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DQS

A Commitment to Quality

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DQS

A COMMITMENT TO QUALITY

by

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The DESCON management understands and appreciates that we now live in a period of Close Encounters. Concepts, ideas and models previously developed in the field of quality are still a rich source of perfection. We have to come up with new instruments, new processes, new concepts and new ideas. The past is a good starting for developing those new ideas. DESCON can no longer be treated as a Product or Service. Our target is to be a World Class Company and this we shall achieve at any cost.

DESCON has satisfactorily completed many projects both in country and abroad with various clients. We got ISO certification in 1997 and ever since have always been improving our systems resulting in complete customer satisfaction, and technological growth of our dear homeland.

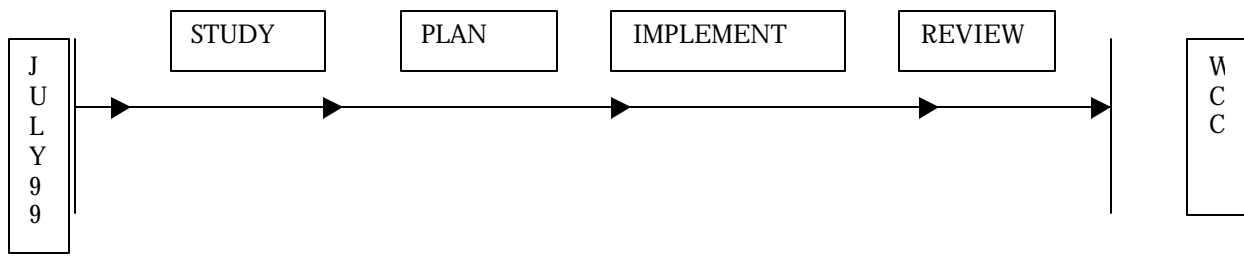
It was in July 1999, that the Management decided to move ahead in pursuit of total quality. A program that should focus the complete organizational culture and not the production/service lines of the business only.

How was this commitment materialized?

We shall now start our journey step by step talking about the various concepts, themes, actions which were studied, planned and subsequently put into practice, all focussed on the World class Company position.

At the end of this 35 minute presentation we shall go through a summary of DO's and DON'T's which can serve as a guideline for ambitious companies in pursuit of excellence.

Adhering to our core values and operational values, the task of revamping the Quality effort was taken up as a project, and given the name DQS DESCON QUALITY SYSTEM. With total management commitment, DESCON started off on the journey. The major refueling stops being STUDY, PLAN, IMPLEMENT and REVIEW.



We can proudly say today that after a period of 14 months we have reached the 3rd sign board in most of the components, whereas some are in the review stages while some in initials. The third stage is the most crucial because it is here that the efforts made at the drawing board are to be materialized. Once starts moving, every system faces obstructions, speed breakers, some big some small. Some requiring a jump and some a crawl. With back and forth movement for necessary adjustments, optimum solutions are reached and put into action.

We had the platform of ISO 9000 already in a fully functional state. This proved to be a jumping stone. We made TQM as a model for reference but prioritized actions and added new concepts where necessary according to the environment and culture of DESCON and Pakistan.

CONCEPTS

With the learned audience present here and with the depth which this forum places focus on TQM, I don't think we need to go into the TQM theory. Rather I shall move directly to the methodologies, which were adopted by DESCON.

The DESCON QUALITY SYSTEM DQS is based on the following concepts:

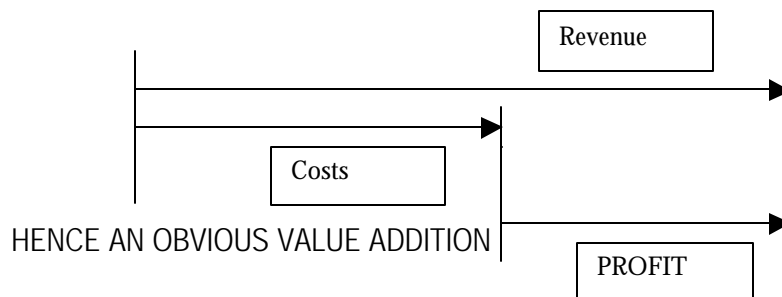
08 VALUES

For continuous growth and achieving Excellence we finalized on 04 positive values and 04 negative values. The +4 need to be maximized, while the -4 are to be minimized. With the inner circle as SELF, the outer circle as World Class, we knew that Production, Quality, Customer Satisfaction and Profitability must increase. Similarly Cost of Quality, Time in Process, Unscheduled Changes (not budgeted, abrupt or not planned) and Inventory must decrease.

Now increase or decrease is a relative term, which must have a reference. Hence defining the reference for key indicators, in each of the 08 values was a must. Though each of the values is equally important, we only selected Quality, Cost of Quality and Customer Satisfaction as our starting points. Another reason for the choice was that Quality is a common factor in every action of DESCON, and directly effects Customer Satisfaction, whether the customer is external or internal. This presentation will therefore cover these three quality values in depth, while we shall share the development of DQS as a whole.

QUALITY AS A VALUE ADDER AND NOT A COST ADDER

This concept required a very little effort to reach home as majority already believed in the necessity of Quality. The money invested in the form of salaries of Quality inspectors, documentation, test and measurement equipment/services, audits and travel combined together amounts to a big figure. And it is basically this, which is usually seen, as it is tangible. Unfortunately there is no method of calculating the failure potentials until it actually happens. A fast moving car may be a good candidate for an accident, but what damage will occur cannot be calculated or in other words, a cautious driver has saved himself from how much of loss, if he was to meet with an accident while driving fast is difficult to calculate. This factor has to be in focus making the intangible to be measured. The Quality Cost concept was thus introduced which measures the total cost a company pays to make sure Right Things are done the first time. It includes four types of costs: Appraisal cost, Preventive costs, Internal failure costs and External failure costs. These cost once totaled form the Total Quality Costs. Comparing with Revenue, the TQC of any World Class Company is below 10%. Average companies have TQC around 35-40% of the revenue. Reducing this figure means higher profits.

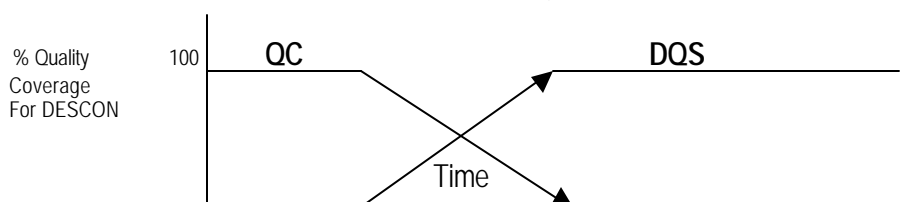


IMPROVEMENT

Improvement was another concept, which was brought in focus while developing DQS. Continuous improvement in all areas of operation is necessary. No system/method or for that matter person is perfect. Improvement suggestions should therefore always be encouraged. In ISO we did have the PCR (Preventive /Corrective Report) but it was not frequently used. We had to improve this system for wide participation in the Company Improvement program.

TRANSFORMATION PROCESS PLANNED

DESCON is operating both in country and abroad at various projects. Any system change could not be abrupt. There are contractual limitations and understandings, which cannot be by-passed. Hence the normal Quality Control function had to continue till finalization of the DQS. We made our guidelines as evident from the chart below:



Step by step DQS takes over traditional QC without disturbing the existing system. At this stage TIME was kept "Open". Of course targets were established for individual systems, yet we must agree that "Perfection" is a visionary goal requiring continual efforts.

CULTURAL THINKING CHANGE

Cultures are developed over a long period of time. It is basically just like a chemical composition, which is formed of atoms of various elements. These elements have their own properties but once joined together the newly formed composition has its own properties. Now this would only take place with various chemical actions. In our case we required this chemical action which could bring required properties. To prepare the apparatus and ingredients, various steps were taken. Somewhere catalysts had to be used to speed up the process.

Lack of education, confidence, and unemployment were fears, which were built in the culture we had set course to change. It was necessary to bring about a cultural change, before a continuous system of self-improvement could run on its own. Hence the priority went to cultural change, thinking approach, value addition.

ACTION PLAN

INITIAL STUDY

First we went to our operating sites and works to study the systems in practice. There were frequent talks with the management, supervisors and the workers. Weaknesses and probable solutions to increase the Quality levels were openly brought on the table.

Since the ISO certification of DESCON a number of audits had been performed both internal and external. We studied all the audit reports and made groups of SNCs (system non-conformity) and observations, which had been reported over a period of time. All this added to our knowledge of what AILS DESCON. Though it was not measurable, the information was very useful to build our Quality strategy upon.

During all these efforts the positive attitude and commitment by the Management proved as a guiding star for our team. Number of times during different meetings we corrected and amended our strategies based on valuable advises and suggestions provided by different members of the DESCON management.

FORMATION

For all systems, methods we followed the Study, Plan, Implement and Review strategy. In the study phase we went into in depth study of the company culture as well as the TQM principles. We set priorities for system development/modification of existing processes. A paper plan was made and discussed thoroughly for GAP analysis. Then we put in the modifications and completed the system with thorough study of "WHAT IF" conditions. Again necessary changes were brought in.

We formed TIGER teams comprising of all responsible personnel engaged in Quality activities both at HO as well as our works and project sites.

The developed systems were taken to the project sites and specific responsibilities were given to the available team. With close co-ordination, awareness lectures and audits, we ensured the concerned staff understood and performed the required. The main theme was to develop Accountability with Responsibility.

SYSTEMS

The various systems designed and put into practice through DQS are:

CUSTOMER SATISFACTION

This is the one most important factor for growth whether one is dealing with consumer or industrial product/service. Though ISO covers the area all right with much importance given to customer. Yet it lacks in giving clear guidelines for the input.

A format was designed for this purpose. The areas covered were peculiar to the type of business DESCON is in, which is purely technically related to design/production/service and unlike consumer product industry where aesthetic sense makes a difference also.

The format was sent to various clients past and present. Though the response rate was less than what we were initially expecting, yet, there were some very informative replies. It basically gave us an unbiased viewpoint of the clients we were serving. It really proved to be a flashlight in the dark. The tried-out system was put into practice as a routine function by identifying clearly the methodology and the responsibilities of all concerned. This made CS, one of the 08 values, as tangible.

TANGIBLE AUDITS

All of us, I am sure must have had experiences of audits both internal and external. DESCON has undergone more than 1200 audits, both internal and external of various departments over a period of 3 years.

During our studies we found that the auditees were being charged for non-conformities through number of Observations and major/minor SNCs. No clear account was available of the areas checked and found OK. Only auditor's report was available giving a brief status of the audit and the discrepancies through observations, minor/major SNCs.

Measuring Quality, being one of the 08 values, was taken as the next project. To give weightage to the good effort and negative to discrepancies, we had to develop tangibility in audits.

We performed five audits and tried the system. After certain amendments in weightages, the audit results were tracked through statistical analysis giving graphs to show trends, weak areas for improvement. Quality information now is available to the managers in tangible form.

COST OF QUALITY (COQ) MEASUREMENT

Next from the 08 values was Cost of Quality. To gain higher profits COQ must be reduced as much as possible. Now we know that to reduce or to increase are both relative terms. So before we could say that COQ is high, and should be reduced by 10% of Revenue, we had to measure the existing status. Being new, the concept of COQ had to be understood in depth. Books, magazines, articles and Internet were fully utilized to gather information on practical aspects of the system.

As pointed out earlier in the "Concepts", Total Quality Costs comprise of Appraisal costs, Preventive costs and Failure costs (Internal and External). Before we move ahead let us first define each of these costs.

TQC: AC + PC + IFC + EFC

AC: All costs incurred in installing and maintaining a test and inspection system comprising of Quality inspectors, instrument calibrations, tests and inspection equipment/services which are used/hired to check the process at various stages.

These costs which are product/service related should be around 25% of the TQC.

PC: All costs incurred in installing and maintaining a system which ensures Quality practices and methodologies are available and followed by all concerned. These comprise of Quality Assurance costs, audits, documentation, designing specifications and checks, travel and salaries of all personnel engaged in the Quality function indirectly. PCs are basically system related and will be common for various projects/products. These costs should be around 5% of the TQC.

FC: This is the major chunk of TQC, around 70%. Failure costs are basically the expenditures on rework or reject. All costs that have been incurred in correcting a reject/rework on the product/service at any stage before handing over to the client fall in IFC. Similarly costs for correction of faults pointed out by client are external failure costs.

During our study for installation of a foolproof Costing system we found that AP and PC data was available in one form or another. Only and the biggest problem was to get the Failure costs.

Again existing ISO procedures came to our help through the NCR system. NCRs are to be raised for each reject/rework. The costing part was thus introduced.

Now we had all the jigsaw pieces in place. The flow of information was smooth and the data study possible. Taking all costs together we are now able to say what is the Total Quality Cost and what percentage (%) is it with Revenue. Also what %age of each sub Quality Cost is as compared with the TQC. We set our targets to reduce the TQC by 10% in one year. Monthly tracking was initiated through inputs from the site systems.

The COQ system has been given full support by DESCON management and we are confident to reach the stipulated targets by co-operation and improvement in various weak areas, which have been pointed out as Cost adders.

PERFORMANCE EVALUATION

Apart from planned target of 08 values, we brought in Performance Evaluation, which is very necessary for acknowledging the good work done by employees. Here I must say that instead of individuals, we focussed on teams. Groups were analyzed on pre-determined criteria inclusive of Productivity, Rework, Efficiency, Discipline and Implementable Suggestions.

Only teams securing above 90% were eligible for the award of certificates. The team securing the highest % was given the Performance Excellence Certificates irrespective of the members being from DESCON or sub-contractor. Basically the idea was to motivate people who are directly related with the manufacturing/construction of product/service by a certificate of acknowledgement, along with some financial benefit.

We are now in process of establishing a Project Quality Award to ensure participation of the Project.

KAIZEN SYSTEM OF IMPROVEMENT

In March this year, we started work on KAIZEN side by side and have selected areas where KAIZEN techniques are being placed, again as part of DQS . DQS basically covers the seven MUDAS of Kaizen namely:

- 1 Muda of Over Production
- 2 Waiting
- 3 Conveyance
- 4 Processing
- 5 Inventory
- 6 Motion
- 7 Repair/Reject

We can see that these unwanted wastes are also covered in our 08 Value concept, maybe in a different manner.

With the Quality, Cost of Quality and Customer Satisfaction made measurable, we are moving towards measuring Time in Process, Un-Scheduled Changes, Profitability, Productivity and Inventory.

EXPERIENCE OF DQS

1. It's an open battlefield. We are dealing with labour
 - (a) of an average or below average back ground inclusive of education, experience and financial status.
 - (b) Their ways of working are now habits that are difficult to break..
 - (c) There is a fear of being laid off.
 - (d) Compromising attitudes and
 - (e) Absence of standards makes things worse.
2. Theories of cultural change get fully applicable and need time to bring the change.
3. Systems must be developed to guide and sustain the effort.

4. Specific responsibilities and timely checks through audits are necessary to keep the efforts in line with the objectives.
5. Strategies or systems have to be custom-built.
6. Each company has a different culture and a different level of Quality appreciation to start from.
7. One technique might not be applicable in another environment.
8. One method may require stress on the stick and another on the carrot.
9. The common and most important aspect is Tangibility. All systems, which are developed in any circumstances, must depend on measurable indicators.
10. Defining these indicators and then making a system to measure these will complete 60% of the job.
11. Next would be implementation for which participation is necessary.
12. Participation is achieved through awareness, friendly talks and convincing arguments.
13. Once the data starts coming in, review through statistical techniques brings the weak areas in focus.
14. Correcting ourselves in these areas is basically improvement which is the crux of the main theme of any Quality system, may it be ISO, TQM, or DQS.
15. There is no end, as the improvement target will keep moving ahead. People change, systems change, businesses change. As long as we hold on to IMPROVEMENT, we shall always have the competitive edge and shall always progress.

SOME DOS AND DON'TS

Many companies' desirous of improvement in Quality have tried different system, some forced ISO and some voluntarily TQM. The reasons of success are easy, in that the basics were followed as a system. However, there have been failures also. Analysis by experts has summarized "Reasons of Failures" which were common in most of the failure cases. These are:

	ACTIONS LEADING TO FAILURES
Commitment	Did not create a vision to help direct the change effort and develop strategies for achieving the vision
Tiger Teams	Did not assemble a group of people with enough power to lead the change effort
Empowerment	Did not empower others to act on the path designed
Awareness	Did not communicate the vision and strategies to everyone in the company
Reengineering	Did not change structures that undermine the vision, risk taking, non traditional ideas, activities and actions
Motivation	Did not plan or create performance recognition and reward of employee
System development	Did not produce changes by reinvigorating the process with new projects, themes and change agents
Time	Did not establish urgency in transforming the organization
Implementation	Did not institutionalize new approaches

Table 1. REASONS OF FAILURE

FUTURE

As said before, the Quality effort never ends. DESCON has also plans for the future. Rather work is underway today for the objectives of tomorrow. We have in focus the following:

1. Company wide KAIZEN activities
2. Quality Circles
3. Quality Cost Audits
4. Activity Based Costing ABC
5. Six Sigma
6. Integrated Approach for ISO (9000+14000)

OUR VISION

We want to be leaders of Quality and we shall be. By sharing our knowledge and experiences we want the Quality base of Pakistan to move up. We don't want to be a World Class Company alone, but want to lead the team of World Class Companies making Pakistan as a World Class Country. I am sure through forums like this we all can learn, share and achieve this common objective.

Just like developing systems for individual departments in a company for participative improvement, all companies can join together and participate for the growth of our dear homeland.

ICQI should come forward and offer a Quality Reward System on the lines of Malcolm Baldrige. With incentives of this nature a healthy competition will be seen, again with the objective of Continuous Improvement.

With this my presentation comes to the end. Before leaving this place, I on behalf of DESCON offer our Open Door Policy on Quality concepts. Please feel free to contact us for any suggestion, update or advice.