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Quality in Airport Ground Handling Operations

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QUALITY IN AIRPORT GROUND HANDLING OPERATIONS

by

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INTRODUCTION

EMIRATES GROUP

Emirates Group, currently employing over 16000 professionals from approximately 100 countries, consists of Emirates Airline, Dnata Airport Operations, Dnata Cargo Handling and logistics, Dnata Travel agencies, Emirates Holidays, Arabian Adventures, Al Maha resort and Mercator for information technology.

DNATA AIRPORT OPERATIONS

Dnata Airport services were founded in 1959 at Dubai International airport. Its basic function involves provision of ground handling services to airlines on flight arrival and departure. The work force is over 4500 with around 500 vehicles. Key departments of airport operations are, Passenger services, Operation services, Ramp services, Baggage services and Engineering services. Support departments include Strategic Quality Planning, Resource Planning and Human resources. Average Volume of flights and passengers handled by airport operations on monthly basis are 5000 and 1200000 respectively.

WHY ISO 9001:2000 CERTIFICATION

Rising demand from customers for excellent service at a time of increasing competition demanded that Dnata, a ground handling company based at the Dubai International Airport in the United Arab Emirates, stay competitive. By becoming the world's first airport operator to achieve ISO 9001:2000 certification, Dnata's management knew the company would not only improve internal operations by streamlining and standardizing procedures but also satisfy customers. It was also recognized that ISO certification would help to market the product globally by offering ground handling services at other airports in the world.

Dnata has been established its joint venture relationship outside the Emirates and currently providing ground handling services successfully with the name of Gerry's Dnata, Pakistan at Karachi, Lahore, Islamabad and Peshawar airports. Also its other joint ventures include Manila,

Doha and Tehran, whereas some potential projects are underway. Eventually Dnata's joint ventures will be proceeding towards ISO 9001 certification through in-house expertise.

Dnata has been focused on how to achieve and enhance customer satisfaction and to further improve its pace towards customer satisfaction and become a world-class operation. In view of this, Top management issued a directive by putting ISO 9001 certification as one of the goal and so established Strategic Quality Planning department at airport operations. It was also decided that whole certification process would be carried forward through in house expertise without hiring a consultant. The company adopted multiple approaches to achieve its goals.

PROJECT MANAGEMENT

Considering the size of the organization, complexity of the work and time focused operation, management decided to set the completion time for the project at 15 months. The strategic quality planning team that managed the project drew up a strategy. Gantt charts highlighted the main tasks with start and finish dates. These main tasks were further divided into subtasks. Progress on each task was monitored regularly by the quality planning department and reviewed by management every month.

PROCESS MANAGEMENT

ISO 9001:2000 clearly emphasizes a process control approach. Good process control produces good products, which enhance customer satisfaction. Dnata's process model was established with this in mind.

As the aviation industry is regulated by on time performance, therefore time bound activities are very crucial for whole of the operation. Customer requirements are received, reviewed and incorporated into all key processes. These are received and agreed in the form of service level agreement. The service level agreement contains all relevant services with their precision time and target. These inputs are fed into the operations, which includes activities on flight arrival, during turn around and on flight departure.

These processes are controlled by four basic elements of ISO 9001:2000:

1. Management responsibility.
2. Resource management.
3. Product realization.
4. Measurement, analysis and improvement.

While establishing Dnata's process model, the quality planning team adopted these elements as:

1. Management leadership.
2. Quality system support.
3. Process management.
4. Process and system improvement.

After key processes were identified, they were mapped, and operation procedures were finalized. Figure 1 clarifies approach adopted.

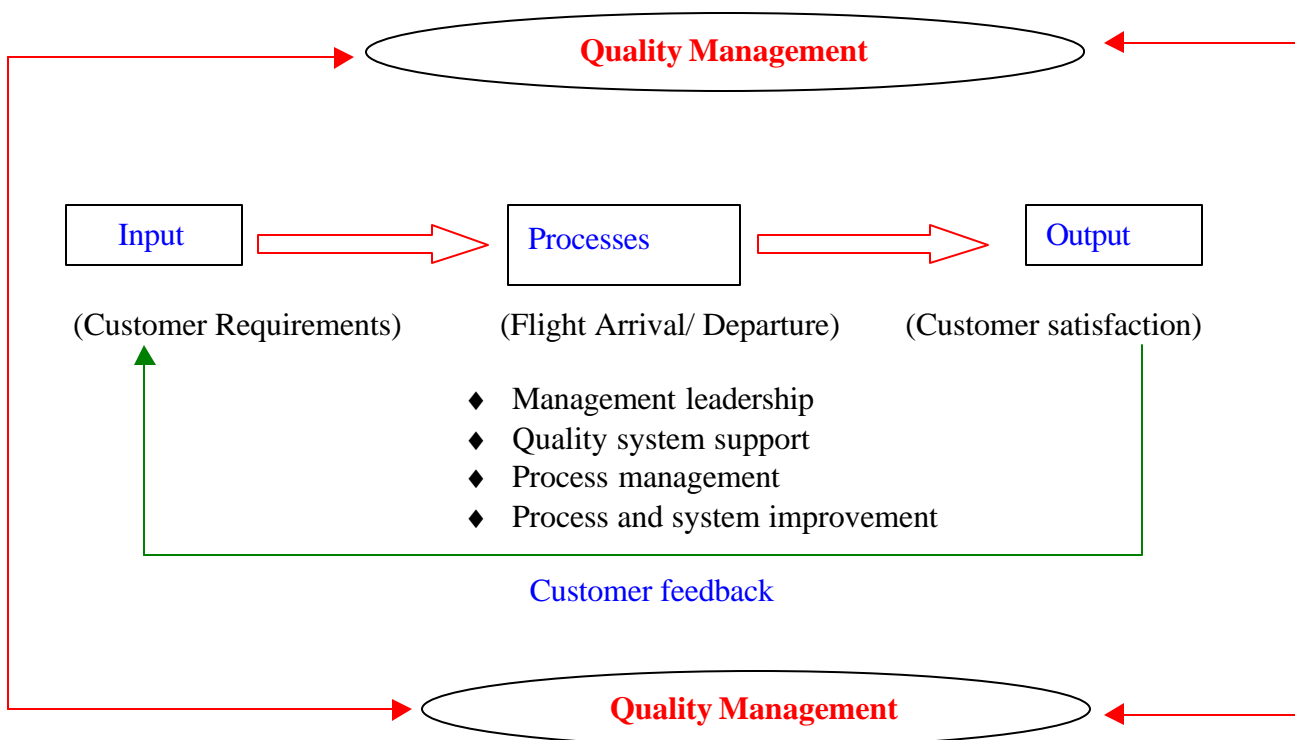


Figure-1: Process Map

POLICY FORMULATION & DISSEMINATION

Quality policy was established according to standard's requirement and in view of dynamic nature of the industry, which approved by the Director airport services and senior general manager airport operations. Quality policy badge were prepared and disseminated to all staff. The wearing of badge was made mandatory for all staff while on duty. Quality policy boards were placed at various prominent locations of the airport. Further awareness among staff was created through quality lectures, staff meetings and procedures implementation. Moreover, ISO 9001 and Quality policy awareness has been a mandatory part of induction training for new recruits.

SOP PREPARATION & IMPLEMENTATION

Comprehensive discussions were carried out with ISO co-coordinators and functional managers of each process area. Key processes were identified and mapped. Document routing, relevant quality records and their retention time were established. Monitoring and review for each process were finalized and added as separate section in each standard operating procedure. Standard operating procedures were then prepared, reviewed and approved as per document control procedure. Training and mock audits were carried out to create awareness and for SOP implementation.

MANAGEMENT BY OBJECTIVES

OBJECTIVE SETTING AND MONITORING

As discussed earlier that aviation industry is very dynamic in nature and its performance mostly depends upon timely delivery of service. In view of this reality and according to the ISO 9001 standard requirement, airport operations set its overall objective based on the On Time performance. Time and target bound objectives were then set for all levels of the organization including individual staff members. These objectives are being monitored and measured regularly using statistical techniques such as data collection, graphing, Pareto analysis and cause and effect diagrams. Management reviews the analysis in monthly meetings.

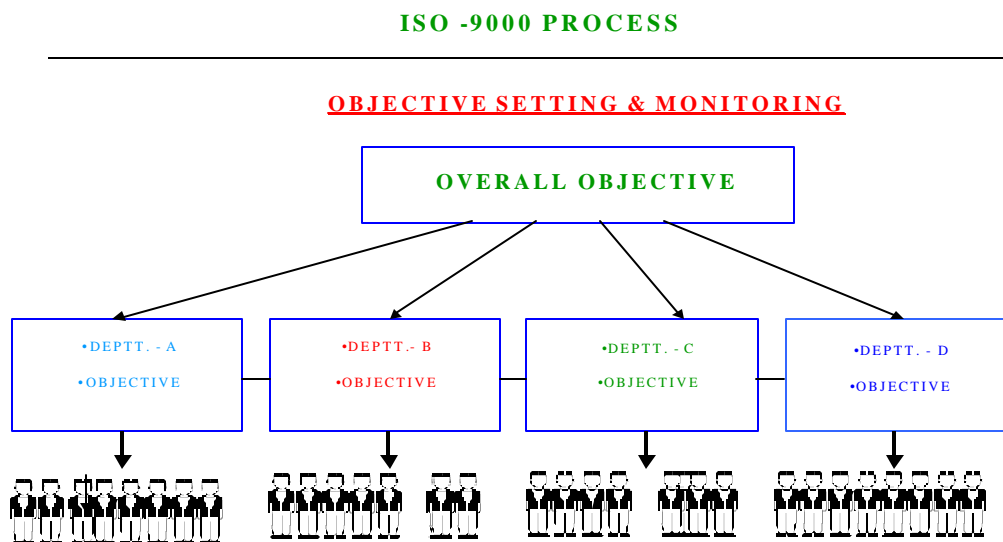


Figure-2: Shows process of objective setting and managing

Few examples of objectives monitoring are mentioned below:

Figure 3- Airport Operations Overall on time performance vs. target

Figure 4 – Dnata's accountable delays Contribution to overall delays

Figure 5- Ground Operations department on time performance vs. target

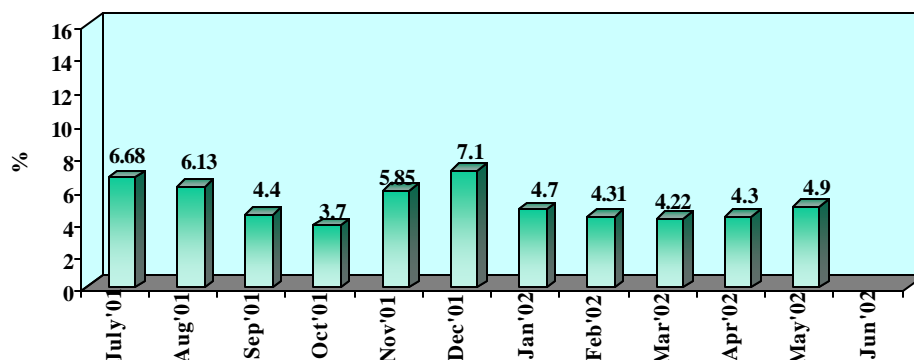
PROCESS PERFORMANCE MEASUREMENT SYSTEM

Dnata established process performance measurement system across all airport operations, and initiated key process indicators for each process. Statistical process control monitors the processes. Data are collected for each process for each flight on a shift basis. They are then converted to a daily basis.

Monthly data highlight total figures with the percentage of on time performance and reasons for any delays. Statistical techniques analyze on time performance. Corrective or preventive actions follow. A consolidated overall performance report for each department is prepared and discussed in the monthly management review and departmental meeting.

MONTH	OCT'01	NOV'01	DEC'01	JAN'02	FEB'02	MAR'02	APR'02	MAY'02
ACCT. DELAYS	70	98	109	80	87	102	77	88
% ACCT. DELAYS	4.13	5.85	7.1	4.7	4.31	4.22	4.3	4.9

CONTRIBUTION TO OVERALL DELAYS



The departments to manage the process performance measurement system used following approach.

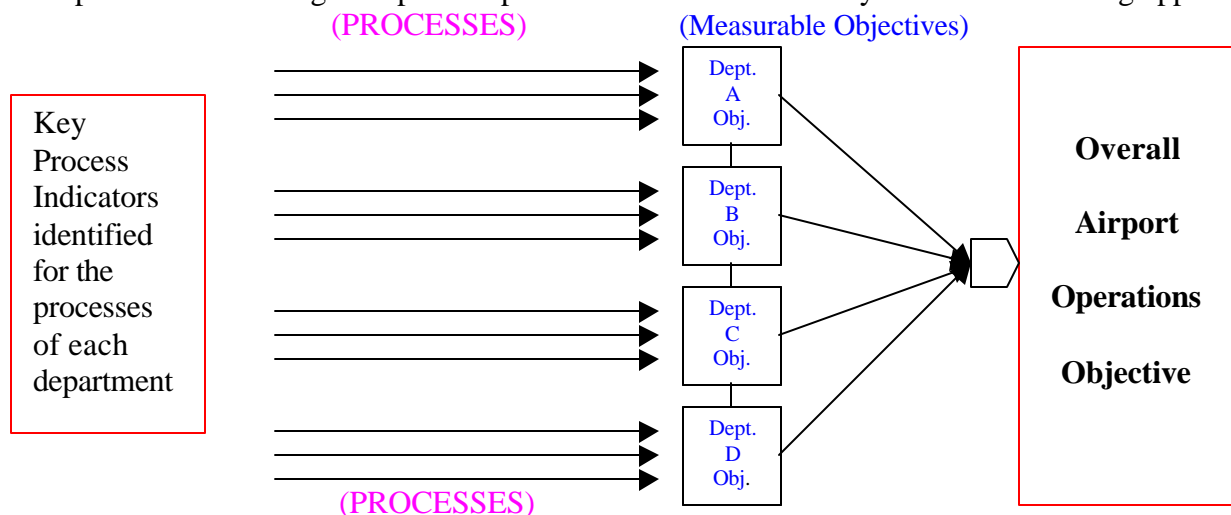


Figure 6: Departmental Process Performance Measurement System

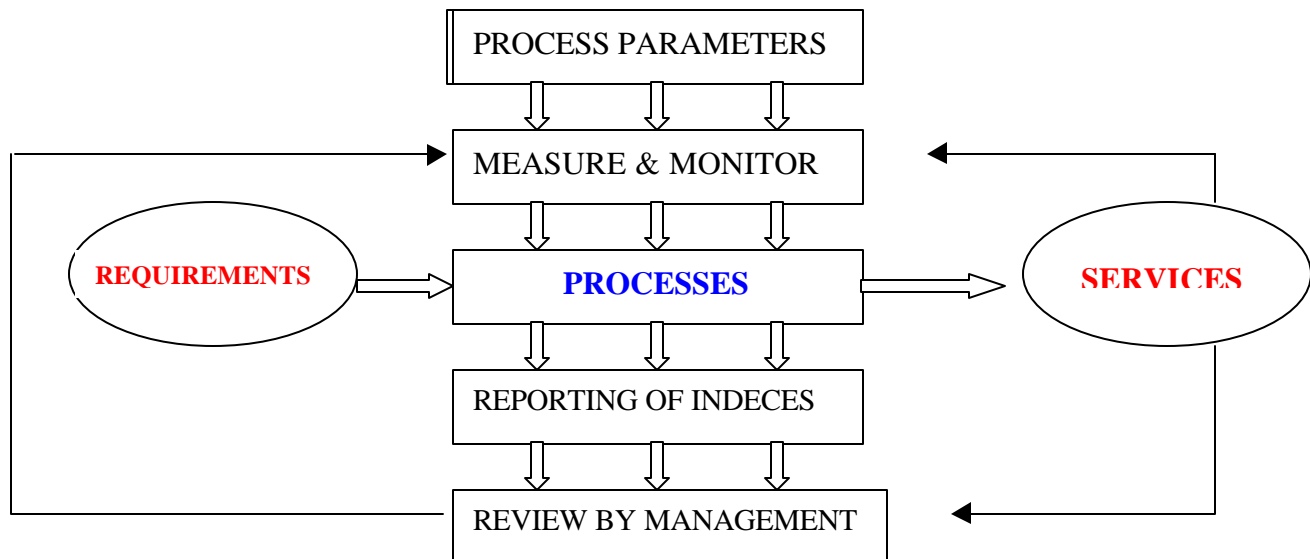


Figure-7: Process Measurement, monitoring and reviewing – An Overview

Process performance measurement system was developed keeping in view following points:

- To assess department effectiveness in meeting customer requirements
- To monitor and review department's performance
- To analyze effectiveness of existing controls and improve
- To reduce poor quality activity and thereby cost
- To meet ISO 9001-2000 requirements

CUSTOMER COMPLAINTS AND COMPLIMENTS HANDLING

All successful businesses handle and resolve customer complaints by putting themselves in the customer's shoes. Complaints are resolved to satisfy dissatisfied customers, and compliments are used to enhance customer satisfaction. The comprehensive customer complaint and compliment handling system developed at Dnata was created with this in mind. Each department registers the complaint and identifies the cause. It is then analyzed and corrective and preventive actions are taken. Department forwards monthly summary of complaints & compliments and action taken to quality planning. Finally management reviews actions and status of complaints. Customer always kept in loop during whole process of complaint resolution. Refer to figures 8,9,10 below.

To obtain customer feedback for continuous improvement, the company initiated a yearly customer satisfaction survey. The main purpose was to develop baseline data about customer satisfaction so future surveys findings could be compared against quantified data. In this survey, which covers all key operating areas and ground handling services, satisfaction is measured, but not limited to, by the following attributes:

- Process efficiency.
- Timeliness and accuracy of information.
- Staff grooming, friendliness and job knowledge.
- Equipment availability.
- Management and administration.
- Handling of unusual requests.

The passenger services survey is conducted on a quarterly basis to get a feedback from individual passenger. Feedback is analyzed and reviewed by management.

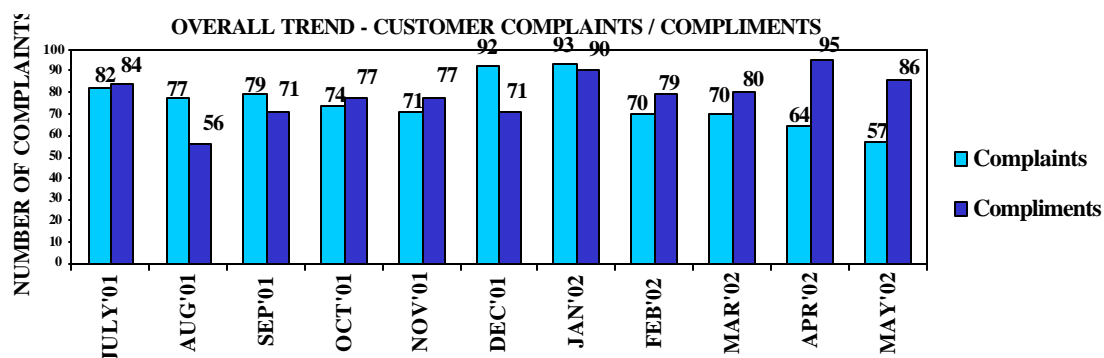


Figure-8: Monthly Trend of Customer Complaints / Compliments

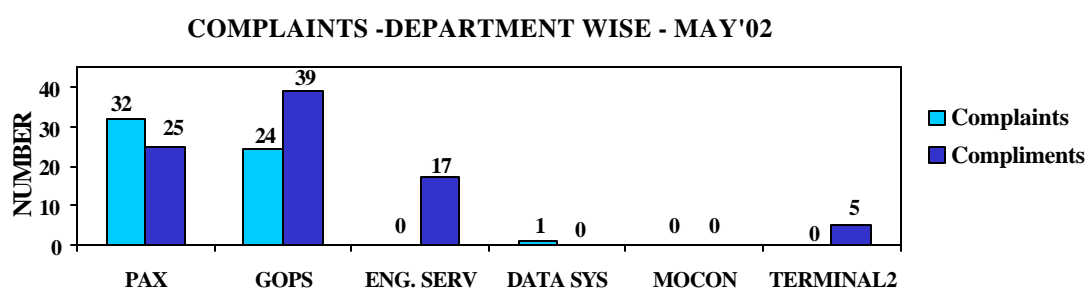
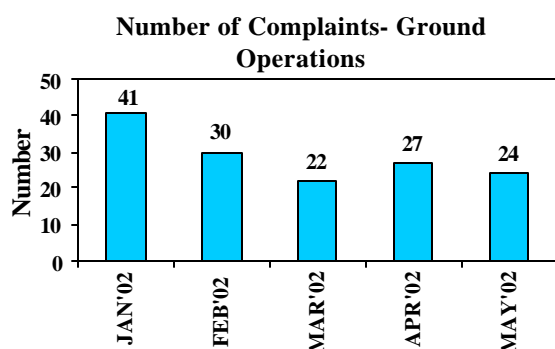


Figure-9: Department-wise complaint / compliments



MONTH	JAN'02	FEB'02	MAR'02	APR'02	MAY'02
NO. OF COMPL	41	30	22	27	24
NO. OF BAGGAGE	793027	674213	692589	737684	831103
COMPL/1000 BG.	0.051	0.044	0.032	0.037	0.029

Figure-10: Ground Operations Department (May'02)

RESOURCE MANAGEMENT

Resource planning department through automated system was taking care of planning and provision of resources that include manpower and equipment at Dnata airport operation. While establishing resource management requirement according to ISO 9001 standard, the process of resource planning was reviewed and standard operating procedures were developed covering areas mentioned in the below figure – 11.

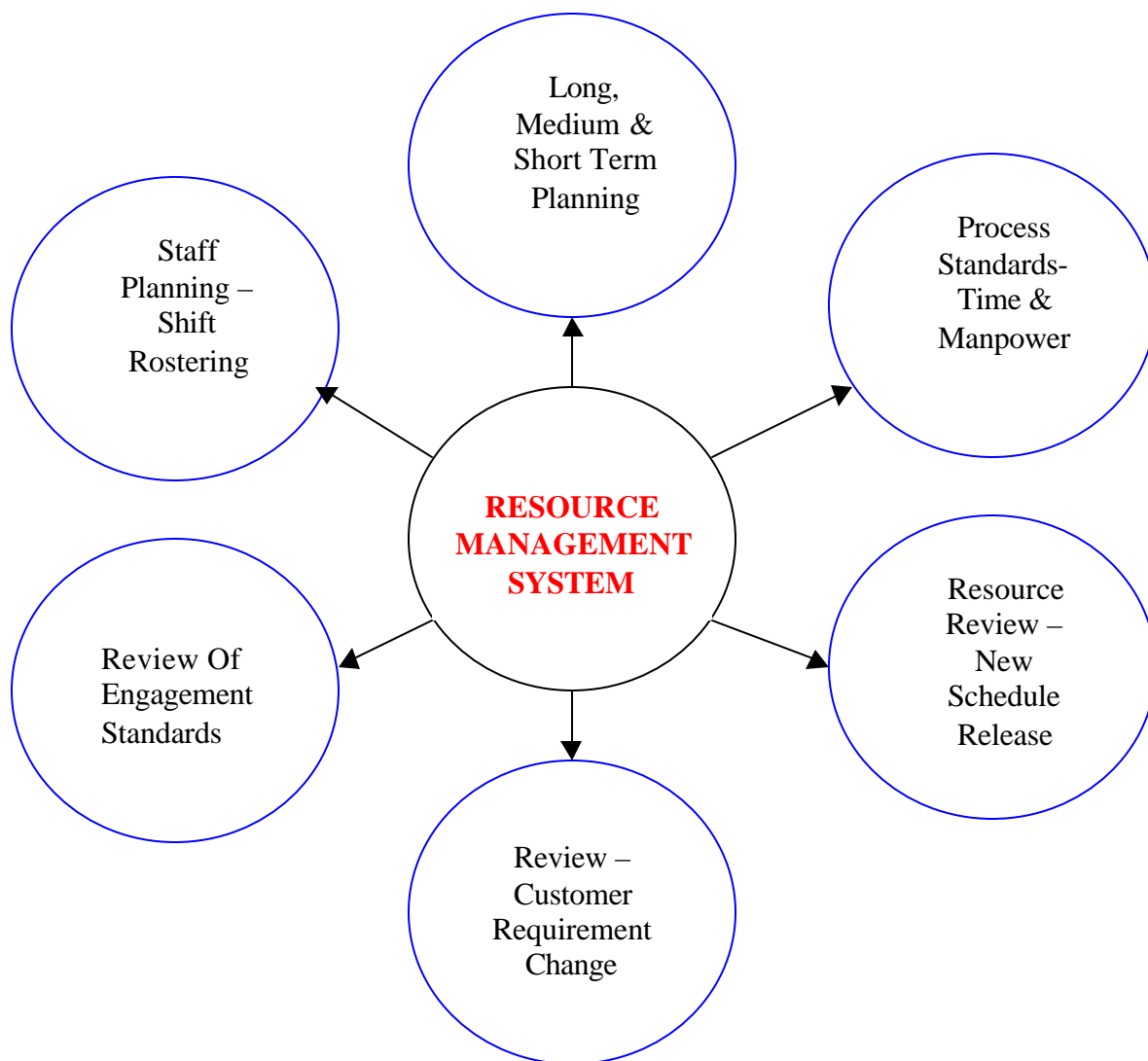


Figure-11: Sections covered by Resource Management System

SERVICE IMPROVEMENT FEEDBACK (SIF) SYSTEM

Service Improvement Feedback (SIF) system was established as part of the corrective and preventive action procedure. This system is used for dual purpose, one for recording and resolving all internal discrepancies / deficiencies and secondly for any kind of process improvement. Departments capture issues such as poor quality service, staff error, process problems, equipment shortage, etc., and service related improvements. Any discrepancy and/or service improvement suggestion highlighted by any level of staff is recorded on the SIF form. In case of discrepancy problem cause analysis is done. It is then passed onto the concerned manager who reviews it and corrective and preventive action is taken jointly. Finally it is forwarded to concerned department head. Final outcome either for discrepancy or service improvement is passed on to the initiator of the SIF. For the service improvement related SIF, the originator is awarded by the appreciation certificate. Staff at large is encouraged to come forward with corrective action and service related improvements. All SIFs from each department are summarized monthly, analyzed by the quality planning and reviewed during management review every month. The service improvement feedback is used within and across the departments.

TRAINING / FAMILIARISATION ON ISO 9001 PROCESS

A sound learning infrastructure was established as part of the quality system. Management decided to train each staff member of Dnata airport operations on quality thinking.

FIRST LEVEL TRAINING

Senior management was given information about the quality system requirements. Middle management received structured three hours classroom training covering ISO 9001:2000 requirements and customer service through lecture, presentation, group work and handouts with examples from operations. Finally, junior staff received a small booklet in four languages with illustrations that was discussed in hour-long sessions.

SECOND LEVEL TRAINING

Second level training was provided on quality system procedures and standard operating procedures at all relevant levels.

INTERNAL QUALITY AUDITORS TRAINING

Lead auditors from the quality department played a role in preparing 43 internal quality auditors from different operational areas to maintain and improve the quality system. To cope with the size of the organization and to further develop quality culture, around 200 internal quality auditors to be trained and inducted in the process. To fulfil this requirement, quality planning designed custom made internal quality auditor training course and provided in-house training. The quality-planning department according to feedback received evaluated training effectiveness.

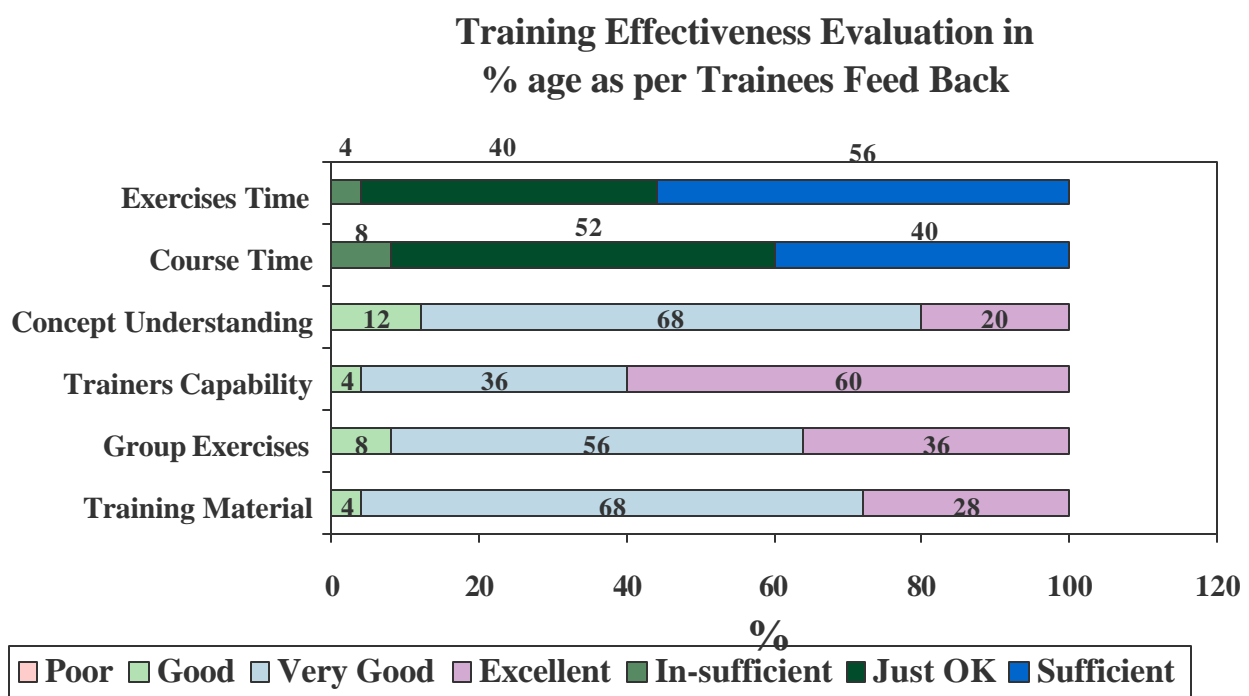


Figure-12: Internal Quality Auditor Training Effectiveness Evaluation

INDUCTION TRAINING FOR NEW RECRUITS

Quality system awareness program has been made mandatory for new recruits. On joining, all new recruits are provided with Dnata airport operations quality policy badge and quality system process.

It is important to involve all staff members as a company embraces ISO 9001:2000. The quality system included mandatory monthly staff meetings at the departmental level. A quality news section also was added to the company newsletter.

INTERNAL QUALITY AUDITS

This management tool was applied in 80 operational areas to judge the health of the system. As an ongoing process, we adopted two cycles a year. Audit results are thoroughly analyzed by the quality planning and reviewed by top management.

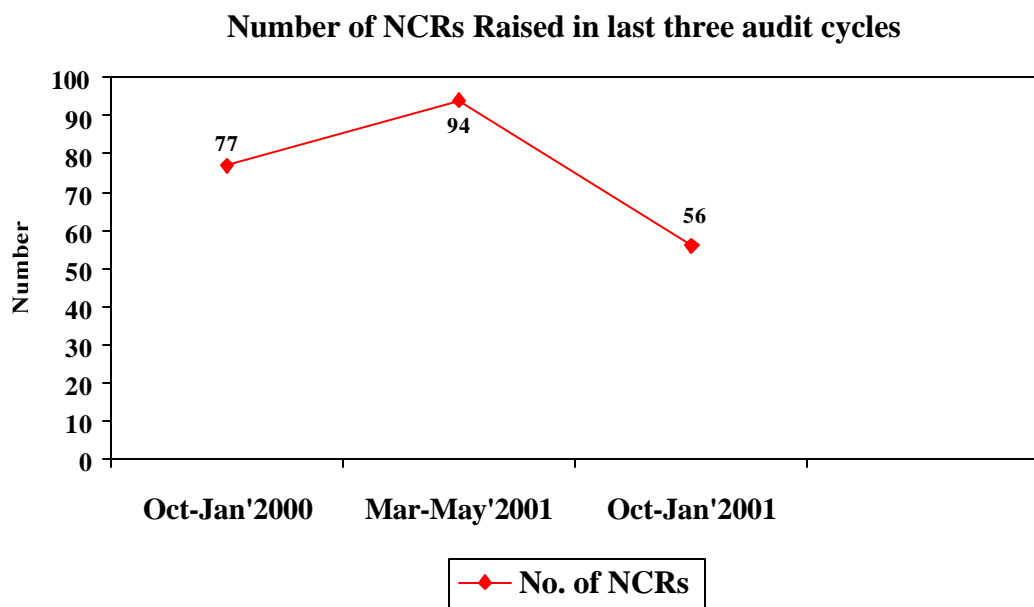


Figure-13: Highlights number of NCRs raised during three internal quality audit cycles

CONTINUAL IMPROVEMENT & QUALITY ACTION TEAMS

As part of continuous quality improvement, action teams were established in each operational area. All team members received one day of in-house training on problem solving, data collection, few statistical tools, developing solutions and action plan by the quality-planning department. The teams then selected and started their projects. Line management's support and quality planning's facilitation plays a vital role in fruitful completion of the project. On completion, project conclusions and recommendations are presented to the management and team efforts are recognized. Quality action teams are being operated at whole Dnata airport operations as an on-going process. Following figure highlight the Quality Action team process.

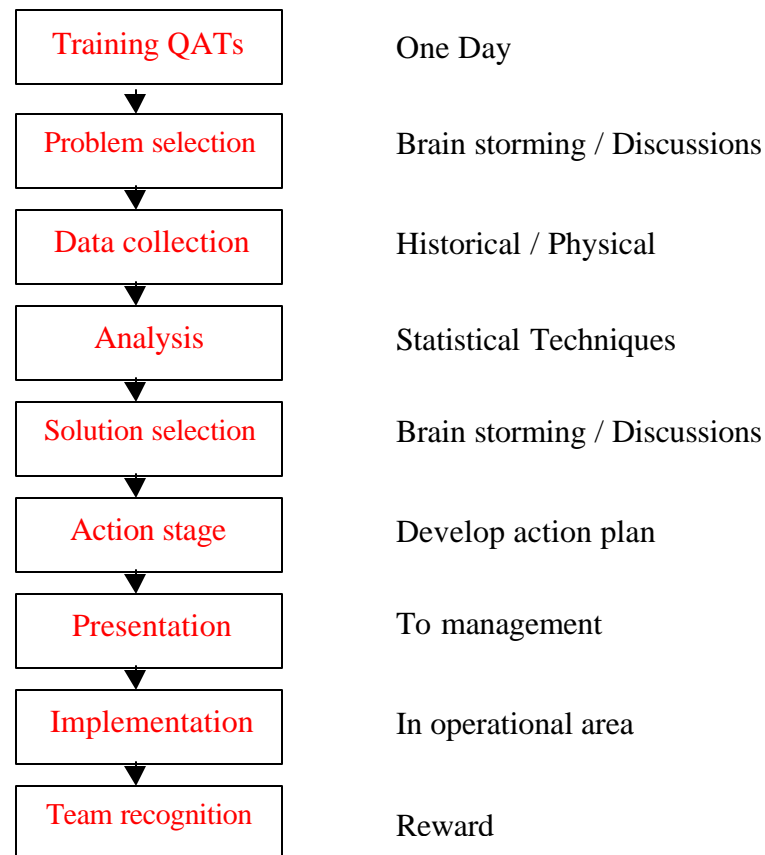


Figure-14: Clarifies the process adopted by the quality action teams.

MANAGEMENT REVIEW

The effectiveness and efficiency of the quality management system are judged and analyzed through monthly management reviews, which demonstrate the management commitment.

DIFFICULTIES DURING IMPLEMENTATION

- Awareness about quality and Quality Management System ISO 9001
- Multinational culture
- Literacy rate
- Time constraints by operational staff
- Difficult to accept change in routine work
- Bureaucratic behaviour
- Customer interaction in all departments are very high

BENEFITS

- Documented procedures for airport operations
- Management by objectives approach for targets
- Process approach established – hence minimized communication gaps among departments
- Improved process performance by measurement system
- Systematic complaints handling – hence improved customer satisfaction and feedback
- Improved quality thinking among staff by training and staff meetings

When Dnata's airport operations became the world's first ground handling agency to achieve ISO 9001:2000 certification, the total commitment of the management, quality planning department and tireless efforts of staff made the dream come true. As everyone knows, this was just a milestone—not a destination. Now, we look forward to the next milestone of Environmental Management System ISO 14001 and Dubai Quality Award.

AUTHOR'S BRIEF BIO DATA

Khurram Nawaz, currently working as Quality Planning Officer with Dnata (A part of Emirates Group) at Dubai International Airport. He has 13 years of practical experience of management systems Development / implementation, production, R & D, Laboratory, material Handling, etc., from diversified industries such as service /Aviation manufacturing, construction contracting and Trading. Presently he is working on application of business excellence practices based on Dubai Quality Award & business excellence model criteria at Dnata Airport Operations, Dubai. He holds a Master's in Applied Geology from University of the Punjab, Lahore, and diploma in Quality Management / materials technology from Japan. Khurram is certified assessor for Dubai Quality Award and Business Excellence model. He is a Lead auditor for Quality management system (ISO 9001), Environmental Management system (ISO 14001), health & Safety management system OH&SAS (18001). He has been a guest faculty for TQM for MBA at International University of Missouri, USA, Dubai campus. He is senior member of American Society for Quality and member of Quality society of Australasia. He is certified trainer for Internal Quality auditor and Quality action Team courses. His articles and papers have been published in the Dubai newspapers, Quality Quill and ASQ's Quality Progress.