization is a Must

Most companies still view corporate strategy as a secondary priority when compared to day-to-day operations. The attitude towards corporate strategy as a focus area for survival in the face of increasing competition has to be built into mindsets. Companies must review their existing strategies to develop a sustainable position not only in domestic markets but also in the international market.

They should focus on internationalizing rather than just building export markets. Most Indian companies view internationalization in a very limited scope, such as increasing of export income rather than making their global presence felt. Companies will have to actively include global strategies to sustain growth in the near future. This has to be implemented taking account the action plan detailed in Chapter 6 on internationalization.

Appropriate market penetration strategies in domestic markets being tackled currently will have to be more refined and focused due to the increasing levels of competition and customer requirements. While most companies are well aware of the market situation and the competition for their products, regular and up-to-date surveys as well as keeping track of new entrants with technologically advanced products are essential as proactive measures to face competition.

Corporations should be able to accurately assess the business cycle in relation to their existing products, and be prepared for new product launches at the appropriate time to sustain and develop their markets. This also ties in with their ability to access new technology or develop new products in-house.

Correlate corporate diversity as per core competencies

Companies should focus on core competencies rather than going into every market that looks attractive. This would approach towards entering new business. Their initial entry, based on projected market attractiveness and the interest of certain members of the family, will have to change. What has been happening up to now needs not be a successful business pattern any more. Development of strategy in tune with all the above action plans will have to be addressed as an integrated whole.

Focus on Customer Orientation

The focus on utilization of the sales function and distribution to meet strategic goals has to increase. This will be vital to implement strategy. The marketing departments must undertake in-house research through periodic interviews with customers, dealers etc., on an organized basis. They could engage professional market research agencies for more detailed analyses of customer perceptions. This will lead to increased customer orientation as well as recognition potential markets and products.

In the face of improving production technologies on the global scene, production upgradation and its inherent utilization to implement strategy are a must. Corporates should review their existing production systems and plan for the introduction of viable and advanced flexible production systems to keep abreast of the global advances.

Instill the urge for innovation

Companies focus on in-house product development and search for new technologies. This mandates a higher investment in the framework through infrastructure and manpower to build competence. They should leverage the significant advantage of skilled manpower available and invest further in their training and upgradation.

The company should be transformed into a learning organization. Companies should review themselves as adapters of change and raise appropriate measures to build the change in the organization. This has to address several critical issues such as the caliber of manpower, their motivational levels, etc. Companies should initiate and regularize the process of innovation through organizational change, workshops, seminars and installing systems for continuous improvement.

Total Quality Management Division

From a humble beginning in 1988, today TQM Division has taken deep roots in the Indian Industry. This significant growth and reach of TQMD can be attributed much to the fact that CII was the first to adapt to the change in the business scenario. This change was brought about by the realization of the role and importance of quality in improving business.

Role

The role of TQM is to work as a change agent and to support the industry in bringing about a qualitative change in the work culture to provide greater value for money to the consumer and the society.

Purpose

The purpose of TQM Division is to contribute to the development of industry and culture by popularizing and encouraging the use of new scientific soft technologies.

Objectives

- To create awareness in the business organization about the change in emphasis towards quality of work culture as the key to competitiveness and survival.

- To provide education and training opportunities in new scientific soft technologies which are relevant to the improvement of quality process and management process.
- To provide consultancy services and to undertake specific projects to support the promotion of TQM process in specific industries.
- To conduct application research to modify and improve on existing technologies and research on application of new scientific technology related to management.

Membership

Any member company of CII can opt to become the member of TQM Division. The membership subscription based on the Gross Sales Turnover is as follows:

- Rs.7,500 per year for companies with GST less than 50 crores.
- Rs.10,000 per year for companies with GST between 50 crores and 100 crores.
- Rs.12,500 per year for companies with GST more than 100 crores.

Benefits

- Members get preference of service for both In-company and open programmes. In a programme where seats are limited, preference is given to members.
- The members are eligible for a discount on the delegate fee for select open programmes.
- Members can participate and share experiences with other member companies at the TQM Technical Committee meetings.

The Committees

The TQM Division is guided and advised on various Quality issues by two different Committees, namely:

- National Committee on Quality.
- TQM Technical Committee.

The National Committee is headed by a Chairman drawn from the industry and comprises of 10-15 other CEOs who bring together a rich blend of wisdom and experience in guiding the TQM Division and establishing the broad framework of operation. It meets 3-4 times in a year.

The TQM Technical Committee is also headed by a Chairman drawn from industry and comprises of 10-15 TQM Coordinators representing various sections of industry. The Technical Committee meets once every two months, deliberates on various quality issues and shares experience with a host member company.

International connection

AOTS: Joint Programmes in India and discussions in progress to strengthen areas of cooperation in areas of Management.
ASQ: Sustaining member and participation in ASQ Annual Congress.
EFQM: Technical Cooperation for CII-EXIM Award for Business Excellence.
IRCA: Accredited Courses from IRCA.
ISO: Representation of Key Committees to decide/update ISO 9000 Standards.
JIPM: TPM Activities in India and setting up of TPM Club.
JUSE: Mission and expertise on Deming Award Excellence.

NIST: Joint workshop on Quality, Standards, Accreditation and related Issues.

Services Offered

TQM

Gain expertise and capabilities to become world class through:

- Use of CII Business Excellence Model.
- Practice of Daily Work Management.
- Development of Vendors / Suppliers.
- Practice of 5S for Workplace Organization.

TPM

- Join the TPM Club (Initiative in collaboration with JIPM).

Tools & Techniques

Improve product and process quality, delivery & cost performance through:

- Statistical Techniques.
- FMEA/FTA.
- Design of Experiments (DOE).
- Problem Solving Process.
- Cost of Quality.

Systems

Maintain and improve your present level of performance through systems based on ISO 9000 & QS 9000. Programmes offered:

- Lead Auditor training.
- Internal Auditor training.
- Audit Effectiveness.
- Assurance through Measurement.
- Leveraging Measurement Uncertainty

Services

Quality in Government

Participate in annual events on the subject. In addition make your department a benchmark on:

- Retrieval of information.
- Cycle time for processes.
- Work-place organization.
- Expenditure control.

Quality in Education

Participate as a school/college in prorammes which enable:

- Students responsible for their own behavior.
- Students responsible for their own learning.
- Teachers motivation.
- Expenditure control.
- Procedure simplification.

TQM Clusters

Participate in a TQM Cluster

The objective of forming a TQM cluster is to enhance the competitiveness of the member companies. The focus is on acquiring world-class practices to achieve world-class performance.

The cluster approach offers the following benefits for its members:

(a) Opportunity to work under the guidance of the Counselor of world-class level at an economical cost.
(b) Learning through interactions and networking with member companies of the cluster.
(c) Healthy competition amongst cluster member companies.

What is a cluster?

Cluster is a group of five to ten companies which work together on their journey to become world class under the guidance of a common 'Guru'. A company which satisfies the following criteria are included in the cluster.

(a) Top management commitment.
(b) Cluster companies are not in competition with each other.
(c) Logistically the cluster member companies are connected by road within a driving distance.

TQM Study Mission – Domestic and International

Each year TQM Division organizes Study Missions, domestic and international, with the following as the key objectives:

- Seeing the effectiveness of TQM at work first hand.
- Identify concepts and ideas that can be put into practice immediately in their organizations.
- Share insights and learning points with other members in the Study Missions.

Domestic Study Missions are organized to leading TQM practicing companies in Northern , Eastern, Western and Southern regions of the country. The Mission to each region usually lasts for 5-6 days that includes a presentation on some of the concepts practiced by the company and a plant visit for first hand learning.

The TQM Division also organizes international study missions to Japan, USA and Europe to enable participating individuals and companies to see first hand, the latest state of the art techniques being practiced by leading companies in Japan, USA & Europe.

Flagship Event – Quality Summit

Since inception, TQM Division has been in constant pursuit of propagating the concept of quality and placing it high on the corporate as well as national agenda. The Quality Summit Flags milestones in the Quality Movement of India.

Each Summit, rivets the attention of CEOs and quality professional on to a chosen central theme that aptly reflects the need of the hour. Around this central theme is built a structure of presentations, panel discussions, case studies, key note addresses etc. by various experts in the field, to present an agenda of action points for the Indian Industry.

CII-Exim Award for Business Excellence

The CII-Exim Award for Business Excellence, instituted jointly by the Confederation of Indian Industry and Export-Import Bank of India in the year 1994, is

the most prestigious Award in India for Business Excellence that an Indian Company can challenge.

The Award is being administered by CII with the technical support from the European Foundation for Quality Management. To be an Award winner, a company must demonstrate excellence in results with respect to satisfaction of its various stakeholders (customers, employees, society and share holders) through excellence in processes and people. The company stands out as a role model in Indian business. There are four levels of recognition and three categories: large, medium and small scale.

Our Team

A dedicated team of 15 counselors is the backbone of the various training and consultancy services, provided by the TQM Division. These counselors have a rich and hands on experience in a wide variety of topics related to Total Quality Management. Currently, our counselors are located in New Delhi, Mumbai, Calcutta, Pune and Bangalore. The team of counselors at the TQM Division has provided their services and expertise to various hues of the Indian Industry on several topics ranging from Quality Management to application of tools and techniques.

The team includes:

Rajan Anand, R.S. Choudhry, R.N. Chowdhury, S.K. Dutta, Indrani Ghose, P.Girish, S.K. Kakkar, Snehil Kumar, Sarita Nagpal, Sumit Roy, Sri Sai, C.V.Subrahmanyam, R. Venkat

The core competencies of the counselors in the team cover:

- TQM and Business Excellence.
- Total Productive Maintenance.
- ISO 9000.
- QS 9000.
- Statistical Tools and Techniques & others.

Apart from conducting training programmes, both open as well as in company, these Counselors also provide one-on-one counseling services. A large number of small, medium and large sized companies have benefited from these services.

Publications

Under the aegis of CII-TQM National Committee on Quality & Competitiveness and Technical Committee on Quality, CII-TQM Division is assisting a number of companies to improve their management systems with the objective of improving the final product/service to create a win-win situation.

To supplement this education and training, the TQM Division regularly brings out a monthly newsletter – Quality News. The main objective of this newsletter is to promote TQM, ISO 9000, QS 9000, Self Assessment and Total Productive Maintenance concepts and it mainly features management practices in Quality, Tools and techniques. It also highlights all major events including seminars, conferences, missions, conventions etc.

Posters

You might ask if quality is an infectious passion. The answer to this lies in discovering quality itself. Once you are convinced of what quality can do to your

organization, your passion will convince everyone. In fact, you will see when a team works together as one, with a common vision, quality happen automatically.

To communicate on how to win through quality the TQM Division has brought out Quality posters in English, Tamil, Hindi, Bengali, and Marathi. These posters are available in set.

Service Quality for Global Competitiveness

Sri Sai, TQM Counselor
TQM Division
CII–Pune

Introduction

Service Quality defies definition since it is too interdisciplinary, complex, intangible and largely perceptual. Service Quality excellence may be focused upon aiming at 100 per cent consistency of delivery and 100 per cent customer satisfaction each time. The customer's perception of excellent quality of service depends to a great extent on comparison of competitors' performances vis-à-vis:

- Fitness for use.
- Conformance to specification.
- Brand and grade.
- Salient/distinguishing features.
- Organizational reputation.

Why Service Quality?

Today's market for any product or service presents itself as a plethora of competitors striving to strike the chord in thinly defined market segments with a just noticeable difference in their offer packages. The customer, obviously, is confused.

Add to this the fact of a shrinking global market and international competition (Thanks to IT and the Internet) and mere confusion has bowed out in favour of a veritable chaos. Manufacturers and service providers the world over have understood and accepted that the best way to differentiate their customer benefit packages, the key to being a leader in a world of "copy cats" is excellence of service quality. In other words, the customer's perception of just noticeable difference of service quality is the decisive factor to ride the wave in cutting-edge global competition.

Conclusion

Service Quality for global competitiveness must be measured against global standards such as the EFQM Model, Malcolm Baldridge Quality Award, Deming Prize and other International Service Quality Norms.

To work towards, compete and achieve such awards, Service Quality should ride the wave in all aspects of organizational performance excellence such as, leadership, information and analysis, strategic quality planning, human resources development and management, process quality management, quality and operational results, customer-focus and satisfaction.

When Service Quality is focused and geared to the achievement of the above vision, the organization will climb the steep ladder to the pinnacle of global excellence.

In pursuit of excellence – Daily Work Management

Dr. Sarita Nagpal,
Senior Counselor
TQM Division, CII, New Delhi

Daily Work Management is system that helps a company to effectively implement countermeasures for daily occurring abnormalities in routine processes.

This is also the intention of any good quality management system such as ISO9000 and QS9000, but even after their implementation there are many gaps between the reality and this objective. This objective is not realized very often because the way that we react to abnormalities in our day-to-day life remains the same. We in fact keep taking actions which are only 'correcting the abnormality' temporarily but never get to the root cause and eliminate the problem. At best we reduce the effect to some extent. What is required is to reduce, eliminate and sustain the elimination of the problem.

Daily work management operationalises a set of principles which allow us to systematically reduce and eliminate the problem and then sustain the level that we reach. The measures that Daily Work Management operates on are Quality, Cost, Delivery, Safety and Morale. The principles are:

- Exactness.
- Standardization.
- System for accountability in direct and indirect areas of operation–managing and checking points.
- Poka-Yoke – Mistake prevention.
- Quality Assurance table.

In this section we are presenting two articles which are the sum of the learning acquired over a period of three years of practice in a cluster of companies from the auto-component sector, all of who are OEM suppliers. These companies have been supervised by Prof. Tsuda to lay a foundation for becoming world-class companies through the practice of Daily Work Management.

The contribution these companies made to the learning and understanding of DWM in this country will go down into the history of Quality in Indian Industry as a key milestone. Their names are: Amtek Auto Ltd., Asahi India Safety LTd., Brakes India Ltd (Brakes Division), Brakes India Foundry Ltd., Delphi Ltd., GKN Ltd., India Pistons Ltd., IP Rings Ltd., Jay Bharat Maruti Ltd., Krishna Maruti Ltd., Lumax Ltd., Lucas TVS Ltd., Motherson Sumi Ltd., Precision Pipes Ltd., Sundaram Brake Linings Ltd., Sona Koyo Ltd.

Prof. Tsuda, the Guru of these companies' painstaking efforts into putting these companies at a level where they can operationalize DWM effectively, will bring about great benefits that are visible in the short and long term. During the last Quality Summit there were presentations by many of these companies on DWM, but the learning has not stopped – practice is making it evolve – and these two notes represent the learning.

Corporate Culture and Communication :

A Synthesis

Gr. Capt R. S. Chaudhry
Sr. Counselor–TQM
CII, New Delhi

This article is an extract from the book "Managing Corporate Culture – Leveraging diversity to give India a Global Competitive Edge" authored by Mr. Karl Ulrich, Gp. Capt. R.S. Chaudhry and Kishan S. Rana and published by McMillan India Limited, Delhi. This book is a result of the research survey conducted by CII and Roland Berger & Partners on Indian Companies in the year 1998.

Corporate culture is a synthesis of management styles, values and communication styles. It is generally understood as "the way things are done" in an organization. It describes the situation not as stated but as practiced. Though organizational structure, system, policy and strategy direct and channelize the workflow, the actual behavior of people is conditioned by corporate culture. It is intangible and hard to quantify. In response to a question on how respondents viewed their corporate culture, most felt that Indian companies were highly cooperative in their approach and style. This is further substantiated by the high level of flexibility and willingness to change, which is also reflected in the Survey.

Managerial behavior – management style which is not seen but felt throughout the organization and influences people's responses. Various elements of corporate culture such as management styles, corporate personality and identity and effective communication are vital for creating a positive impact on internal and external target groups. There are several factors that bear a significant influence in shaping the management style of an organization. These include leadership style, organizational factors, motivational methods and tools, as well as communication styles and methods.

Action Agenda for Indian Corporate

Reshape Management Style

The paternal management style has been found inadequate for successfully meeting the challenge of international competition, globalization and restructuring. World-class companies with well-entrenched paternalistic styles had to reshape themselves. Indian corporations would be well advised to evolve a management style integrating the positive aspects of paternal and entrepreneurial styles, while discarding the negative aspects.

Urgent attention needs to be given to introduce elements which are at present deficient, among them customer orientation, innovativeness, strategic thinking, growth orientation and risk management, focus on details, methodical and systematic working, and value for time. This would lead evolving a new management style in line with requirements of organizational transformation.

Indian companies, particularly large ones, urgently need to shift the existing paradigm of centralized decision-making and physical controls to distributed decision-making and empowerment. To achieve this paradigm shift, sound

organizational and personal values and guiding principles need to be defined and effectively implemented.

ISO 9001 : 2000 - A New Hope in the New Millennium

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Here is the schedule of a 12 - year old boy

1. He wakes up at 6 o'clock in the morning.
2. After completing his morning rituals he goes to his yoga classes.
3. At 9.30 A.M. he goes to school.
4. At 4.30 P.M. he returns from his school and takes rest for half an hour.
5. He practices chess from 5 p.m. to 6 p.m.
6. He studies from 6 p.m. to 9 p.m.
7. He watches one of the educational channels in the TV network.
8. He goes to bed at 10.30 p.m. after finishing his dinner.

[This schedule is applicable for all the days except on Sundays and holidays].

This schedule has been authorized by his parents through consultation with the tutors and by comparing with the schedules of some of the best students around. It is a well-written and comprehensive procedure, which may be considered as an established quality system for a student. However, there is a problem! Although the boy follows this procedure meticulously his examination results are not satisfactory, his attitude towards his parents is not positive and above all, he is not interested in extra-curricular activities.

Similarly, at times, the implementation of the current standard of ISO 9001 (1994 edition) is an organization becomes analogous to the above example. People often confuse between the process and the results. They often assume that a well - written procedure will necessarily deliver favourable results. And, that is why, organizations seeking for ISO certification put their best efforts to prepare and implement a well - written documented system.

However, not all of them ensure improved business performance. In the next part of this article we will examine whether ISO 9001 : 2000 (Quality Management Systems - Requirements) will take care of some of the shortcomings of the ISO 9001 : 1994 (Quality Systems - Model for Quality / Assurance in Design, Development, Production Installation and Servicing) other than holding a different title and edition.

The Proposed Model, as it Stands Today:

The proposed model is simpler. The 20 elements of the current **ISO 9001: 1994** are repositioned into four major headings namely:

1. **Management Responsibility**: Management needs to define its requirements.
2. **Resource Management:** Necessary resources need to be determined and applied.
3. **Product Realization:** Process are to be established and implemented.
4. **Measurement, Analysis and Improvement:** Outcomes of processes are to be measured, analyses and improved.

The terminology used in this model is more user - friendly. Currently an organization selects ISO 9002 or 9003 based on the scope of business operation. Upon the publication of ISO 9001 : 2000 the current editions of ISO 9001, 9002 or 9003 will become obsolete. Therefore ISO 9001 will apply to all business types and sizes. In other words, the proposed standard will overcome the problem of choosing between the current ISO 9001, 9002 and 9003.

The Proposed Model Links Processes with Results:

What is a process? It could be any activity or operation, which receives inputs and converts them to outputs. In the current standard the scope is limited. It includes mainly the production, installation and servicing process. However, in the proposed standard, the scope is wider. It includes all the processes in order to realize the required products and services. It starts with the process of identifying customer requirements and encompasses all the interlinked processes, such as design and development, purchasing production etc. until the final delivery of the product.

Organizations also need to measure whether the process continue to deliver planned results and outputs. For example, for the purchasing department, writing a procedure outlining only the sequence of operation (say, from the receipt of the indent to the issue of the purchase order) is not adequate. The organization should also measure and verify whether planned results are achieved (e.g. whether there is any stock - out situation or the inventories are maintained at a target value).

It Introduces the Intent of Continual Improvement:

An organization needs to maintain or retain a certain level of performance. It also needs to improve the processes to attain a higher level in order to increase its competitive advantage in the market. The proposed standard looks for both. For example, maintaining an inventory level against the target is necessary. However, establishing a new target value derived from the business need and based on process improvement is also required.

The Model's Compatibility with Other Standards/Award Schemes:

1. ISO 9001 and ISO 9004 (Quality Management Systems - Guidance for performance improvement) are the consistent pair of quality management system standard. ISO 9001 aims at ensuring customer satisfaction and it may be used for certification purposes. ISO 9004 is intended to identify and meet the needs and requirements of all the stakeholders (i.e. customers, employees, suppliers, owners and society) and gives guidance to all aspect of the quality management system to improve the overall performance of the organization. Both these two standards are now being developed to be used together. Both the standards will have similar structure, but different scopes.
2. Additional alignment with ISO 14001 (Environmental management system) has been established. There is a plan to prepare a single standard on auditing activities both for quality and environmental management systems.
3. The guidance provided by ISO 9004: 2000 may be considered as a annex regarding organizational self - assessment. In other words, now it is more aligned with the quality award schemes (i.e. European Quality Award or Malcolm Baldrige National Quality Award).

A Few More Words:

The ISO 9001 : 2000 would enable an organization to institute an effective quality management to ensure customer satisfaction and a sustained business performance. However, the organizations implementing ISO along with the training, consulting and certification bodies need to be aligned with the intent of the proposed standard. If so, it would definitely contribute to the competitiveness and the overall business growth of an organization thus justifying its more meaningful existence in the national economy.

A Manifesto of TQM

Quest for a Respectable Organizational Presence

The TQM Committee
Union of Japanese Scientists and Engineers

Preface

For a long time, Japan has used "TQC (Total Quality Control)" for modern quality control, which was born in America and developed in Japan in its own right. In April 1996, the Union of Japanese Scientists and Engineers (JUSE hereafter) changed the term from "TQC" to "TQM (Total Quality Management)".

Frankly speaking, a reason for this change from TQC to TQM was due to the prevalence of the latter term in many countries and our feeling for the need to adopt this more internationally-accepted term: TQM. More than that, this renaming process gave us an opportunity to revisit the origin of quality control and rebuild the concept of "TQM as New TQC" enabling us to respond better to environmental changes in TQC and business management.

For the past few years, the need to change the name from TQC to TQM has been discussed quite concretely among the people concerned. However, soon after JUSE made the official announcement of the name change, it became apparent that previous discussions had still failed to fully develop the consensus regarding this change from TQC to TQM. People are now questioning and discussing such simple and fundamental points as: How does TQM differ from TQC? How should the new concepts of TQM be established?

To map out the course in addressing issues related to this name change, JUSE established a TQM Committee consisting of the following members:
Chairman: Yoshinori Iizuka, The University of Tokyo
Member: Masamori Inohara, Osaka Electro-Communications University
Takao Enkawa, Tokyo Institute of Technology
Hiroshi Kubota, Hiroshima Institute of Technology
Hisakazu Shindo, Yamanashi University
Masahiko Munechika, Waseda University
Susumu Yatsu, Tamagawa University
Tadashi Yoshizawa, Tsukuba University
The TQM Committee had three missions:
(1) To clarify the significance of the name change from TQC to TQM.
(2) To clarify the concepts of the renamed TQM.

(3) To develop a master plan promoting the understanding and implementation of TQM as new TQC.

In short, the purpose of the TQM Committee was to clarify what TQM is. Based on these TQM Committee discussions, this booklet was developed as a manifesto of TQM, launching its beginnings as a fresh concept. Here, TQM asks such self-referential questions as "What am I?" and "What should I do?" It is hoped that this booklet may be used as a starting point for further discussions on the future course of TQM.

TQM Definition

TQM is a management approach that strives for the following in any business environment:

- Under strong top management leadership, establish clear mid- and long-term vision and strategies.
- Properly utilize the concepts, values, and scientific methods of TQM.
- Regard human resources and information as vital organizational infrastructures.
- Under an appropriate management system, effectively operate a quality assurance system and other cross-functional management systems such as cost, delivery, environment, and safety.
- Supported by fundamental organizational powers such as core technology, speed, and vitality, ensure sound relations with customers, employees, society, suppliers, and stockholders.
- Continuously realize corporate objectives in the form of achieving as organization's mission, building an organization with a respectable presence, and continuously securing profits.

TQM Transformation

This new TQM aims to further strengthen its predecessor, TQC, in the following areas:

- While TQM's core aim remains customer satisfaction through products and services, TQM also emphasizes developing sound relations with other stakeholders such as employees, society, suppliers and stockholders.
- To improve these relations, TQM aims to strengthen fundamental organizational powers such as core technology, speed, and vitality and to create an organization that has a respectable presence.
- To respond better to changing times, TQM emphasizes the importance of mid- and long-term vision and strategies as well as top management leadership.
- Among management resources, TQM emphasizes the importance of people and information and strives to build an organization that is excellent in autonomy, learning, speed, flexibility, and creativity.

1. Name Change from TQC to TQM

Significance of the name change from TQC to TQM:

- Made the concept easier to recognize outside of Japan by changing "C (control)" to "M (management)," since with "control" there always exists some risk of the practice being narrowly understood.
- Led the practice to transform itself more robust for radically changing times ahead by extending TQC's tradition of adapting itself to the requirements of the times.

Quality control in Japan has successfully overcome many tests. Every time Japan faced challenges such as liberalization in trade, capital investment, and foreign exchange, as well as oil crises and appreciation in Japanese yen, TQC functioned as an effective tools for organizational improvements. If we are facing similar challenges again today, why shouldn't we continue to develop TQC as we have? Why not keep the name TQC, and transform it by enriching its contents?

The primary reason changing the name from TQC to TQM is its perception from an international viewpoint. The origin of the word "control" in TQC (Total Quality Control) is "counter" + "roll" meaning to check by a duplicate register. Therefore, though it carries the meaning "to check against standards," it does not necessarily include an action to establish standards and plans. As ISO 9000 gained popularity throughout the world, various concepts regarding quality control rapidly became widespread as well.

Consequently, it became clear that "quality control" simply referred to elements and techniques of quality control activities and that "quality management" was a more suitable term to describe quality control activities practiced in Japan. While TQC may have been acceptable as an acronym for the activities practiced in Japan, the word "control" could still cause misunderstanding if TQC continued to be referred back to as "total quality control". In the United States as well as in Europe, TQC has gained popularity as a term meaning total quality activities, and TQC is no longer an internationally-used term. If we are to position TQC as a universal methodology for managing organizations, we had to change the name to TQM.

The second reason for the name change is our recognition of the need to accelerate the speed of change in TQC. Up until the late 1980s, TQC was successful in adapting itself to the requirements of the times and contributing greatly to the companies that put this systematic approach for business management improvements into practice. Thus, TQC became widely recognized. The crush of the bubble economy in Japan also marked a turning point in TQC in many ways.

The prevailing feelings are a lessened trust in TQC, a sense of limitation in applying TQC to many fields, a rise of management techniques that have new aspects that TQC didn't, a lack of future TQC leaders, and a stagnation in TQC promotion. The 80s were too prosperous for TQC to begin making necessary changes. Though belated, we must now begin to tackle squarely with TQC's transformation. By changing the name to TQM, we intend to express our unwavering commitment to transforming TQC beyond the extrapolation of the past changes and adapting itself to these radically changing times.

2. TQC as it has been

The Essentials of TQC (Basic Concepts)

- Quality.
- Total Employee Involvement.
- Continuous Improvement.

TQC had three essentials (or basic concepts): Quality, Total Employee Involvement, and Continuous Improvement. These concepts were unique to TQC as other systematic management improvement methods did not include them explicitly. TQC has been effective in improving management systems in an organized manner.

TQC pointed out repeatedly the importance of quality in business management. Companies survive by payment from their customers for the products and services they provide. Companies cannot go very far, unless customers are willing to buy their products and services. As companies need to satisfy their customers not for a short time but for a long time, quality, including price, of their products and services is important. Quality, has always meant "customer acceptance" and "customer-orientation," and has been an integral part of the TQC philosophy from the beginning.

TQC also pointed out the importance of quality in terms of "quality losses." Quality losses are classified by the following categories: "internal losses" vs. "external losses" and "visible losses" vs. "hidden losses." What should be specially noted are hidden losses. An example of hidden internal loss would be an opportunity loss due to rework. A typical example of hidden external losses is reduced sales. It is better to have customer complaints than to not have them and gradually lose sales. In this vein, understanding quality in these terms is important.

Additionally, TQC recognized that quality problems are often buried under the problems seemingly unrelated to quality. For example, in new product development, people often identify their main problems to be their long man-hours and high costs to develop new products. However, a lack of ability in achieving planned quality levels often results in driving man-hours up forcing employees to repeat trial and error until achieving these levels. It also can result in increasing costs from applying more costly measures.

Also, a failure to grasp customer requirements correctly from the beginning often results in a need to add functions and performance improvements to the original product later on or a shorter life cycle of the product than initially intended.

To achieve quality as discussed above, TQC encourages total employed involvement. When the product and service quality of a company is recognized as a reflection of the aggregate quality characteristics of the organization, it becomes obvious that the involvement of all its members is not only necessary but also efficient for achieving quality.

In this regard, TQC has advocated the efforts to uplift employees through education and training, morale enhancement, and proper feedback mechanisms to their resulting work. Unless a system has a built-in subsystem to improve itself, it is not a good system. TQC emphasized problem solving. It emphasized the importance of continuous improvement on products, processes, and systems, but not in dwelling on past failures. This is based on the notion that technologies and systems can never be perfect, and thus require constant efforts to improve.

TQC encouraged such effects through total employee involvement. Total employee involvement is a noteworthy management methodology, and TQC had practical structures to promote it effectively. Above all, the QC Circle activity played on important role in total employee involvement as it provided first-line supervisors and employees with a platform where they could carry out improvements involving their circle members. By embodying total employee involvement through QC Circle activities, everyone experienced being "a manger of his/her own work." Employees enhanced their sense of ownership toward their jobs and processes. QC Circles'

Workplace improvements resulted in higher quality and productivity and enhanced pride in jobs.

Reasons for TQC's High Reputation

- Pointed to the importance of a business management based on the concept of "customers" (quality concept).
- Presented important management concepts.
- Proved the effectiveness of improvement through total employee involvement.
- Provided not only the philosophy but also its practical methods.
- Provided a common language for articulating quality management.
- Presented activities that involved top management.
- Contributed to securing long-term profits by establishing a management system for producing better products at lower cost.
- Provided infrastructures of TQC promotion for those companies that wanted to apply TQC.

Up until 1980s, TQC was highly recognized especially among manufacturing companies in Japan. This was because TQC met the requirements of the times. In the process of industrial development in Japan, it was effective for manufacturing companies to have business strategies centering on product quality. TQC provided these companies with various concepts and methodologies that supported their activities.

It is not so easy to gain a true understanding of the concept of customers or quality, and the importance of quality in business management. In explaining both the theory and practice of TQC, as well as its methodologies and techniques, TQC often pointed out the difficulty in mastering TQC even after having understood it as ideas. Nevertheless, through successful case examples from those companies that trusted TQC and implemented it, TQC proved its effectiveness.

"Management" does not mean merely to supervise or to control. TQC introduced these concepts and methodologies to "manage" organizations and proved to be very effective: PDCA Cycle, Process Management, Management by Facts, Priority Thinking, Upstream Management, and Prevention by Prediction. In a way, TQC was a philosophical revolution in management theory.

TQC discussed the importance of "improvement" through "total employee involvement" and fully confirmed its effectiveness. This was also a philosophical revolution in management theory. QC Circles were a vehicle to materialize this revolution.

In addition to the philosophies of "quality" and "management," TQC was equipped with the "tools" to materialize the philosophies. Philosophies, concepts, and theories alone cannot be effective enough to practice. By developing QC techniques and by introducing successful applications. TQC contributed to product, process, and system improvements.

It is often said that TQC has many jargons, which could be both merits and demerits. On the positive side, the terms that articulated important concepts of "quality management" served well as a common language among those who wanted to practice TQC and facilitated their implementation.

In any organization, top management leadership is a necessary condition to improve and transform its management systems. TQC is a method to materialize high organizational ideals through top management leadership and total employee involvement. TQC was an activity that involved top management. This was another reason why TQC was successful when it was applied to organizations.

The reasons for the success of TQC in the past was because those features discussed above met with the needs of the times. In other words, TQC was a methodology that could contribute greatly to companies' establishing their management systems to produce "better products at lower cost" and building the foundation for "long-term profits."

Even if TQC was intrinsically effective, it would not have been popular unless it was friendly to those companies that wanted to use it. TQC was also characterized by its various structures that facilitated its application. The Deming Prize, QC Circles, and various QC conferences enabled TQC user companies to mutually learn from their experience in implementing and advancing TQC, and thus provided "the infrastructures for TQC promotion."

Strengths of TQC (Identity):

- Education and popularization of quality concepts.
- Widespread practice of management concepts.

In short, the contributions of TQC can be summarized with "education and popularization of quality concepts" and "widespread practice of management concepts."

Managing quality company-wide requires an organization to have lofty ideals and methodologies. TQC translated these ideals and methodologies into practical implementation methods and popularized them. History shows that TQC contributed greatly to business management as a result of its meeting organization's values and methodologies needed during times of economic growth and market expansion.

Environmental Changes Prompting TQM Transformation

- **Evaluation of Business management needs:**
  - To provide products and service.
  - To maximize quality and efficiency.
  - To pursue a respectable organizational presence.
- **Further development of business management infrastructures:**
  - Reduction of constraints from time and physical distances as a result of progress in information technology and distribution technology.
- **Changes in social systems:**
  - Organizational challenges of higher transparency, maintaining fairness and accountability, countering liability, and responding to deregulation.
- **Changes in labor environment and consciousness:**
  - Changing views toward humanity and labor as well as individuals' behavior, involvement, and roles within groups.
- **Increasing uncertainty:**
  - Speed for political, economical, social, and technological changes, as well as the expectations of an advanced nation.

Restructuring of TQM

- **Goals of TQM:**
  - "Respectable presence" of products and organizations.
  - "Sound relations" with customers, employees, society, suppliers, and stockholders.
  - "Organizational powers" based on core technology, speed, and vitality.
- **Higher, more diverse, and comprehensive quality concepts:**

- More sophisticated and mature customer needs.
- Diverse customers.
- Comprehensive quality.

- **More Sophisticated management:**
  - Expansion of management (vision, strategy, transformation, speed, and prevention).
  - People and information as important management resources.

Examples of Building-Block Technologies that TQM Can Develop

(1) Integration of management strategies and Policy Management.
(2) Integration of marketing technology and new product development system.
(3) Comprehensive management of Q, C, and D in new product development.
(4) Quality assurance in a global community.
(5) Coordination, fusion, and integration with international quality trends.
(6) Quality and technology information systems using latest information technologies.
(7) Strengthened planning in equipment management.
(8) TQM methodology for technology improvement.
(9) New SQC for process analysis and management.
(10) Methodologies for solving various problems and achieving various tasks.
(11) Human resources that support changes in production workplace.
(12) Human resources development that emphasizes creativity and respect for people.

TQM Definition

TQM is a management approach that strives for the following in any business environment:

- Under strong top management leadership (1), establish clear mid- and long-term vision and strategies (1).
- Properly utilize the concepts, values (2), and scientific methods (3) of TQM.
- Regard human resources (4) and information (5) as vital organizational infrastructures.
- Under an appropriate management system (6), effectively operate a quality assurance system (7) and other cross-functional management systems such as cost, delivery, environment, and safety (8).
- Supported by fundamental organizational powers such as core technology, speed, and vitality (9a), ensure sound relations with customers, employees, society, suppliers, and stockholders (9b).
- Continuously realize corporate objectives in the form of achieving an organization's mission, building an organization with a respectable presence, and continuously securing profits (10).

TQM Transformation:

- Sound relations with customers, employees, society, suppliers, and stockholders.
- Creation of an organization with a respectable presence by strengthening its core technology, speed, and vitality.

- Emphasis on the importance of vision, strategy, and top management leadership.
- Emphasis on people and information as important management resources.

While the new TQM Model inherits the basic TQC concepts and methodologies, it aims to further enrich the contents of TQC in the areas discussed above.

While, TQM's core aim remains customer satisfaction through products and services, TQM also emphasizes developing sound relations with other stakeholders such as employees, society, suppliers, and stockholders.

To improve these relations, TQM aims to strengthen fundamental organizational powers such as core technology, speed, and vitality and to create an organization that has a respectable presence.

To respond better to changing times, TQM emphasizes the importance of mid- and long-term vision and strategies as well as top management leadership.

Among management resources, TQM emphasizes the importance of people and information and strives to build an organization that is excellent in autonomy, learning, speed, flexibility, and creativity.

Strategies for TQM Build-up:

- Disseminate TQM concepts as they are developed.
- Develop TQM's Building-Block Technologies.
- Actively provide mutual-learning opportunities.
- Assume international leadership.
- Ensure strategic nature in TQM.

The change from TQC to TQM also presents many tasks for restructuring TQM. Being a quality-centered management approach, TQM's mission should aim for contributing to organizational efforts to building efficient and effective organizations. In this vein, TQM must develop and disseminate concepts, and their applications, techniques, and methods in response to changes in business environments while supporting user organizations according to their needs.

TQM must always strengthen its basic technologies and methodologies as a quality-centered management approach, take leadership in keeping ahead of changing times with an enterprising spirit, and play an integral role in fusing and integrating itself with various organizational improvement and transformation methodologies.

In Pursuit of Excellence to Become Globally Competitive

This is the story of a journey of a manufacturing (Printed Circuit Boards) unit, engaged in producing basic building block in electronic component industry in 1989, INDAL ELECTRONICS, which was a totally unrelated diversification of Indian Aluminum Co., Ltd. (INDAL).

The market environment in which it had to start operating can be considered volatile. The single biggest emerging end user market was telecom and the biggest and near monopolistic buyer was Department of Telecom. Lot depended on policy initiations or lack of it. The biggest manufacturer of telecom equipment and hence largest buyer of PCBs was in public sector which at that point of time was undergoing a painful transition itself.

The industry itself was highly fragmented having more than 100 producers ranging from cottage industry to some sophistication. Worldwide this industry was growing consistently at +8% and dominated by USA and Japan. Lot of competition was emerging to these two nations from Far East particularly from Taiwan. Later China entered into the race very seriously.

It is part of an industry where prices keep falling down sharply at the same time customers demand thinner, lighter and more feature packed products where the life cycle of the products does not exceed 6 months. It is also part of an industry, which is capital intensive, knowledge intensive and labour intensive. People consider survival as a guiding principle in this industry.

I PHASE

The unit commenced operation in 1990 with a simple Mission – "To become domestic market leader with adequate return on ROI". To achieve this, under an inspirational leader some key fundamental processes and thinking was put in place and along the passage of time it become nearly institutionalized. Some of them were:

1. Strategic HRM dimensions:

- Employee skills and work policies – Purpose – Develop superior performing employees.
- Supportive Environment Practices – Purpose – Foster sustained employee motivation.
- Performance measurement and reinforcement practices – Purpose – Focus Employee energies on specific production behaviors.
- Organization practice – Purpose – create a linkage between employees and organization.

2. Strategic Quality Dimensions:

- Connecting all employees to company's goals through "Quality Policy Deployment" one of the first companies to be accredited.
- To become ISO-9000 certified.
- Incorporate philosophy and practice of TPM and 5S.
  Shop floor to be managed only on the basis of SPC.

3. Technology Road Map:

- Align periodically our Technology Road Map (TRM) with that of customer.

4. Partnership Approach with Suppliers:

- Establish long term relationship to leverage supply chain, optimum pricing and technical know-how.

These were some key processes that were established and achieved during first four years of existence (1990-94) which provided a solid foundation to work upon further. It achieved its initial mission of becoming market leader and in terms of market share having double of its nearest competitor. It also obtained adequate ROI.

II Phase :

During all of this time winds of change were blowing across both in domestic interconnect industry as well as worldwide. The employee loyalty was the only key to anchor the company to a safe coast through the rough weather of changing industry conditions. This led to rethinking of earlier mission and repositioning of the company. Thus could well be stated as follows:

- Being globally competitive preempts liberalization & exposure.
- Bench marking global operations for domestic leadership.
- Bringing parity with global players is desirable. Market leadership is the greatest security.
- Liberalization pushes limits to growth.
- Being able to retain business viability.
- Participating in International market is both profitable and measuring.
- Deployment of benchmarked goals.
- Exceeding international market expectation is the goal.
- Autonomy and being globally competitive is the ultimate security.
- Unlimited business opportunity.
- Retaining & improving job opportunity is the ultimate mission.
- Domestic Marketing provides ample opportunity.
- Domestic Market Leadership is the goal.
- Best in domestic market in quality & delivery is good enough.
- Working within the shadow of a large company is greatest security.
- Business opportunity is limited and varied.
- Adequate ROCE.

The corner stone of new mission was to change from mindset evolution. Domestic Leadership - Globally Competitive. Low End Technology - High End technology (Suited for domestic market) – Return on investment – Greater value to stake holders.

The vision evolved was:

- Rededicate itself to market opportunities by fulfilling customer needs in chosen segments, both in domestic as well as international markets.
- Revenue growth to reach Rs. 100 crores in 3 years as well as revenue per employee of Rs. 40 lakhs by year 2000.
- Technology Roadmap and Quality Policy Deployment will be a vehicle to achieve this.
- Place itself among 100 largest manufacturers of PCB worldwide for continuity and security of all engaged in the business.

Based on above, the company changed gears and started establishing itself on export market of DG-7 countries.

Blue Print for future up to 2003:

- Global capacity expansion to 3,00,000 sq. mtrs. per annum approved during global investor meet held at Bangalore, Karnataka during June 2000.
- Transition to use of exotic raw materials.
- Preparedness to produce higher complexity PCBs.
- Employee knowledge management.
- Reducing Cycle Time from "ideas to implementation".

Conclusions:

We have today, a highly, dedicated professionally trained workforce of over 400. A workforce which could be an envy of any knowledge intensive manufacturing

industry in India and most part of the world. In our pursuit of excellence to become globally competitive we have thus far reached. This strength of us has taken us so far in our pursuit of excellence to Becoming Globally Competitive, a stage where all our focus will be on attaining leadership in any one of the following, as this is THE MEANING of Being Globally Competitive to us:

a. Price.
b. Quality.
c. Flexibility.
d. Product innovation.
e. Providing complete customer solution.

Even after achieving 75 % of export, this remains as our challenge.

FOUNDATION OF BECOMING WORLD-CLASS: UNDERSTANDING AND IMPLEMENTING EXACTNESS

Management has three key functions – retainment, improvement and breakthroughs. These are on a maturity scale, i.e. it is not possible to improve without retainment, and no breakthroughs until improvement is a culture. In Total Quality Management, the phase of retainment is built on two key factors: exactness and daily work management. In this section there is an attempt to illustrate the concept of exactness as applicable only to the cluster member companies.

Foundation of becoming world-class is laid in understanding and implementing exactness. When Prof. Tsuda uses the term exactness he implies 'exact for the purpose' or 'effective'. This phase has the purpose to **improve confidence in our product quality**, i.e. meeting customer requirements in a consistent manner. Without this in place, we cannot even start to think of any 'improvement' initiative because the current reality is that status is not even stable. In the view of Professor Tsuda, there are still several causes, which are assignable as 'unstable' in our operations over which we need to gain control; only then, the word 'improvement' will become meaningful. These assignable causes end up taking a lot of time of management in fire fighting leaving little energy or time to improve.

Prof. Tsuda's first visit to each company has brought some of these assignable causes to the attention of the management. In his recommendations, he has identified 'Becoming exact or purposeful' as the first level of maturity for a company wanting to become 'world-class'. Becoming 'purposeful' or 'exact' in operations means having full control over the quantity, quality and delivery performance areas. These have to be planned for and worked hard at to lay the foundation for our journey towards becoming world-class.

PROCEDURE FOR SELECTION OF MANAGING POINTS AND CHECKING POINTS

We can manage a company by many ways, but in TQM, we manage a company by a system, which is based on the PDCA principle. The practice of the PDCA cycle is a logical way of thinking which should reflect in everything that an organization does to achieve its' business results. The question is how to actualize the PDCA in real life. TQM has a system supported with appropriate tools and techniques

to make it happen. The purpose of TQM is to align people with the PDCA way of thinking for achievement of business excellence.

To make this philosophy work in an organization, we need to build an infrastructure of management. This is basic for managers to operate and achieve some results. In TQM this system is built around the PDCA principle and give tools and techniques to people to make it work. This builds ability in managers to assure business performance. Amongst the three roles that managers have – retainment, improvement and breakthrough we first learn and establish the system for retainment and improvement and later for breakthroughs.

In TQM, we have only one way to build a system, which ensures its sustainability, and that is the PDCA cycle. Managing and Checking points is one of such systems by which we can initiate the PDCA cycle in a company as a means to manage its business results.

As the cluster member companies are in the retainment phase and beginning to enter into the breakthrough phase, we will try to confirm how managers should manage their company with a system of managing and checking points to achieve their annual business results based on a sound foundation of daily work management. Making up the managing and checking points in an organization is education for the managers. It educates managers on how to become accountable for results, and identify the value they bring to their organization.

Managing and Checking points should be chosen once the organization has a proper organization structure with some hierarchy and functions represented. Without this we should not attempt to make up the system of managing and checking points. For a selected department/function or a unit head/GM/CEO:

Step 1: Define Responsibilities

- Describe function of the entire department or functions reporting to the person and its' reporting sections.
- Consolidate and list the 'total responsibility' of the individual. Responsibility decides method of working and is not a description of what we are doing. E.g. keeping purchasing or cost within budget is what we are doing, but keeping cost at best level is your responsibility. Responsibility should not be conservative or restrictive.
- Discuss with the manager in the presence of his other colleagues from same department – senior and repartees that the manager fully understands his responsibilities. Also discuss the responsibilities in the presence of interface departments and revise the statements if necessary.
- Responsibilities are not activities. They are for an objective – a result. Ensure the manager understands the purpose of all his responsibilities in his/her level and function and in interacting with other departments.
- If there is any overlap of responsibility with another department/individual – ensure the confusion is cleared. Ask questions such as 'who gives you this information and how often?' 'How often do you give information and to whom?' Before we even begin to select managing and checking points this clarity is essential. If this is not removed more than one person may have the same checking point. We have to eliminate it at that stage, if not eliminated here already.

The purpose of the above discussion is to encourage the manager to start thinking.

STEP 2: DEFINE ACCOUNTABILITY

A. Ask the following questions:

- What is the purpose of my function and my specific work in achieving business results (e.g. Profits, Customer satisfaction, Cost reduction, Delivery performance, Safety, People motivation)? Accountability must always be against purpose not 'implementation of actions'.
- If I extend my responsibility to a reasonable limit can I assume accountability for one or more of these areas of business performance?
- Identify as many areas of accountability as you can for yourself. These must be selected by the manager himself/herself.

B. Ask the following questions for each area of accountability:

- What are the outputs of my section, which contribute to the achievement of this area of accountability? (An output is a result of completed activity). These outputs are tangibles – e.g. ' Request for new product report' is an output for marketing to R&D. These must not be confused with activities. Without clarity and focus on 'output' we cannot build up a good business process. For production people, output is 'production quantity', for product development ' new products developed' etc.
- Who is/are receivers of my output?
- What are the expectations/requirements the receiver has for my output, and what trouble will occur in their work from your output?
- What would be an appropriate measure of the output(s), which will tell us that we have done our job well or not?
- Would I like to commit myself to the achievement of this measure, given my present responsibilities and authorities?
- If yes, then this measure is a managing point. Assign the measurement characteristic a value. (E.g. No deviation on exact order quantity, 0 requirement for additional cleaning, 0 unfinished parts).
- A managing point must be always measurable.
- If you are representing the production department, your output is the finished component. The receiver of your output is 'packaging'. They would like the components to be clean, in the right quantity and not requiring any leftover operations to be done. So clean and O.K. components is a managing point for the production in charge. If you are looking after trolleys and bins, then for C – cost of in-house transportation due to trolley and bins – could be selected as a MP, For Q – In house rejections because of non-std trolleys used, for D-Delayed delivery to customer because of non-availability of trolleys, for S – No. Of accidents because of unsafe trolleys or incorrectly located trolleys.)
- Managing points must be sensitive to the changes. By keeping managing point on delays, accidents as no. of days – whether the number of days is good or bad – it is difficult to say. It is better to put it as Hours lost – this is a more sensitive measure. We could have 'temporary' managing points arising out of breakthrough Objectives.

Taking Accountability is Assuming Responsibility for Occurred Trouble.

In between, step 2 and 3, we need to confirm:

- If we have a business process for the manager and it is assuring the managing point as an output with confidence.
- If necessary review the checkpoints and their frequency – whether they will be preventive or reactive in nature.
- Integrate elements of activities of the department into one or the other business process to build up a complete system.

Only with a system can we do PDCA and improve.

Step 3: Chose Checking Points

By choosing a checking point, I must create my source of daily action or work. They need to be so specific. Ask the following questions:

- What is the process I am going to use to ensure that I can meet my commitment on this managing point?
- What can I check in the process, which will give me an early alarm that I may not be able to meet my commitment on the managing point?
- Can I act on this checking point quickly and effectively? Do I have responsibility for that action? Will I need cooperation from some other people for that action? What can I check in my process?
- Checking points must not be reaction-based, they must be preventive. It can be preventive if I have a business process that is based on a system that prevents failure.
- Is the checking point appropriate for my level? Can there be people lower levels checking it? (If yes, then please look for another point, which is appropriate to my level.) Sometimes the subordinate maybe holding a managing point, which is of a higher, level than the boss – correct that. E.g. Boss is monitoring breakdown hours and subordinate monitoring loss of production hours – needs a correction.
- Is this checking point also being checked by another person in the organization? (If yes, then it needs to be resolved, who will check.)? Checking points cannot be common to two people.
- Can this checking point become a managing point for one of my subordinates? If no, then do I have the means to collect data and observe trends on this point)?
- Can I manage by leaving this point as a checking point – or should I make it into a managing point for myself? By making a point into a managing point it becomes my performance area. By remaining as a checking point it is that of my subordinate and I will only check.
- What would be the appropriate frequency to monitor this checking point? Sometimes two or three checking points could be related e.g. Inventory of raw material and another one could be inventory of steel wires – frequency for checking item should be different – as lead time for procurement are different.
- Is this checking point adequate to assure the achievement of the target for the Managing point, if not choose more?

- Checking points must come from 'my' areas of responsibility, and to the extent possible, should be measurable. Checking points is not a list of all things that we measure in a department, or a list of parameters from the MIS system –they need to be selected with discretion as measures which can help you take preventive action in time.
- The checking point should be measuring the manager's efficiency and capability.
- Checking point is not the sum-total of the components of the managing point. Least of all, MP and CP should never be the same measure expressed in two different ways. This is not a bureaucracy. Looking at the CPs it must be clear what the value-added is in the system by the manager.

This discussion on managing and checking points may also raise some doubts and questions on:

Organization Structures:

1. Are the levels justified in the organization – is there enough value-addition by a level. E.g. Below a unit head, having a cell engineer below whom we have cell leaders below whom we have cell operators. Cell engineer should be a support function to all the cells. Responsibilities and business processes of some support functions (as an example):

1. In purchase department, what system/business process achieves purchase at 'good price'?
2. In marketing, what business process achieves 'new product information'?
3. In production planning, what system/process achieves 'delivery compliance to external customers'?
4. In QA, what system/process assures 'sample approval by customers on time'?
5. In purchase, No. of times actual buying price exceeded minimum market price by 10%. CP by supplier.

Ideas on selection of managing points & checking points:

1. If a manager material says that my MP is 'Minimize variation between standard cost and actual' - we do not need a manager for this job – this can be done by a buyer in the department. A manager should develop a supplier – not just look at gap.

Managing your business systematically through Managing and Checking Points – do they work?

For business, we need to think, analyze and act to get results. This is most critical – and so we need a system of efficient and effective management. There must be no need for excuses. Please audit for yourself:

1. Identify the gap in production – plan and achievement.
2. What is the recorded reason?
3. Does that reason appear as the managing point in the support function? And what does he monitor as a checking point.
4. If there is a gap coming because of this reason quite often, then maybe the MP and CPs are not adequate. Can there be some other more effective and efficient measures that can prevent the gap?
5. Follow this process between all interfacing departments and production and find out the 'real' MPs and CPs.

Management Development:

Synchronization and Integration

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Management culture of an organization reflects in the way it responds to given business situations and how its people respond to each other. Policy and systems, on the one hand, and personal competence and management style, on the other, tend to govern the situational responses.

Therefore, professional competence and behavioral attitudes become extremely important elements in determining the quality and speed of response. In addition, the personal characteristics and abilities such as tolerance, flexibility, empathy, sensibility, courage, risk-taking ability, drive for success/achievement, leadership, etc., also govern the effectiveness of the response.

This Survey focused primarily on top and middle management professionals. It is they who have the maximum share of responsibility and accountability in developing establishing and sustaining the management culture of the organization. They are also the important element of the leadership network in the organization.

There is a leadership gap in Indian corporation and the seriousness of it is evident from the available data:

- Since the implementation of Economic reforms, almost half the business houses have fallen sharply in ranking, while some have gone under.
- Less than 15 per cent of the current business houses, and 10 per cent of the PSEs, are estimated to have good survival prospects over the next 10 years, according to one Indian survey.

The Joy of Work: Optimizing Service Quality through Education and Training

Establishing operations manuals and quality control circles provides education and training opportunities

By **Kosaku Yoshida**
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On March 26, 1992, a clerk at stockbroker Salomon Brothers Inc. Misunderstood a customer order to sell $11 million worth of stock as an order to sell 11 million shares of stock—which could be worth almost a half billion dollars. This sounds like a joke, but it isn't. It actually happened. This kind of mistake could ruin a company in seconds.

In any service company, regardless of its size, service is given fundamentally by the personal contact between one customer and one provider, with no opportunity

for test or rework. Service companies must recognize that the employees who are in daily contact with customers—sales-people, bank tellers, taxi drivers, waitresses, clerks, and so forth—are the individuals determining the companies' future growth. Thus, service companies must manage their frontline employees. In short, to improve service quality, they must establish education and training systems throughout their companies.

Education and training systems

To gain customers' trust, service must be consistently delivered throughout the organization. People, however, provide services, and no two people are alike. Thus, companies must establish an education and training system in which everybody everywhere in the organization provides consistent service to customers every time. This is accomplished by providing all employees with the knowledge and skills needed to perform their jobs. But the goal of education and training is not limited to providing job-related skills; the ultimate goal is to provide employees with "the joy of work" by improving their quality of life.

Traditionally, service has been based on individual ability, experience, and gut feelings. For example, a high-volume salesperson and a low-volume salesperson often are considered to differ in their sales abilities. Consequently, the high-volume salesperson is paid more, the competition for higher pay is used as the major stimulus for achieving an increasingly higher volume of sales. This is especially the case in commission sales.

Commission salesperson fiercely compete with each other to achieve individual maximization; thus, senior salespeople seldom teach junior salespeople what they need to know. Only the customers taken care of by the good salespeople will be satisfied. Consequently, the maximization of individuals will not lead to the maximization of the system. But by sharing ideas and learning from each other, salesperson can achieve higher levels of individual performance and, simultaneously, maximize the system.

Through education and training, procedural and operational know-how is disseminated system wide and variation is reduced. Admittedly, this improvement process is not easy, takes a long time, and requires persistence. But by sharing information and building a common body of knowledge, an organization can reduce variation and raise its average quality level. This process is greatly facilitated by methods that promote a sense of belonging and togetherness among employees, such as establishing and updating operations manuals through team effort.

Competition and Cooperation in Japan

Kosaku Yoshida
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Professor Emeritus, California State University

"Harmony" (Cooperation) has been the dominant principle, never free competition. The entire Japanese establishment and all management practices are aimed at eliminating competition.

I. Keiretsu

Japanese corporate groups. Grouping is a phenomenon of cooperation.

1) Vertical Keiretsu

Large manufacturing companies, suppliers and distribution outlets. Toyota, Honda, Nissan, Hitachi, Toshiba, Matsushita, NEC, Fujitsu, etc. (Give) provide capital and know how and sable business (Take) Continuous improvement in cost, quality and delivery.

2) Horizontal Keiretsu

Main bank, insurance company, and a few dozen large manufacturing companies.
Reciprocal stock ownership, interdependent in business, independent decision-makers.

3) Mitsubishi Group

1) 28 core companies with $175 billion sales.
2) 26% of stock is owned by other core keiretsu members.
3) 15% to 20% of each company business depends on other member companies.
4) Top executives meet once a month. No detailed business dealings. Early access to information on new business opportunities.

II. Industrial Policy

Ministry of International Trade and Industry (MITI).
Post-war period.
Coal Mining, Steel Mills, Shipbuilding electrical appliances, Electronics.
Numerous trade associations: Coordination.
Umbrella business associations:
The federation of Economic Organization.
The Japan Federation of Employer's Association.
Cooperation of MITI and industry.

III. NASDA

Japan's NASDA (National Space Development Agency) launched H-II Rocket into space in 1994, based on entirely Japanese technologies. 74 Japan's leading companies are involved, including four key firms: Mitsubishi Heavy Industries, Kawasaki Heavy Industries, NEC and Ishikawajima-Harima Heavy Industries Co.

IV. Cooperation within a Company

The Japanese Productivity Center issued Three Guiding Principles in 1955.
1) Productivity improvement will increase employment.
2) Labor and management must cooperate.
3) The fruits should be distributed fairly among management, labor and consumers.

Wage differences between production workers and executives are much smaller in Japan than in the US.

Methods for facilitating cooperation

1) Job rotation.
2) Consensus decision-making.

3) Cooperation between management and union.
4) Life-time employment with seniority.

All these Japanese practices point to Cooperation.

V. Current Situation in Japan

Manufacturing industry is competitive. Banking industry is not competitive.
Reasons:
MITI emphasized both competition and cooperation.
MOF emphasized only cooperation.

VI. Role of Defense Advanced Research Project Agency (DARPA) (ARPA)

1) SEMATEC (Semiconductor Manufacturing Technology).
2) Internet.

VII. Cooperation in Europe

1) Airbus Industries.
2) European Laboratory for Particle Physics 12 country; 5 Nobel Prize winner.
3) The European Synchrotron Radiation.

Movement Towards Business Excellence – The BHEL Approach

BHEL Background

Bharat Heavy Electricals Limited (BHEL) a leading Public Sector Enterprise caters to core sectors of the Indian Economy viz., Power, Industry, Transportation, Transmission, and Defence, etc. More than 65% of Power Plants in the country are run by BHEL sets, and prestigious Rajdhani/Shatabdi Express trains are hauled by locomotives manufactured by us. Till late 70's BHEL was enjoying a monopoly; but today its collaborators are its competitors and also Business associates. BHEL recognized the challenges ahead, in late 70's itself when it formulated the Quality Manual and started focusing on improvement of Quality of its products.

With focus on Customer and inputs from shop-floor rework/rejections, internal/external failures and Customer Complaints; BHEL introduced the concept of Quality Improvement Plans (QIP) under which problems are identified and resolved through cross-functional teams with a time bound approach. Use of SQC techniques is integral part of such problem solving.

We sowed the seeds of TQM by reviewing and aligning our Quality Management Systems to ISO 9000 series of standards. In a phased manner our 19 Units/Divisions have been certified to ISO 9001/9002. We brought 'Quality' to Boardroom by formulating, measuring and monitoring 'Quality Indices'. ISO 9000 certification and Quality Indices brought beginning of a new era. A culture of improvement started building-up. Today our Vision is

A WORLD CLASS, INNOVATIVE, COMPETITIVE AND PROFITABLE

ENGINEERING ENTERPRISE PROVIDING TOTAL BUSINESS SOLUTIONS

Salient Achievements to BHEL due to TQM Initiatives and Self-Assessment

Self-Assessment and the TQM approach has provided BHEL an excellent opportunity of framework for managing, analyzing and improving Organization' performance. It has provided BHEL '*moment in time*' picture of the status of the organization expressed in terms of *Strengths*, and *Areas for Improvement* on yearly basis. Salient achievements to BHEL due to these efforts are:

- Knowing the Organization. Best practices adopted by various Business Units have been unearthed. These now form a baseline for having a Benchmarking within the Organization and thus exploiting the existing resources to the maximum.
- Better understanding of Business Processes. Bringing in a "Process culture" as against the traditional functional approach.
- Involvement of all (Top executives to worker level) in improvement activities. A culture of improvement is building up.
- A systematic approach to achieve World-class status.
- A culture of reducing wastes and energy consumption.
- Bringing in a culture of target setting and measuring performances against targets.
- Reduction of inventory by 30% to 50%.
- Reduction of Order Processing time by around 30%.
- Improvement in Delivery performance by 50%.
- Reduction in Average time of servicing activities by 25%.
- Reduction in Product Non Conformances by 65%.
- Reduction in Customer Complaints by 65%.
- Reduction in Site failures by 25%.

We have recognized that it is the processes which when improved with a systematic approach, will lead us to achieve our Vision of becoming a World Class Organization. Our High Pressure Boiler Plant, Tiruchy Unit has developed MBE pyramid which links Critical Success Factors and elements of Critical Success Factors to the goals of the Unit and Corporation. Super Critical Processes linked to the elements of Critical Success Factors and improvement projects drawn from these super critical processes form the base of this pyramid.

Creating a Competitive Organization in E&C Project

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Preamble

The opening up of Indian economy has thrown open avenues for investments in core sectors. A combination of perceived advantages like low per capital consumption, the proximity to end user markets and availability of skilled manpower

at lower costs have resulted in developed countries increasingly targeting their marketing of products & services to India. In addition, major Indian companies are also aggressively building up capacities for achieving economics of scale in order to meet the global competition.

The need for early market entry is putting increased pressure on companies to undertake fast track execution of project. The entry of global players into Indian markets and enhanced private sector participation in hitherto restricted sectors has brought about a market change in the project implementation philosophy. More and more plant owners, having acknowledged various advantages offered by Lumpsum Turnkey (LSTK) mode, are now preferring LSTK mode of project management.

Why LSTK?

Traditionally, most of the medium and large-scale project in the fertilizer, petroleum refining, chemical and petrochemical sectors in India were executed in piece-meal manner. In this conventional approach, the owner and his consultant coordinated all the project activities. Engineering work was offloaded to an engineering consultant and procurement was done by the owner/consultant with construction entrusted to a number of construction contractors.

This approach required a large project management set-up from the owner and considerable amount of time was spent to finalize contractors and coordinate between them at various stages of the project. This approach also led to bottlenecks and delays in project execution since majority of the activities were interdependent and could only be carried out sequentially.

Further, there are piece-meal warranties and guarantees, which seldom can be exercised. Thus, overall responsibility lies with the owner and therefore, lies with the owner and therefore, owner's risk exposure is very high.

The LSTK Concept

In LSTK mode, the contractors offer comprehensive project management services encompassing design & basic engineering, detailed engineering, project management, procurement, transportation, inspection, fabrication, construction, commissioning and demonstration of performance guarantees at a fixed lump sum price within a definite time frame committed at the time of award of the contract. The success of this approach is in effective planning and controlling of the project throughout all the phases of project implementation so as to achieve the best output from all the pooled in resources.

Tata Steel – In pursuit of excellence

P. C. Shukla
Tata Steel

Introduction

Tata Steel stands proud as a modern integrated steel plant, comparable with any integrated steel plant in the world. The main steel works is located at Jamshedpur. The captive iron ore mines are located at Noamundi and Joda in south Bihar and

Orissa respectively. Coal is supplied from its collieries located in Jharia and West Bokaro.

Tata steel has 23 marketing offices and stockyards spread all over the country with the marketing head office at Calcutta. It also maintains offices in Singapore, Dubai, Saudi Arabia and Nepal to cater to overseas markets. The company is a publicly held company. Today, the House of Tatas owns close to 25 % of its equity, rest is with the Government, Financial Institutions and individuals. The company has an asset base of over 9000 crores.

Tata Steel is renowned for many of its pioneering initiatives. Its exemplary industrial relations, whereby, the company has not lost a single day of work for over 70 years on account of labour unrest and has contributed to the creation of a productive, wholesome environment. It has a committed workforce of 50915 personnel, of which 44344 are associated with the steel business.

Tata steel is an integrated steel plant using the blast furnace route for iron making. It has modern blast furnace, modern steel melting shops (BOF-LD), and state-of-art rolling mills to produce long and flat products of world class standard. The four phases of modernization completed in 1999-2000 have seen the old and uneconomical units replaced by the newer units. It has crude steel capacity from of 3.43 MT per annum currently.

Though steel products remain the core of its business activity (75% of turnover), the company also produces ferroalloys, tubes and agricultural products, ball bearings, steel plant equipment and rings.. Recently, it has invested over Rs 1600 crores in establishing a state of art Cold Rolling Mill, capable of leveraging the company's strength well into the future. The addition of the CRM to the company has changed the complexion of products and business .

Tata Steel has decided to position itself strategically and serve those discerning customers who are demanding in terms of quality and service, have high business potential, and are in areas where Tata Steel has a competitive advantage.

Tata Steel's products are broadly classified as (a) Flat Products such as hot rolled coils, cold rolled coils and sheets (60 % of sales) (b) Long Products mainly in the form of wire rods, forging quality, bars, structurals and tested semis (40 % of sales) to cater to the consuming sectors such as auto / auto ancillaries, consumer durables, construction / infrastructure, capital goods, general engineering and railways.

Typically 85 % of the production is sold in the domestic market or are transferred for internal use. However, to manage the fluctuations in the domestic market and to remain a net foreign exchange earning organization, Tata Steel maintains a strategic presence in the international market by exporting the rest. Tata Steel has a customer base of over 5000 customers out of which, 158 customers have been identified as Key Customers accounting for 51% of the business .

Tata Steel has a track record of proactively fulfilling these regulatory requirements. It has also taken steps to exceed some of the standards through implementation of the Environmental Management Standard (ISO 14001) in Mines, Collieries and Steel Works.. The company has spent Rs. 240 crores on environment and pollution control systems during the modernization phases.

Tata Steel has also developed a unique "Corporate Citizenship Index", the first of its kind, which has measures related to Health services, Civic Amenities and Environmental awareness, to monitor the performance of the company towards the community and the society within which it resides. In addition to the Rs 100 crores that the company spends for the upkeep of the township, the hospital and other

employee-oriented facilities, Tata Steel also spends Rs 37.31 crores (98-99) every year on facilities oriented towards serving the needs of those not connected with Tata Steel. The company in fact maintains a 740-bed Hospital and Township for its employees and dependents at Jamshedpur and also at the Mines and Collieries.

ANNEX1

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