

## **CHAPTER 5: THE CASE ANALYSIS**

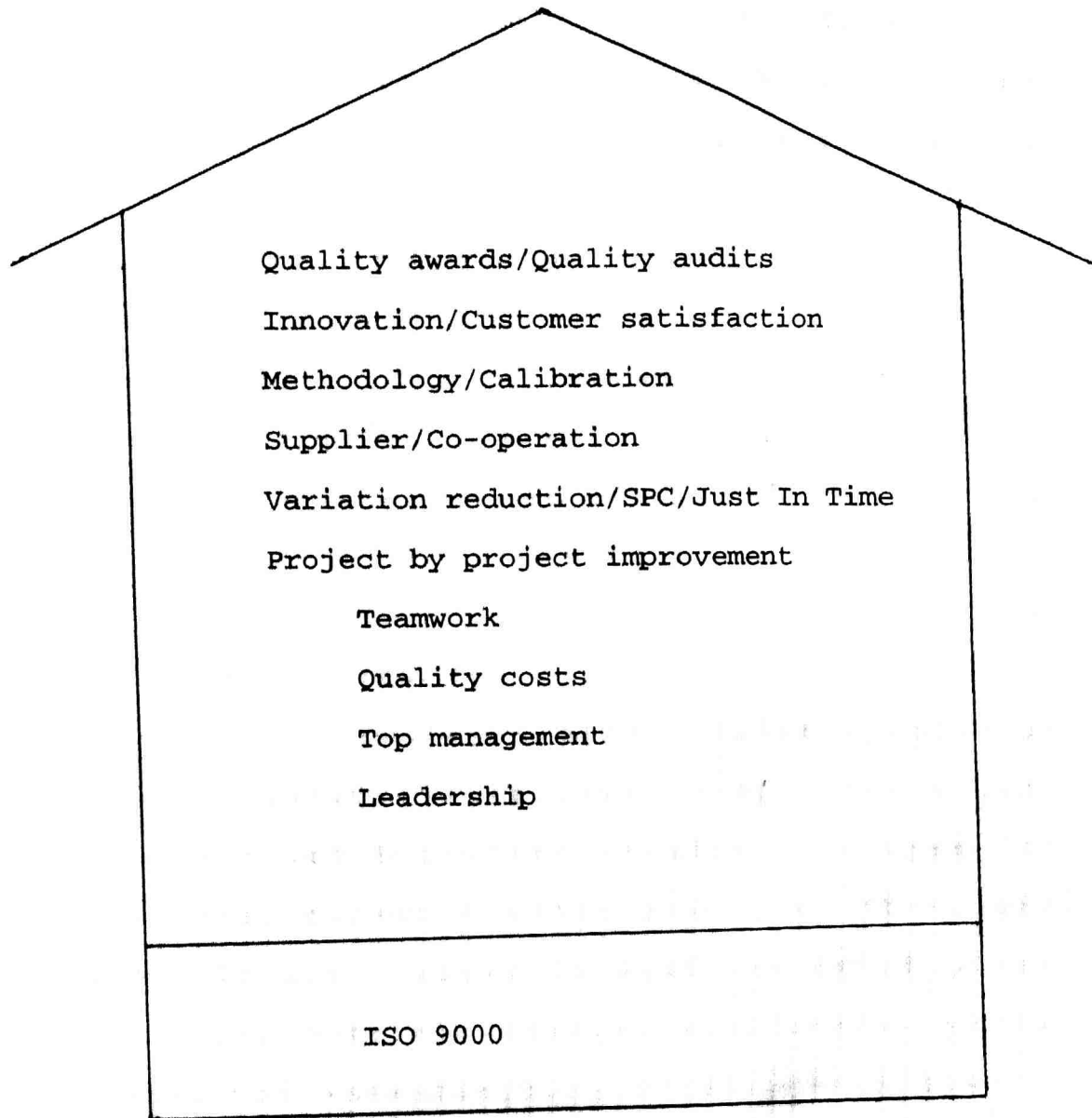
### **5.1 TQM Practices in DMIB**

#### **5.1.1 Some Critical Observation**

To obtain ISO 9002 certification is not the ultimate goal in quality management effort. Quality management effort is a continuous process. The certification must be looked at as only meeting minimum quality system requirements. ISO 9000 registration is definitely an important step towards TQM. TQM go beyond ISO 9000. ISO 9000 and TQM complement each other and it is essential to understand both approaches and their relationship to each other to ensure that both are applied appropriately so that their benefits can be achieved.

In essence, ISO 9000 becomes an ongoing process at the root of TQM rather than a certificate awarded for passing inspection on an initial set of written rules. This is illustrated in Exhibit 5.0 with ISO 9000 shown only as a basic foundation for a quality system that for completeness includes other techniques and procedures. "With these additional resources, the resultant system should be better, more dynamic, more comprehensive, more effective, and more economical than that of ISO 9000 alone" (K.S. Stephens, 1993).

EXHIBIT 5 ISO 9000 - MINIMUM FOUNDATION FOR QUALITY IMPROVEMENT



5.1.2 Benefits of TQM

There are many advantages and benefits for the Company to practice good quality management and attain ISO certification. Some of the advantages are:

#### 5.1.2.1 Improve Customer Satisfaction

Attaining ISO 9002 Certification which certified by the third and independence party (ie. SIRIM), customers are assured of a quality products and are assured that the Company is in control over the process and design development, manufacturing and quality standards.

The Company is able to deliver the desired quality product and services as well as maintain the desired quality consistently and this leads to customer satisfaction.

#### 5.1.2.2 Increase Profitability

In view of the challenging market, the Company should be able to identify problem areas for improvement as non-compliance and defects are identified and analysed for appropriate corrective actions to be taken. The Company should be able to reduce the amount and cost of rejects or reworks with the objective of delivering quality products at reasonable prices as the system is aimed to prevent rather than fixing the problem. This is to increase overall turnover and profit. TQM emphasize on eliminating rework.

#### 5.1.2.3 Improve Productivity

The Company have clearly defined policies, operational procedures and work instruction which help to

- enhance communication and understanding

- improves co-ordination
- provides a basis for further improvement
- helps the new and inexperienced staff to learn
- reduce interference from customers' auditors

#### 5.1.2.4 Improve Competitive Position

The Company's competitive position improve with the following advantages:

- The certification meets the requirements of the company's core customers.
- Gain potential customer's recognition of ability to produce quality products.
- Enhances the company's quality image.

## 5.2

### Analysis of DMIB's TQM Practices

The analysis is a qualitative assessment of the Company's practices relation to the core concept in TQM. Table 3 and Exhibit 6 shows the Company performance in term of waste generated, service return, productivity (kg per man hour), manufacturing time and suggestion trend for the past 7 years.

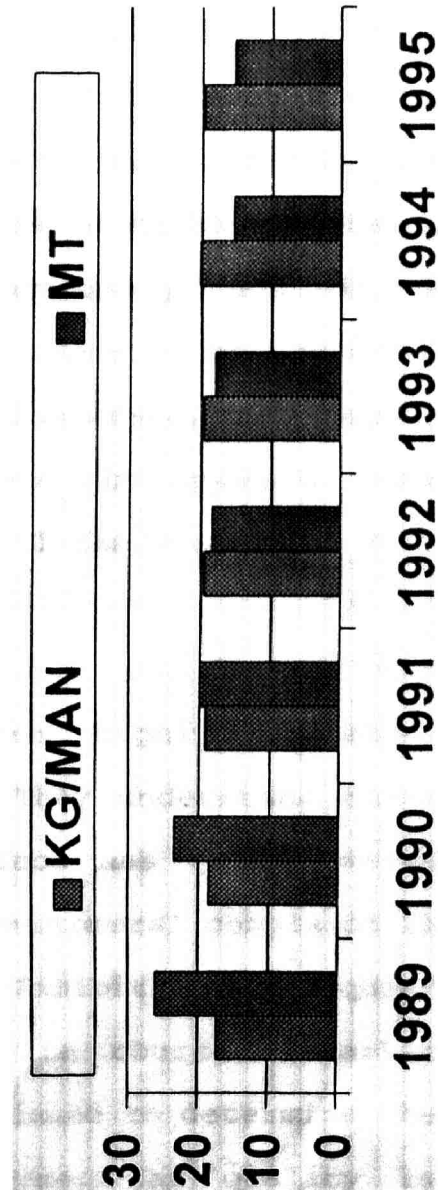
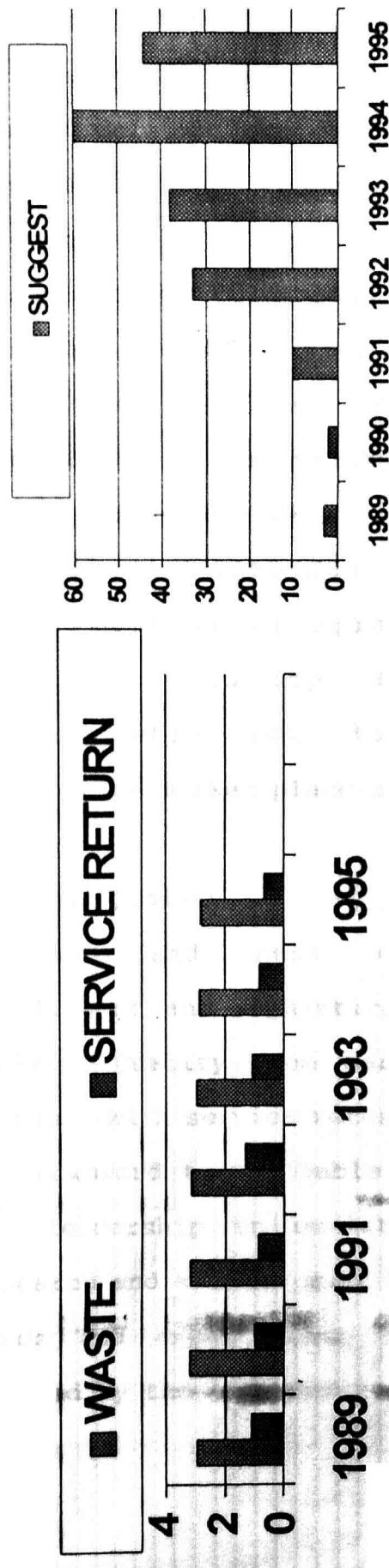
**TABLE 3 DMIB Factory Performance From 1989 to 1995**

	Waste (%)	Service return (%)	kg per man hour	Manufacturing time (mins.)	Suggestion trend (No.)
1989	2.98	1.13	17.4	26.0	3
1990	3.22	1.01	18.6	23.5	2
1991	3.20	0.88	19.1	20.0	10
1992	3.14	1.32	19.5	18.5	33
1993	2.98	1.08	19.6	18.0	38
1994	2.89	0.82	20.2	15.5	60
1995	2.83	0.65	19.8	15.4	44

#### 5.2.1 Quality Improvement

The quality performance of a the Company can be measured in two ways, internal quality ie. amount of waste generated and external quality ie number of complaint received from the customer or percentage of service return.

# EXHIBIT 6 DMIB FACTORY PERFORMANCE FROM 1989 - 1995



#### 5.2.1.1 Internal Quality

A lot of waste generated in many organizations in the form of delays, late deliveries, unfulfilled promises, reworking, scrap products and shoddy work. The index shown in Table 3 and Exhibit 6 reflects the rework, scrap products and shoddy in the Company. The control of overall waste has been the measure for internal quality and the figure is showing improvement slowly. About 85 % of the quality problems are caused by the faulty work processes. All these problems are being arrested systematically and gradually and in a continuous drive for improvement. Removal of waste has a by-product - quality. By reducing waste, the Company can be better able to compete in today's ever competitive market place and fulfil the vision.

#### 5.2.1.2 External Quality

Consumers and users today are highly educated, intelligent and sophisticated. They understand their right. Quality from market place has quite varied issues. With service returns or customers' complaint in the downward trend (Table 3 and Exhibit 6), the quest for leadership in quality is on course. Market research and service must be continued to determine the needs and expectations of customers as quality is defined by the customers.

For a product or service to enjoy customer satisfaction, there are other essential requirements that the Company must meet - cost and delivery. TQM companies should consistently producing high quality, low price products and prompt delivery. A problem in any one of these requirements would consider failure to meet TQM philosophy.

#### 5.2.2 Productivity

Competitive pricing of products are achieved through continuous improvement in 4Ms. Existing equipment in the factory are continually being upgraded with automated features to simplify and reduce manual work methods resulting in lesser time on operation. The Company is implementing RM200 million modernisation programme to equip the tyre manufacturing plant with the latest state-of-the-art technology and precision equipment.

Manufacturing time and kilogram per man hour are the two measurement for productivity improvement. As stated earlier, TQM companies should be able to deliver quality products or services promptly at competitive price. Both index shown in Table 3 and Exhibit 6 indicated the productivity of the Company has increased from 17.4 kg per man hour in 1988 to 19.8 kg per man hour in 1995 as the result of equipment automation and simplification of processes. The manufacturing time at the same period



reduced from 26 in 1988 to 15.4 in 1995.

#### 5.2.3 Continuous Improvement

In the concept of participative management, all levels of employees are encourage to contribute ideas, suggestions and observations on safety, quality, productivity and welfare in the work place. It is encouraging to see that the number of suggestions per month has increased from 3 in 1989 to 44 in 1995. Refer to Table 3 and Exhibit 6 for the suggestion trend from 1989 to 1995.

#### 5.3 Proposed Improvement

Over the year, the Company has embarked on a number of TQM activities. The Company has done well in some areas but not so in others. Table 4 summarise the initiatives introduced, current status and proposed improvement.

Proposed Improvement

Current status

Initiatives (Year introduced)

- | Initiatives (Year introduced) | Current status  | Proposed Improvement  |
|-------------------------------|---|---|
| 1 Mission Statement (1996).   | Well established and communicated but newly launched. No official launching of Total Quality Management in the Company. | 1 It is important to officially launch the concept of Total Quality Management. Need time to obtain the effect of the launching of the Mission Statement. |
| 2                             |   | 2 Need more commitment from the top management to provide support and explanation to the operators.   |

## 2. Problem solving.

- 1 Most employees are trained in TQM, SPC, 4S, TBC and etc. Need continuous follow up to ensure the tools are being correctly used. Re-training is very important to upgrade the employee's skill.
- 2 SGA team formed for trouble shooting.

## 3. Training for employees.

Fair; Annual training expenditure = 5% of the Company's payroll.

Training should start with the top management and executive where they should be very clear and understand the company objective and goals in order to be able to explain and convey the message to the operators. Continuous improvement is an important part in TQM. Training and re-training should be conducted regularly for all employees.

4. Rewards and recognition.

Incentives are more for individual.

More emphasize should be to team rewards and recognition.

5. Management practices.

Well defined and communicated but inadequate practices. Quite an open style.

Cohesiveness and teamwork should be prioritised. An open style with clear and consistent objectives which encourages problem solving and group-derived solutions.

6. Customer requirements.

Not all employees are aware of internal and external customer requirements.

Identifying external and internal customer is very important for process evaluation and improvement.