

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Quality in construction and property development, by the measure of today's society's concepts, requires that facilities meet society's needs not only physically but emotionally and environmentally as well. If this quality is to be achieved, a systematic approach to quality system in construction and property development industry must be used.

Whilst no quality management system can replace the skills of the designer, the engineer and the contractor, ISO 9000 does provide the vital disciplined framework for the industry.

However, for a quality system to be effective, several requirements must be met. Top management and representatives from various department must be involved; attitudes throughout the system, from Chief Executive Officer to craftsman, must favour quality in

construction; communication must be effective throughout the system and input from outside sources must be solicited and used where appropriate.

In short, quality is in essence a shared commitment and requires all parties working together to achieve the predetermined objectives. This necessitates a radical change of approach far beyond the requirements of ISO 9000.

5.2 Recommendations

Based on the research findings, the following recommendations could be useful in providing some guides on how to develop and implement ISO 9000 Quality System successfully in the construction and property development industry.

First and foremost, top management must commit and support wholeheartedly.

Management must define the quality policy clearly and make sure that the policy is understood at all levels. Management must also define the responsibility, authority and interrelationship of all personnel clearly.

Secondly, a management representative should be appointed and a steering group should be established. The management representative is a person who has the responsibility

and the authority to make sure that the quality system is implemented and then is maintained. The steering group however, is made up of members of management and the group's responsibility is to oversee the whole process of the development and implementation of ISO 9000. This means they have to provide leadership and guidance wherever needed. They must also make resources available where needed. Since they are the people who will be staying in touch with what's going on throughout the whole process, they should acquire knowledge on ISO 9000 by attending public seminars and training courses or if they prefer, to engage external consultants to train them as well as to help them develop and implement the system.

The third step is to develop the quality manual and procedures. Since every department head will have a better idea on what is the best procedure for their department, the procedures should be drafted by them. Besides, as the procedure was drafted by the individual department heads, it gave them a sense of belonging that will encourage them to work harder for the success of the quality system. However, one important consideration in this stage is to study and to adopt the necessary engineering standards and specifications into the quality manual wherever possible.

After the quality manual is completed, the following step is to educate the employees within the organization about the content of the quality manual. The job can be easily performed by all the department heads who have involved in the preparation of the manual. Creating awareness and acceptance among employees toward the quality

manual may greatly reduce the problem of resistance and resentment during the implementation stage of the quality system. Once the process reached this stage, the company should choose and contact a third-party accreditation body because many of them have long waiting lists.

The fifth step involved the full implementation of the quality system across the entire organization. The members in the steering committee and all the department heads should take on an active role to ensure this stage is going smoothly.

Internal audits and feedback is carried out in step six. The internal audits can be broken down into two kinds of audits; the adequacy audits and the compliance audits.

According to SIRIM's guidelines, an adequacy audit is just looking at the documentation that currently exists and checking it against the requirements of ISO 9000 to find out what needs to be upgraded or improved. The compliance audit on the other hand, is actually going out and talking with people in the field to find out whether they are really carrying out the systems that have been set up. Management review could be carried out following the internal audits. The emphasis in feedback and management reviews is on corrective actions and constant system improvement.

Step seven will involve the actual assessment by a third party registrar. The auditors come in to do a compliance audit which is the same thing the internal auditors did during the internal audits. They are checking to find out whether the system is actually working

as it has been described and also whether the quality system is meeting the ISO 9000 requirements. It is very rare for an organization to have zero deficiencies in the actual assessment even after they have had an internal audits. Typically, there are still some deficiencies to be corrected.

After going through the seven steps, the organization should have obtained the third party certification now. However, the whole quality improvement process should not stop here. Instead, the company must shift into ISO 9000 maintenance mode because achieving ISO 9000 certification is only one step in a larger continuous improvement approach but not the ultimate goal.

The maintenance process should include continuous internal quality audits, corrective actions, management reviews and surveillance audits by the certification body at six monthly intervals. These are some of the steps to ensure that the company not only maintains the system, but also continue to improve it.

5.3 Suggestions for Future Research

Since the history of ISO 9000 in Malaysia's construction and property development industry is still very new, there are a few areas where additional study can be carried out in future.

As construction and property development industry covered a wide variety of business, it is recommended that the same study should be carried out on other business of the building and construction industry. For example, a similar study can be carried out on building material suppliers and also the professional engineering consultation firms. The findings from these future studies can then be combined and compared with this study to provide a wider picture on the effect ISO 9000 has in the construction and property development industry.

The second suggestion is really a follow up or a continuity on the general overall subject matter of this current study. A detailed survey research can be carried out on the three companies understudy in this project in order to collect feedback and information to find out if ISO 9000 does really improve the performance of the companies in term of cost, productivity and competitiveness.

A study can also be carried out to measure the level of job satisfactions in those companies in construction and property development industry that practiced ISO 9000 Quality system in their organization.

Finally, some future research should be encouraged to study the effect of the newly introduced ISO 14000 Environmental Management Systems in the construction and property industry. In addition, the future research should also investigate into the relationship between ISO 9000 and Total Quality Management in the construction and property development industry. These research will be very useful in providing some knowledge and guidance for those construction and property development companies who seek registration to ISO 9000 as part of their long-term objectives towards total quality.