Abstract
The ISO 9000 standards have been the most widely used quality standards in the world and by the rate it is going, it will continue to be so in the near future. The aim of this paper is to highlight how a service organization maintains its ISO 9000 Quality Management Systems (QMS) through continuous improvement. The case being studied is a large cargo transportation company in Malaysia with a global network. Sixteen in-depths interviews were conducted with managers over a period of two months to investigate the critical success factors and issues and challenges in maintaining their successful quality system. Changes and improvements made since the implementation of the ISO 9000 QMS by the organization are also identified.

Keywords
ISO 9000, Quality Management System, ISO 9000 certification, Continuous improvement, Service sector
MAINTAINING ISO 9000 QMS IN THE SERVICE SECTOR: A CASE OF SUCCESS FROM MALAYSIA

Introduction

The purpose of the ISO 9000 standards is to facilitate the multinational exchange of products and services by providing a clear set of quality systems requirements. It also assists organizations of all sectors and sizes to implement and operate an effective quality management system (QMS). The generic nature of the standards allows interested companies to determine the specifics of how the standards apply to its organization. Registration or certification to the standards demonstrates to customers that the supplying organization has achieved a basic level of quality assurance by the formalization and documentation of its quality management system (Beattie & Sohal, 1999). The ISO 9001:2000 follows a plan-do-check-act cycle to align and enhance the compatibility of ISO 9001:2000 with ISO14001:1996 which also follows a process-based approach (Yahya and Goh, 2001).

Generally, the implementation of ISO 9000 QMS can be divided into five stages; planning (plan), documentation (do), verification and validation (check), deployment (act) and continuous improvement (Nanda, 2005). The continuous improvement stage is actually the phase where maintenance of the quality system ISO 9001:2000 is carried out. This phase is important if the organization wants to continuously improve and reap the long term benefits of having a quality management system in place. This paper concentrates on how a service company maintains its ISO 9000 QMS through continuous improvement. By comparing the ISO 9000 experience of this particular company with findings from previous studies in the literature, it sheds some light on the extent to which there are unique aspects to its maintenance in a service sector.

Literature review

For the past 15 years, there has been a growing body of literature relating to the ISO 9000 quality management system. Many studies have been conducted on the implementation of ISO 9000 in small, medium, and large size companies both in the manufacturing (Bhuiyan and Alam, 2005; Lipovatz et al., 1999; Beattie and Sohal, 1999) and service sectors (Poksinska et al., 2006; Karim et
al., 2005; Efstratiadis et al, 2000; Sarkar, 1998; Mo et al, 1997; Carlsson and Carlsson, 1996; Motwani et al, 1996). Comparative studies have also been done on ISO 9000 standards in manufacturing and service organizations in terms of levels of resources required, motivations for implementation, difficulties faced, benefits gained and management practices applied in the implementation of the ISO 9000 standard (Singh et al., 2006) and within the same industries but different countries (Ahmed et al., 2005). Aspects of implementation such as the critical success factors (M. Shariff, 2004; Li and Gurnani, 1997) for and barriers (Quazi et al., 2002; Bin Srinidhi, 1998; Samson, 1997) to the implementation and certification have also been well researched.

Likewise, numerous studies have been done on the reasons for obtaining ISO 9000 certification (Singh and Mansour-Nahra, 2006; Awan and Bhatti, 2003; Santos and Escanciano, 2002; Wiele et al., 2001; Fuentes et al., 2000; van der Wiele and Brown, 1997), the impact of improvements generated (Calisir et al, 2005), and the benefits of ISO 9000 on companies (Singh and Mansour-Nahra, 2006; Burzacca and Lunghi, 2003; Casadesus et al., 2001; Yahya and Goh, 2001; Casadesus and Gimenez, 2000). Also studied were the business value of ISO certification and its impact on the companies’ business performance (Costa and Lorente, 2007; Saizarbitoria et al., 2006; Terzirovski et al., 1997) and the degree of small companies’ dissatisfaction with ISO 9000 certification (Rodriguez-Escobar et al, 2006).

However, not much literature is found on the maintenance of ISO 9000 quality management system and the post-certification period. Chin et al. (2000) have examined the criticality of the 20 ISO 9000 clauses from the old version in the maintenance of ISO 9000 QMS in Hong Kong electronics manufacturing companies. The study which consist mainly of company’s management representatives for the ISO 9000 quality system consider “corrective and preventive actions” the most critical issue in maintaining the ISO 9000 system followed by “document & data control”, “internal quality audits”, “quality system”, and “management responsibility” respectively.

The same study also explores current practices in maintaining ISO 9000 through interviews conducted with the quality directors and quality assurance managers of 12 ISO 9000 registered companies where it was found that the success factors for ISO 9000 maintenance for electronics manufacturing companies are management commitment, teamwork, and company-wide ISO
recognition. The study found that the teamwork approach has proven to be effective for identifying and solving problems in the maintenance phase while company-wide recognition of ISO will certainly promote employee involvement in the maintenance phase. Through the same interviews, it was found that to achieve the effective maintenance of ISO 9000, continuous management support is a primary success factor and many reported failure cases are attributable to lack of constancy in management commitment and involvement. This seems to be in tandem with the reasons why companies failed the surveillance audits which are mostly due to lack of top management involvement and understanding of ISO 9000 requirements for the companies’ quality systems (McCullough and Laurie, 1995; Dzus and Sykes, 1993). These researchers also found another major failing was the lack of effective internal corrective measures once system non-conformance and deficiencies were identified, as the failed companies were often not aware of the importance of ISO 9000 maintenance and did not have well-established procedures to maintain their quality systems after ISO 9000 registration.

There is no doubt about the benefits that can be accrued from being certified to the ISO 9001:2000 standards. For Malaysian companies it certainly will open doors to international markets such as the European countries and enhance their image worldwide. Past researchers have also debated the relationship between motives for certification with the perceived benefits of having this ISO 9000 certification (Wiele et al., 2001; Terziovski et al., 2003). A study by Singh and Mansour-Nahra (2006) in the public sector in Australia found that there appears to be a strong nexus between motivation for registration, benefits derived and problems faced. The study concludes that organizations that view the standards in an enlightened manner in terms of a vehicle for achieving genuine process improvements have a greater chance of succeeding because the standards are designed for this express purpose. The extent of problems faced will also be minimized.

Based on the review of literature, although there are a lot of studies being conducted on the implementation of ISO 9000 both in manufacturing and service sectors, little is found on the maintenance phase or the post certification period. This gap is certainly very obvious especially in the service sector, hence the need for this research. Moreover, there are considerable benefits organizations can obtain by having the ISO 9000 certification. Therefore, organizations need to identify what are the critical success factors in maintaining the ISO 9000 certification in order to
answer part of the ‘how’ question in relation to ISO 9000 maintenance for them to be able to obtain those benefits on a long-term basis. They also need to understand the issues and challenges that need to be faced to effectively maintain the certification. The research questions that arise then are:

i. What are the critical success factors for maintaining ISO 9000 QMS in a service organization?

ii. What are the issues and/or challenges that managers face in maintaining ISO 9000 in such an organization?

Methodology

This paper adopts a case study approach as described by Yin (2003) to investigate the research questions described. The experience of a service organization relating to the ISO 9000 maintenance was carefully reviewed. The study summarizes four years of ISO 9000 quality management system maintenance in the organization. The organization continues to strive towards continuous improvement of all departments certified.

The primary sources of information were top management, middle management in charge of operations, quality assurance executives, document controller, and the Management Representative responsible for the implementation of ISO 9000 in the organization.

Sixteen face-to-face interviews over a period of 8 weeks were conducted with the respondents with each interview lasting between 1 to 2 hours. Apart from these interviews, company publications were also used as part of the data gathering process.

Thematic analysis as described by Braun and Clarke (2006) was used to analyze the data where it involves familiarizing oneself with the data collected, coding, searching for themes, and defining and naming the themes before producing the report.


Malaysia Airlines Cargo Sdn Bhd (MASkargo) is a cargo transportation company incorporated under the Company Act 1965. It is a subsidiary wholly owned by Malaysia Airlines to handle the delivery of cargo around the world via Malaysia Airlines’ global network of routes. The registered office of MASkargo is at the Advanced Cargo Center (ACC), KLIA with branches in
Penang, Kuching, and Kota Kinabalu. MASkargo operates 24 hours a day at a 92,900 square metre processing area and has the capacity to serve cargo needs of up to a million tonnes per year.

The core businesses or services of MASkargo are sales of cargo space on Malaysia Airlines flights, handling of normal cargo, express cargo, perishable, animal, and transshipment cargo on behalf of Malaysia Airlines and customer airlines, i-port transshipment service and charter services. Customers of MASkargo consist of freight forwarders, agents, customer airlines, both local and overseas. The scope of quality system for MASkargo is the planning of chartering Malaysia Airlines aircraft for transportation of cargo and provision of cargo ground handling services and warehouse operations on behalf of Malaysia Airlines and customer airlines in ACC.

In June 2003, the preparation for MS ISO 9001:2000 started with the appointment of a consultant. On January 8, 2004, MASkargo was awarded the MS ISO 9001:2000 Quality Management System for the above scope. Other certifications received by MASkargo are the ISO 14001:2004 Environmental Management System and OHSAS 18001:1999. In the year 2002, prior to the implementation of the ISO 9000 QMS, MASkargo was making losses. The major challenge for top management of the company at that time was to turn the company around so it would become profitable again. A plan was devised to turn around the company and the strategy was to be more competitive by increasing operational efficiency and reducing operating cost. Six Sigma was adopted in cargo operations to reduce mistakes during cargo handling. At the same time, the company began looking for ways to make cargo operations more systematic and effective in an effort to reduce the mishandling rate and to shorten loading time. The ISO 9000 QMS was adopted by top management in order to achieve the above objectives. ISO 9000 has made MASkargo better as its processes and documents are in place and staff found it easier to perform their jobs. Furthermore, work has become more systematic.

**Motivation for certification**

Literature shows that organizations have a number of reasons or motives for seeking certification to ISO 9000. The internal reasons for obtaining certification which are found to have beneficial effects on business performance are as a foundation for continual improvement (Van der
Wiele and Brown, 1997), to improve internal procedures such as establishing a formal system and simplifying procedures (Santos and Escanciano, 2002; Fuentes et al., 2000), to improve organizational efficiency and effectiveness (Wiele et al., 2001; Alkhalifa and Aspinwall, 2000; Fuentes et al, 2000), to improve quality of products and minimize operating costs (Santos and Escanciano, 2002; Fuentes et al., 2000).

Some of the external reasons for obtaining ISO 9000 certification are to satisfy customers, in terms of verifying customer demands and expectations (Awan and Bhatti, 2003; Santos and Escanciano, 2002; Wiele et al., 2001), to improve reputation and image in the eyes of the customers (Santos and Escanciano, 2002), and due to competitive pressures (Awan and Bhatti, 2003; Santos and Escanciano, 2002).

In the case of MASkargo, motivation for certification was first internally driven to increase operating efficiency and reduce cost. Secondly, it was driven by the fact that as it operates a global network it is better for the company image to have a world-wide recognition represented by being certified to ISO 9000. This will make potential and existing customers feel a certain sense of security in dealing with a certified company. Moreover, MASkargo’s major customers are bigger and more established organizations and their processes are more sophisticated. Thus, to compete better locally and globally, MASkargo adopted the ISO 9000 quality management system as a tool to achieve both objectives.

**Critical success factors and measures in ISO 9000 quality management system maintenance**

Past studies on ISO 9000 have found that several factors are critical to the successful implementation and maintenance of the QMS such as the commitment and support from top management, teamwork, and company-wide ISO recognition (Chin et al., 2000). Low and Omar (1997) also cited that top management commitment and support as one of the most important factors for certification and maintenance of the ISO 9000 in the construction industry in Singapore. Other factors of importance reported by the study are the concurrent use of technical and social aspects of quality management, and productive relationships. Similarly, Cheng and Tummala (1998) found that employee involvement is critical in achieving the ISO 9000 registration and in the effective
maintenance of ISO 9000 quality system in Hong Kong and China companies. They described employees as management, supervisors, staff, and operators of the companies they studied and stressed that the attitude and behavior of people working in the organization is critical to achieving the ISO 9000 certification and its maintenance.

However, during the maintenance stage, apart from the above factors, more emphasis must be placed on continuous improvement and preventive action. In addition, Nanda (2005) states that at this phase internal quality audits must be utilized not merely to verify adherence to the defined QMS but also to explore opportunities for continuous improvement. Chin et al. (2000) also stressed that continuous maintenance of the ISO 9000 QMS is essential to satisfy the surveillance visits by registrars, and to monitor and improve the system.

In the Chin et al. (2000) study, the respondents were asked to indicate their measures to maintain the ISO 9000 certification in their organizations. It was found that measures taken consist of eight items such as strengthen internal auditing, management support and participation, training and education, regular management reviews, improve employees communication/feedback, enhance improvement culture by teamwork, effective corrective and preventive actions, and additional resources. According to Chin et al. (2000), a regular management review may ensure that the ISO 9000 system remains effective and management can determine if a change is required in the organizational structure or in the operations of the organization in order to improve the system.

In the case of MASkargo, to maintain its ISO 9000 quality system, the company has carried out several continuous improvement initiatives. Each manager in every department is required to come up with two improvement projects every year. Thus far, some of the improvement projects that have been carried out are to improve the skill of employees in problem solving and corrective and preventive action analysis, modification, simplification and improvement of work processes, upgrading of system to minimize administration time, improvement of forms and documentation, and also upgrading of vendor monitoring device and system. These improvements are critical to the quality of service provided by MASkargo to its customers.

To encourage staff to seek improvement initiatives and appreciate those who have done it, MASkargo came up with several recognition and reward programs for the staff in the form of cash
rewards, paid holiday packages and commendation certificates. MASkargo has recognition programs which are called ‘Employee of the Year and Employee of the Month’. The winner will get a vacation package together with his /her spouse. There is also a reward program called the C-Star which stands for Cargo Staff Testimonial and Reward system. Staff who collected the highest point will be announced as the Annual Superstar of MASkargo and will get RM1000 cash reward and also a certificate. Apart from individual program, a team-based program known as C-MIND is also introduced by the company to promote the innovative mind of staff. Staff will have to submit proposals on how to improvise and solve problems. The winners will get RM5000 cash. This is how the organization rewards its staff for their contribution and fosters their team spirit and creativity. At the same time, teamwork was also encouraged and nurtured through and during these improvement initiatives. Initiative and Creative Circle (ICC) teams entered nation-wide competitions and have won the top ten placing for the past several years.

Top management of MASkargo also introduced the concept of multi-tasking to ensure the company has flexibility in using its human resources. Multi-tasking involves moving an employee to a different department every few years in order for him/her to develop and acquire different skills and knowledge. This is in line with the company’s objective to have lean but effective business operations that will contribute to operating efficiency and cost reduction without compromising the quality of its service to customers. By multi-tasking, employees’ potential and talent are unleashed, which is also beneficial for employees because they can avoid the monotony that comes with doing the same job repetitively. In addition, multi-tasking also serves to optimize human resources to be more productive and efficient in the use of resources. At the senior manager’s level, multi-tasking also acts as part of succession plan for them to move to the top in future. This is line with MASkargo’s policy of promoting from within the company.

Issues and challenges in maintaining the ISO 9000 QMS

The literature describes a variety of problems associated with the implementation of ISO 9000. Some of these are mostly due to lack of top management involvement and understanding of ISO 9000 requirements for the companies’ quality systems, the lack of effective internal corrective measures,
and not having well-established procedures to maintain their quality systems after ISO 9000 registration (McCullough and Laurie, 1995; Dzus and Sykes, 1993). It was found that lack of top management commitment and involvement are inhibiting factors in implementing QMS in Australia, New Zealand and New Jersey state organizations (Samson, 1997; Bin Srinidhi, 1998; Quazi et al. 2002).

For MASkargo, one of the problems faced during the initial stage of implementation was resistance from some of the staff to the change. They have the old mindset and they were afraid of changes that come along with ISO 9000 QMS because it will mean they can no longer be complacent, must leave their ‘comfort zones’ and adapt to a new way of doing things. Commitment and cooperation from some of the managers were also lacking. However after a year of being certified, the ‘teething pains’ had lessened a great deal. Staff saw the benefits that the company reaped from having the system and they understand the processes and their jobs better. The next step was dealing with issues and challenges in maintaining the quality management system. As one of the top managers put it:

“The issue is basically maintaining the momentum. Getting a certification is almost like trying to win the race and every race after that is the real challenge. People start losing steam, basically beating the mentality of complacency. It’s easy to win something but very difficult to maintain it. It’s more to do with people”.

This sentiment about maintaining ISO 9000 being ‘more to do with people’ is also supported by the Management Representative of the quality system when he says:

“Top management must continuously be involved and sit in meetings as scheduled. As for lower staff, it is difficult to get commitment, involvement and participation from them because they have their day to day work. For example, we used to conduct training at the workplace but staff got interrupted by their superiors about work, so we have training outside the workplace; at hotels so staff can concentrate fully on their training instead of thinking of their job. Staff don’t give much support because they lacked the sense of importance and urgency. For example, they don’t fill forms and don’t do follow-ups. They have to be reminded”.

One of the challenges that MASkargo encountered in maintaining the ISO 9000 QMS is the qualification and the quality of staff conducting the internal audit as they were drawn from the internal pool of employees. The employees are well versed in aspects of their jobs but are not in others’, so they do not know how to audit and have to be well trained, putting a strain on resources. Secondly, as cargo business is dynamic, the updating of ISO documentation has to be done when
there are changes in the environment and technology as processes and procedures have to be amended and improved. This is aptly put by one of the senior managers:

“One of the challenges is the quality system that we write; it’s never going to be permanent. It’s going to change continuously when the industry progresses, when the requirement changes and when we have to move forward. We have to make sure the ISO moves together. The real challenge is when new changes come, we have to go back and review and amend our document and communicate it down the line”.

Sometimes, confusion crept in during the transition period as stated by one of the operation managers:

“We have some small issues with the manual, new procedures. For example, we amended the work process and tell the document controller where she will change and distribute the new document to respective person or unit. Sometimes the old document is not removed and this is discovered by the auditor”.

**Table 1** summarizes the critical success factors, measures, and issues and challenges in maintaining a quality management system based on the literature and from the MASkargo study. The current study found that a reward and recognition system as one of the critical success factors in maintaining the quality system. This is similar to Low and Omar’s (1997) study which found the social-cultural aspects or the human factors as one of the most important factors for quality improvement. In contrast to other studies, the current study found that continuous improvement of process, people, and system are what kept the quality system alive for MASkargo to progress, grow and remain competitive.

The same issues and challenges were identified by all the studies in maintaining the ISO 9000 QMS. These are in terms of maintaining the momentum and beating complacency in people which can be the cause of slow corrective and preventive actions and associated with employer’s or/and employee’s attitudes. Lack of resources which can result in the lack of training and education can contribute to the lack of knowledge on the part of internal auditors. Frequent changes in documentation can also put a strain on the resources of any organization.

Although the measures taken were not exactly similar between one study and another, it can be seen that all of them emphasized the improvement of process, people, and system. The current company studied however, went one step further by capitalizing on the potential and capability of its human resources through the multi-tasking approach.
Changes and improvement made since the implementation of ISO 9000 QMS

Previous studies had uncovered a plethora of benefits from being certified to ISO 9000 standards. Burzacca and Lunghi (2003), Casadesus et al. (2001), Yahya and Goh (2001), and Casadesus and Gimenez (2000) show that some of the common benefits from certification to the ISO 9000 standard are customer satisfaction, continuous improvement, increase in quality awareness, improved management control, improved productivity, improved efficiency and effectiveness, improved profitability, reduced costs, improved internal communication, greater motivation of employees, and worldwide recognition.

For MASkargo, since the implementation of ISO 9000 in January 2004, the company has been back in the black. The company has made profits for the years 2004, 2005, 2006 and 2007. Apart from that, results from interviews show that several changes have taken place especially with regard to people, process, and system. People’s mindsets have changed and they are more open and receptive to a new way of doing things. They have become more responsible and accountable for their work. Employees are more aware of policy and procedures. Attitudes of staff from top to bottom have changed for the better; they have become very committed. All ranks and levels are involved in maintaining the quality system. In terms of process, the company managed to simplify and reduce the number of activities in some of the processes, particularly in cargo retrieval and release, which are critical to customers. Tracing of processes becomes easier and the root cause of problems is easier to detect, work errors are minimized and there is transparency in doing business. Processes have been changed to suit a changing market and market needs. The company has also managed to reduce the number of complaints from 30 a day to 3 per day and the cargo mishandling rate has dropped from 0.2 percent to 0.06 percent, making MASkargo one of the best in this industry. The new system has also raised the bar in term of trust from customers. MASkargo has become very lean, and its services are very predictable and consistent.
Conclusion

A number of useful conclusions can be drawn from the experience of MASkargo with its ISO 9000 quality management system. First, ISO 9000 is not an exception anymore; it has become a norm for companies to do business globally.

Second, although employees took some time to be convinced of the benefits of having the ISO 9000 certification, the right leadership and motivation have brought positive changes to their attitudes that lead to teamwork and participation in the effort for continuous improvement.

Third, the case of MASkargo shows that maintaining a quality management system is not an easy task. The journey is long and winding. There are issues and challenges that MASkargo has to constantly address in order for continuous improvement to thrive and for the company to remain competitive.

Overall, it can be said that MASkargo has been a successful example in the use of ISO 9000 in a service organization. It has started with clear purposes as to what it wants from implementing the standards, it has achieved those objectives, and it continues to improve with its improvement projects and initiatives and by constantly adapting to changes in the environment. Other service organizations can learn from MASkargo’s experience when implementing and maintaining ISO 9000 QMS.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical success factor</td>
<td>Top management commitment &amp; support</td>
<td>Employee involvement (management, supervisory, staff, and operator level)</td>
<td>Management commitment &amp; support</td>
<td>Top management commitment</td>
</tr>
<tr>
<td></td>
<td>Technical aspects of quality management</td>
<td></td>
<td>Teamwork</td>
<td>Employee involvement</td>
</tr>
<tr>
<td></td>
<td>Socio-cultural aspects of quality management</td>
<td></td>
<td>Company-wide ISO recognition</td>
<td>Teamwork</td>
</tr>
<tr>
<td></td>
<td>Productive relationships</td>
<td></td>
<td></td>
<td>Reward &amp; recognition system</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Continuous improvement</td>
</tr>
<tr>
<td>Issues &amp; challenges</td>
<td>Organization structure</td>
<td>Not specified.</td>
<td>Corrective action</td>
<td>Maintaining momentum &amp; beating complacency in people</td>
</tr>
<tr>
<td></td>
<td>Employer’s attitude</td>
<td></td>
<td>Preventive action</td>
<td>Internal auditors not knowledgeable in other areas</td>
</tr>
<tr>
<td></td>
<td>Employee’s attitude</td>
<td></td>
<td>Document &amp; data control</td>
<td>Frequent changes in documentation (e.g. procedures)</td>
</tr>
<tr>
<td></td>
<td>Resources</td>
<td></td>
<td>Internal audit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Education &amp; training</td>
<td></td>
<td>Quality system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supervision</td>
<td></td>
<td>Management responsibility</td>
<td></td>
</tr>
<tr>
<td>Measures taken to maintain QMS &amp;</td>
<td>Use of documentation</td>
<td>Management commitment, Involvement &amp; support</td>
<td>Strengthen internal quality audit</td>
<td>Improvement project teams</td>
</tr>
<tr>
<td>certification</td>
<td>Use of corrective actions</td>
<td>Development of communication channels</td>
<td>Management support &amp; participation</td>
<td>Improve skill of employees</td>
</tr>
<tr>
<td></td>
<td>Use of preventive actions</td>
<td>Provision of training &amp; education</td>
<td>Training &amp; education</td>
<td>Modify, simplify and improve work processes</td>
</tr>
<tr>
<td></td>
<td>Use of internal quality audit</td>
<td>Establishment of audit team, management reviews &amp; other work teams</td>
<td>Regular management reviews</td>
<td>Upgrade administration system</td>
</tr>
<tr>
<td></td>
<td>Use of training</td>
<td>Formation of quality improvement teams</td>
<td>Improve employee communication /feedback</td>
<td>Improve documentation</td>
</tr>
<tr>
<td></td>
<td>Use of management reviews</td>
<td>Adoption of appropriate leadership skills.</td>
<td>Enhance improvement culture by teamwork</td>
<td>Upgrade vendor monitoring device &amp; system</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Effective corrective &amp; preventive actions</td>
<td>Multi-tasking of human resource</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Additional resources</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Factors in ISO 9000 QMS maintenance
References


