

Planning Integrated Management System audit to ensure Conformance, Consistency and Continual Improvement

Sendil Mourougan¹

¹(Business Administration, Annamalai University, India)

Abstract: An integrated management system results when an organization uses one single management system to manage multiple aspects of organizational performance. This paper discusses about the various management systems that can be integrated. It also explains about the management system and its corresponding ISO standard. It details about the management standards approach and structure, its benefits and compatibility with other standards.

Keywords: Integrated Management System, International Organisation for Standardization, Quality Management system, Environmental Management System, Occupational Health & Safety Management System, Information Security Management System, Audit Plan, Roles and Responsibilities, Audit Report

I. Introduction

ISO (International Organization for Standardization) has a membership of 164 national standards bodies from countries large and small, industrialized, developing and in transition, in all regions of the world. ISO's portfolio of over 19200 standards provides business, government and society with practical tools for all three dimensions of sustainable development: economic, environmental and social. ISO standards make a positive contribution to the world. They facilitate trade, spread knowledge, disseminate innovative advances in technology, and share good management and conformity assessment practices. Integrated management system combines all related components of a business into one system for easier management and operations.

On the part of the different structure of ISO standards, it is difficult to integrate the management systems into integrated management system. This is the reason why ISO published Annex SL. According to this Annex SL, the new published standards will have the common High-level structure (HLS) with the following 10 clauses: 1 – Scope, 2 – Normative references, 3 – Terms and definitions, 4 – Context of the organization, 5 – Leadership, 6 – Planning, 7 – Support, 8 – Operation, 9 – Performance evaluation, 10 – Improvement.

II. Integrated Management System (IMS)

An Integrated Management System (IMS) integrates all of an organization's systems and processes into one complete framework, enabling an organization to work as a single unit with unified objectives to achieve its purpose and mission. Organizations often focus on management systems individually, often in silos and sometimes even in conflict. The integration of all the management systems into a single system and centrally managed is defined as Integrated Management System. As shown in Figure 1, Integrated Management System comprises of:

- ISO 9001:2015 - Quality Management Systems (QMS);
- ISO 14001:2015 - Environmental Management Systems (EMS);
- OHSAS 45001 - Occupational Health & Safety Management Systems (OHSMS);
- ISO 27001:2013 - Information Security Management Systems. (ISMS).

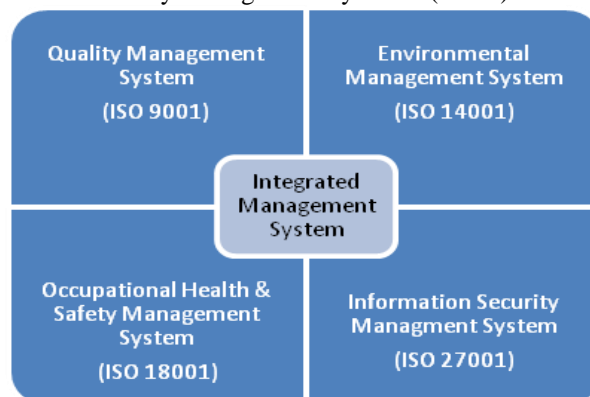


Figure 1. Integrated Management System

III. Integrated Management System Formation

Owing to business, market and stakeholders pressures, organizations today have adopted a number of management systems. Auditing different management systems for the same processes is proving to be cumbersome. The following are the steps that could be followed for forming an IMS.

3.1 Leadership team commitment

The leadership team in the organisation should be committed in implementing the IMS. The leadership team should carry out the following:

- Select management representative;
- Define roles, responsibilities and authorities;
- Identify additional resources that will be needed;
- Define the scope and boundary of the system;
- Develop management system policies with its commitments.

3.2 Management standards purchase

Before forming an IMS, the organisation has to purchase the international management standards for Quality Management Systems, Environmental Management Systems, Occupational Health & Safety Management Systems and Information Security Management Systems.

3.3 Training

The training can be given to the stakeholders of the organisation by hiring a consultant. The training can be customized to suit the organization's product and services. It helps to impart to the delegates the skills and knowledge to audit an Integrated Management System and understand how management systems apply to the organization. IMS Training is recommended not only for the core team but also for the top management.

3.4 Process mapping and planning

The establishment of the management system policies and its commitments will provide the framework needed for the planning portion of the Integrated Management System. It requires the following:

- Review of baseline and KPIs;
- Legal & Other Requirements / Initial Compliance Evaluation;
- Framing objectives, fixing targets and developing management programs;
- Linkages to operational controls;
- Monitoring & Measurement.

3.5 Documentation

Documents such as procedures, work instructions, or forms should be developed and updated.

3.6 Implementation

The documents should be rolled-out and the IMS components should be incorporated into the core business process and procedures.

3.7 Gap assessment

A gap assessment is recommended to assess whether the implementation plan (tasks, resources, and timelines) is adequate and to identify those areas having "gaps" to be filled to implement a complete IMS system. It will also allow the organization to identify whether there is an opportunity to integrate the management systems with other management systems.

3.8 Communication

A second-stage of training is recommended so that the employees can engage in the implementation process and can immediately apply what they have learned in the training. This second-stage of training will support:

- Specific training and competence modules to support IMS implementation;
- Awareness Training – Facility-Wide;
- Internal auditor training;
- Overall communications strategy – Internal and External – needed to support implementation.

3.9 Establish key measures and evaluate

IMS performance needs to be measured, monitored & evaluated for continual improvement.

3.10 Internal audits

It will provide an accurate picture of the implementation process and will help to discover those areas that are in full conformance, as well as those areas that may still require additional focus. A complete internal audit is required prior to the certification process.

3.11 Develop non-conformities, correction, corrective and preventive actions

Results of the internal audit identified as non-conformities should be verified as effectively corrected and closed.

3.12 Conduct management review

A management review is crucial at the end of the implementation to confirm that the system is fully functioning and that the organization is ready for a certification assessment.

3.13 Follow-up and continual improvement

The follow-up action items from that Management Review will allow for further improvement in performance as the system cycles forward.

IV. Planning IMS audit

An audit is fundamentally a comparison of audit evidence to audit criteria to determine findings. The evidence is the objective information collected through interviews, visual reconnaissance, and documentation review. The audit criteria are the expectations or "rules" of how conditions should be. When evidence is compared to criteria, one can determine whether the audited entity does or does not conform. This determination is a finding, and a finding can either be one of conformance, or non-conformance. Therefore, an audit will always produce findings, even if what is being audited is in full conformance with criteria. Other key definitions to be aware of with auditing are: objectives, scope, auditee, client, and auditor. The audit objective(s) is simply why you are conducting an audit; usually the reason is to demonstrate conformance to stated criteria. The audit scope is what entity is being audited, and can be a company, a site, or unit within a site or company.

4.1 IMS audit requirements

To effectively audit an IMS, it is important to have an understanding of the international management standard requirements. A quick review of the standard shows that it is structured following the Plan, Do, Check, Improve philosophy of the TQM movement. The International Standard adopts a process approach for establishing, implementing, operating, monitoring, reviewing, maintaining and improving an organization's process. An organization needs to identify and manage many activities in order to function effectively. Any activity using resources and managed in order to enable the transformation of inputs into outputs can be considered to be a process. Often the output from one process directly forms the input to the next process.

The application of a system of processes within an organization, together with the identification and interactions of these processes, and their management, can be referred to as a "process approach". PDCA (plan-do-check-act or plan-do-check-adjust) is an iterative four-step management method used in business for the control and continuous improvement of processes and products. It is also known as the Deming circle/cycle/wheel, Shewhart cycle, control circle/cycle, or plan-do-study-act (PDSA). Another version of this PDCA cycle is OPDCA. The added "O" stands for observation or as some versions say "Grasp the current condition." This emphasis on observation and current condition has currency with Lean manufacturing/Toyota Production System literature.

- **PLAN:** Establish the objectives and processes necessary to deliver results in accordance with the expected output (the target or goals).
- **DO:** Implement the plan, execute the process, and make the product. Collect data for charting and analysis in the following "CHECK" and "ACT" steps.
- **CHECK:** Study the actual results (measured and collected in "DO" above) and compare against the expected results (targets or goals from the "PLAN") to ascertain any differences.
- **ACT:** If the CHECK shows that the PLAN that was implemented in DO is an improvement to the prior standard (baseline), then that becomes the new standard (baseline) for how the organization should ACT going forward (new standards are enACTed). If the CHECK shows that the PLAN that was implemented in DO is not an improvement, then the existing standard (baseline) will remain in place.

4.2 Advantages of integrated audits

4.2.1 Internal streamlining

- Consistency of management goals and management system goals;
- Eliminates duplication among internal audits, for better business efficiency.

4.2.2 Audit efficiency

- Just one audit per year;
- Reduced auditing time for common elements and personnel, shorter compliance time for each division.

4.2.3 Cost reduction

- Fewer fees for applications and certificate issuance;
- Lower review costs.

The internal audit emphasizes:

- determining whether the direct and indirect environmental /sustainability issues and their evaluation are up- to-date;
- determining whether the strategic programme is up-to-date;
- comparing present status and realization/implementation of the action plan(s);
- comparing present status and progress towards achievement of targets;
- checking whether the laws and regulations have been updated and are being followed through;
- checking the management system functions (organisation, documentation, internal and external communication, monitoring and reporting);
- checking update, adherence to and implementation of the training plan for employees.

4.3 Conformity to management system

Conformity to management system means the organization has met the requirements of the standard in implementing the management system. Assessing the conformity and making claims can be in one of three ways:

- **First Party audit:** This is where an organization assesses its own system and makes a self-declaration of conformity with the requirements of the standards.
- **Second Party audit:** An external party (such as an individual or organization in the supply chain, consultant or industry association) assesses the organisation conformity with requirements of the standards.
- **Third Party audit:** Accredited certifying bodies conduct third party conformity assessment audits and award IMS Certification. These certifying bodies must be 'accredited' (authorized to certify).

4.4 IMS audit essential features

The IMS audit incorporates the following general features of any audit. It should be:

- pre-planned and methodical in nature rather than haphazard;
- free from bias or prejudice;
- concerned with all activities that affect environmental issues and with results reflecting environmental performance;
- ensure that such activities are carried out in an effective and consistent manner in accordance with planned arrangements.

4.5 Need for IMS audits

In order to confirm that the defined IMS system operates effectively, it is essential to carry out some form of monitoring activity in addition to ongoing monitoring and measurement. Listed below are some of the potential benefits of adopting IMS audits as the basis of any such additional monitoring:

- They provide a means of confirming that the IMS policy is understood and is being implemented.
- They give management confidence that the system is being implemented in the manner prescribed.
- They provide a structured means of identifying deficiencies in the system, agreeing on corrective action, and following up to confirm effectiveness.
- They enable system weaknesses to be highlighted before the related potential problems are reflected in the environmental performance.
- They provide a convenient framework for investigating operations in a particular area, e.g., in response to environmental problems.
- Again, if they involve personnel from other areas, the opportunity is created for interchange of ideas so that successful features of an area's system can be applied elsewhere if appropriate.
- They can, by involving personnel more widely in the operations of the business, lead to increased commitment and motivation.

4.6 Audit plan

With IMS auditing, as with any type of auditing, a very important step is planning the audit. This involves preparing the specific audit plan, making team assignments, deciding on working documents, and addressing any unique extenuating circumstances. The audit plan is the document that establishes the scope, objectives and criteria, and schedule of the audit. It also goes into specific details on what areas will be audited, when, and by whom.

Other details such as which checklists may be used, how the report is to be formatted and distributed, and how meetings will be conducted can also be included in the plan. In essence, the audit plan reflects the programs, procedures, and methodologies of the IMS audit process. These planning items are usually described in the procedures and do not need to be re-created every time an audit occur. For example, it can be determined that the entire IMS will be audited once per year, but in four partial events. This schedule then becomes part of the procedure.

The audit scope defines what part of the organization will be audited. Obviously, this should coincide with the scope of the IMS itself, and is usually the site in question. If the full IMS audit is divided in smaller segments conducted throughout the year, then the scope of any given segment is what portion of the organization will be audited at that time.

Typically, an organization should create a chart or matrix showing the various divisions of the site or activity and when it will be audited. A typical entry may show the maintenance department being audited in the first quarter and production in the fourth quarter, for example. The audit objective describes why an audit is being conducted. Typically the reason is to conform to requiring that the IMS be periodically evaluated. Another reason is demonstrate conformance to others.

Audits should be carried out to:

- Determine conformance of an auditee management system with the management system audit criteria;
- Determine whether the auditee management system has been properly implemented and maintained;
- To identify areas of potential improvement;
- Assess the ability of the internal management review process to ensure the continuing suitability and effectiveness of the management system;
- Evaluate the management system of an organization where there is a desire to establish a contractual relationship, such as with a potential supplier or a joint-venture partner.

Internal audits should be carried out to ensure that:

- The IMS continues to meet the needs of the business;
- The necessary documented procedures that exist are practical and satisfy any specified requirements;
- The necessary documented procedures are understood and followed by appropriately trained personnel;
- Areas of conformity and non-conformity with respect to implementation of the IMS system are identified and corrective action implemented;
- The effectiveness of the system in meeting the IMS objectives is determined and that a basis is created for identifying opportunities and initiating actions to improve the IMS system.

When developing an audit plan, it is wise to consider the three C's of IMS auditing: Conformance, Consistency, and Continual Improvement. Conformance relates to addressing each of the requirements of the standard, i.e., the "shalls". Consistency relates to how well each procedure or process of the IMS relates to the others. In other words, do objectives and targets reflect the policy commitments? Are personnel trained on the correct legal and other requirements? Finally, Continual Improvement requires that the system lead to improvements in the system itself as well as with environmental performance. A system that has all the prerequisite procedures, but remains static, is not in conformance.

With the three C's in mind, one now sees why it is best to audit all applicable elements of the standard in a given area at one time, rather than tracing any one standard element throughout various areas. Now what is being audited, when it is being audited, and to what "rules" it is being audited is known. The remaining audit plan is simply then the logistics of the audit. The logistics include identification of team members, noting if and what checklists will be used, schedule and formats of meeting. Below is the full list of recommended audit plan elements:

- the audit objectives and scope;
- the audit criteria;
- identification of the auditee's organizational and functional units to be audited;
- identification of the functions and/or individuals within the auditee's organization having significant direct responsibilities;
- identification of those elements of the auditee's IMS that are of high audit priority;
- the procedures for auditing the auditee's IMS elements as appropriate for the auditee's organization;
- the working and reporting languages of the audit;

- identification of reference documents;
- the expected time and duration for major audit activities;
- the dates and places where the audit is to be conducted;
- identification of audit team members;
- the schedule of meetings to be held with the auditee's management;
- confidentiality requirements;
- report content and format, expected date of issue and distribution of the audit report;
- document retention requirements.

If the internal audit is to proceed smoothly, it is helpful for the internal auditor to establish a dialogue prior to the actual audit with the person responsible for the area being audited. This dialogue may be conducted by memo, telephone, or during a formal or informal meeting. The main factor that should influence the auditor's choice of method for setting up this dialogue should be the organization's normal style or culture. Irrespective of the method of communication the auditor adopts, the following points should be established:

- The overall duration of the proposed audit - starting location and time;
- The proposed scope and areas to be covered by the audit;
- A timetable for approximate progress of the audit where applicable, e.g., if a number of different departments or geographical areas are to be included in the scope of the audit;
- The arrangements for any close out meeting where the findings of the audit can be agreed and corrective action requirements discussed;
- The personnel liable to be involved at each stage of the audit.

If an auditor does not give sufficient attention to ensuring that clear agreement is reached with respect to the above points, the potential for misunderstandings that can affect the conduct of the audit is greatly increased. However, these initial communications with the personnel of the area being audited not only affect the "tone" of the forthcoming audit, but they can significantly influence the commitment and level of cooperation shown by that area throughout the audit process and for many subsequent audits.

Prior to commencing the audit, but once the plan is prepared, the audit team assignments are made, and working documents are defined. Working documents are those documents such as observation logs and checklists that are used during the audit to collect evidence, but are not necessarily retained as records. In other words, they may be discarded after the audit is complete and the report prepared.

Of these, only the checklist should require an input at this stage from the auditor. However, before compiling a checklist, the auditor must determine if the function and format of the checklist are prescribed by the audit procedure or whether personal preference can be exercised.

The format of the checklist may vary considerably, depending on whether it is intended to act as an aide or as a part of audit records showing the scope and conduct of the audit. The former may consist only of general topics to be covered during the audit, whereas the latter may be an extensive and detailed questionnaire on which details of sampling and answers to the questions are to be recorded.

The need for checklists and the type appropriate will vary according to other experience of the auditors and the culture of the company. It is recommended that for purposes of internal audits, checklists, even if limited, should always be developed. However, standard questionnaire type checklists not prepared by the auditor that must be slavishly followed and completed, should be avoided. This latter type is likely to result in an unnecessary restriction in the scope of the audit and a stifling of auditor initiative.

Although an auditor should always work within the scope defined for the audit, the working documents must not be designed so that they restrict additional audit activities or investigations that may become necessary as a result of information gained during the audit. There are differences of opinion over whether it is preferable to create the checklist anew or whether a previously developed checklist can be used. Although the former is desirable in principle, it is not always practical in terms of the best use of the resources available. The best compromise is to utilize whatever available checklists are already in existence, but to review these critically against the relevant documents previously identified. In this way, time can be saved in using them as a foundation without detracting from effectiveness.

4.7 Audit team assignments and auditor qualifications

The organization needs to identify auditors in order to effectively carry out IMS audits. These individuals are usually employees who have other day to day to functions and responsibilities. They receive specialized training in auditing, systems auditing, and the organization's IMS.

IMS auditors, or collectively as a team, should have some degree of knowledge of: management systems, auditing methodologies and techniques, environmental science and technology, and regulatory and legal requirements. It is well within the right of the organization to assemble a team of individuals who collectively have this knowledge, understanding that a single person with this breadth of knowledge is a rarity.

The auditor must be capable of communicating clearly both orally and in writing. This requires an ability to be concise and accurate, to be able to modify the approach and questions to be compatible with the person being interviewed, and to be a good listener. Diplomacy is an essential characteristic of the auditor, which must be balanced by an ability to be assertive if the situation demands it. Audits should not involve constant arguments, although occasional differences of opinion are inevitable and must be dealt with firmly but fairly. The good auditor should be able to foresee problems and plan accordingly. These attributes, combined with an ability to make logical decisions and exercise sound judgement, provide a good basis for conduct of audits without undue aggravation.

The auditor must be able to follow audit trails to their logical conclusion, i.e., analytical abilities combined with perseverance are essential if the audit is to be searching and not superficial. Patience and self discipline are also important in this respect. Auditors must be observant and not liable to distractions. They must be able to assess facts without speculation and reach consistent decisions.

4.8 Roles and responsibilities

In order to implement the audit plan effectively and perform the audit, all individuals need to understand and accept their roles and responsibilities.

4.8.1 Lead auditor

The lead auditor is responsible for ensuring the efficient and effective conduct and completion of the audit within the audit scope and plan approved by the client.

In addition, responsibilities and activities of the lead auditor should cover:

- consulting with the client and the auditee, if appropriate, in determining the criteria and scope of the audit;
- obtaining relevant background information necessary to meet the objectives of the audit, such as details of the auditee's activities, products, services, site and immediate surroundings, and details of previous audits;
- determining whether the requirements for the audit as given in international standard have been met;
- forming the audit team giving consideration to potential conflicts of interest, and agreeing on its composition with the client;
- directing the activities of the audit team in accordance with the guidelines of IMS and this International Standard;
- preparing the audit plan with appropriate consultation with the client, auditee and audit team members;
- communicating the final audit plan to the audit team, auditee and client;
- coordinating the preparation of working documents and detailed procedures, and briefing the audit team;
- seeking to resolve any problems that arise during the audit;
- recognizing when audit objectives become unattainable and reporting the reasons to the client and the auditee;
- representing the audit team in discussions with the auditee, prior to, during and after the audit;
- notifying the auditee without delay, of audit findings of critical non-conformities;
- reporting to the client on the audit clearly and conclusively within the time agreed with in the audit plan;
- making recommendations for improvements to the EMS, if agreed in the scope of the audit.

4.8.2 Auditor

Auditor responsibilities and activities should cover:

- following the directions of and supporting the lead auditor;
- planning and carrying out the assigned task objectively, effectively and efficiently within the scope of the audit;
- collecting and analyzing relevant and sufficient audit evidence to determine audit findings and reach audit conclusions;
- preparing working documents under the direction of the lead auditor;
- documenting individual audit findings;
- safeguarding documents pertaining to the audit and returning such documents as required;
- assisting in writing the audit report.

4.8.3 Audit team

The process for selecting audit team members should ensure that the audit team possesses the overall experience and expertise needed to conduct the audit. The audit team may also include technical experts and auditors-in-training that is acceptable to the client, auditee and lead auditor. Consideration should be given to:

- auditor qualifications as given;

- the type of organization, processes, activities or functions being audited;
- the number language skills and expertise of the individual audit team members;
- any potential conflict of interest between the audit team members and the auditee;
- requirements of clients, and certification and accreditation bodies.

4.8.4 Organisation

Organisation responsibilities and activities should cover:

- determining the need for the audit;
- contacting the auditee to obtain its full cooperation and initiating the process;
- defining the objectives of the audit;
- selecting the lead auditor or auditing organization and approving the composition of the audit team;
- providing appropriate authority and resources to enable the audit to be conducted;
- consulting with the lead auditor to determine the scope of the audit;
- approving the audit criteria and audit plan;
- receiving the audit report and determining its distribution.

4.8.5 Auditee

The responsibilities and activities of the auditee should cover:

- informing employees about the objectives and scope of the audit as necessary;
- providing the facilities needed for the audit team in order to ensure an effective and efficient audit process;
- appointing responsible and competent staff to accompany members of the audit team, to act as guides to the site and to ensure that the audit team is aware of health, safety and other appropriate requirements;
- providing access to the facilities, personnel, relevant information and records as requested by the auditors;
- cooperating with the audit team to permit the audit objectives to be achieved;
- receiving a copy of the audit report unless specifically excluded by the client.

4.9 Audit stages

For most types of system audits, the pattern of audit performance is similar, in that it tends to include the following stages:

- Opening meeting – to explain the audit process and set the scene;
- Examination and evaluation – fact finding through interrogation of the system and analysis of findings;
- Reporting of deficiencies – presentation of corroborated facts;
- Closing meeting – to advise the auditee of findings and what happens next;

Since there is no good reason why internal audits should not be conducted on the same basis, the requirements relating to each of these stages is considered in turn.

4.9.1 Opening meeting

Even in circumstances where the auditor and auditee are well known to each other and relationships are normally very informal, it is still advisable to commence the internal audit with an opening meeting that covers certain specific topics. In circumstances where auditee(s) and auditor(s) are not known to each other, e.g., in a large company, or where audits are conducted on a corporate basis, such a meeting is essential. Records of this meeting need not be kept, although the auditor should note who is in attendance, since this information may be required for any audit report subsequently produced. Irrespective of the formality or otherwise of the meeting, there are certain topics that should always be addressed at any opening meeting.

- **Introductions:** In circumstances where the audit team is made up of several individuals, it is likely that a number of representatives of the department being audited will attend the opening meeting. This presents the opportunity to complete introductions and to begin to establish a working relationship with the auditees.
- **Scope of Audit and Program:** Although the scope and audit itinerary should have already been agreed upon as part of the audit preliminaries, these should be re-confirmed at the opening meeting. In particular, the suitability of the audit schedules should be discussed in case unforeseen circumstances have resulted in there being problems with the original planned itinerary.
- **Method of Working and Reporting:** The method of working and reporting should be summarized. The team lead should outline who is likely to be involved in the audit and ensure that arrangements have been made for a departmental representative to accompany the auditors. Obviously in those circumstances where the area being audited is small with few people employed in the area, the requirement for guides or escorts may be superfluous. Where a standardized format of reporting such as non-conformance notes is being adopted the team leader should describe how and in what circumstances these are originated.

- **Closing Meeting:** Provisional arrangements for a closing meeting should be agreed with respect to both its timing and who should attend.

4.9.2 Collecting evidence

Having established with the auditee and client the scope of the audit, now is the time to undertake an initial review of the related documentation, which will normally consist of:

- The IMS manual and the procedures applicable to the area being audited;
- Regulatory documents and specifications that typically apply in the area being audited;
- The findings of the last audit of the area and any available audit checklists relating to that area;
- Any records of corrective action analysis relating to that area.

The foundation of a good audit is effective evidence gathering. The ultimate interpretation of the data to develop findings will only be as good as the raw data. The auditing planning process described above was in part intended to identify the criteria and decide what information must be collected to verify conformance. This leads to the conclusion that the auditor must be aware of not only what the requirement is, but what type of information will be appropriate to verify conformance.

4.9.3 Involvement

To be most effective, the auditor should be somewhat familiar with the specific area they will be auditing. This familiarization goes into more depth than the audit plan. For example, proper preparation will include knowing an area's significant aspects, objectives and targets, monitoring and measurement needs, and supporting documentation. Documentation can include reference documents, work instructions, procedures, records, and calibration procedures.

Secondly, the auditor should arrange for a brief visual reconnaissance, or walkthrough of the area. This allows the auditor to relate what the procedures say should be happening to what actually occurs. In addition, the auditor can note conditions that verify or contradict planned arrangements. The key is that an IMS audit is not a documentation exercise. Having the appropriate documentation is only part of the story. The organization must also have properly implemented and maintained the processes.

This constant observation is part of the process of developing "auditor awareness", an essential requirement for effective and thorough audits. The auditor must always be conscious of what is happening around him or her, whether it is during the visit to a department or between departments. The auditor must be alert and prepared to note throwaway comments or visual clues which will make the subsequent sampling more effective, e.g., general untidiness and bad housekeeping in an assembly area may suggest that waste handling may be a potential problem area. This awareness is something that every auditor has to develop and some find it easier than others. It is a skill that is developed with experience and maintained through regular usage rather than one that can be taught.

4.9.4 Time management

It is often assumed that the main problem the auditor will face is understanding the workings of another department or area and finding the non-conformances. Although a good basic understanding of the system is necessary, inexperienced auditors initially tend to find the management of time during the assessment a more significant area of concern. One method that helps to minimize this problem is for the auditor to allocate the time available between the various activities being undertaken in that department. It is also useful to try and identify what assessment techniques are likely to be most productive and what kind of sampling would be the most appropriate.

Finally, in attempting to structure the visit to assist time management, the assessor should look for a logical route or path he can follow. This may be following the flow of information or material through the area, identifying the inputs, the processing stages and the outputs. Having identified the route, the auditor tries to control deviations from it so that sampling and discussions of the irrelevant are minimized.

4.9.5 Audit checklists

Checklists should be kept available throughout the audit. Ideally, they should not be followed blindly, but should be used as an aide to check that all the topics relevant to the area have been examined. In some instances, it may be beneficial to use spaces incorporated into the checklist to record information gathered during the audit. Frequently, internal audit procedures require that the checklist, completed in this way, be retained to provide objective evidence of effective implementation. This use of checklists, when combined with a well-structured approach, helps ensure all relevant topics are reviewed in the time available and that the audited department is left with the impression of a well-conducted, thorough audit.

4.9.6 Interviewing

It is ironic that probably the most sensitive part of auditing is the most difficult to teach, and is more an acquired skill. Interviewing is essentially the technique of gathering information from another individual by asking a series of questions. This may sound easy, but there are varying styles of questions that will prompt different types of answers. For example, closed questions (i.e., yes - no answers) will not yield details or explanations. It is not feasible to assess how well someone understands a concept by using closed questions. On the other hand, there is a time for closed questions, usually when the auditor wishes to verify a point or time is short. Keep in mind also that the auditor can ask additional clarifying questions to elaborate on a point.

Other types of questions, such as antagonistic or leading are not recommended. Also, keep in mind that silence, allowing the interviewee to think, is also a valid technique of obtaining information. In general, interviews should be characterized by structured, thoughtful questions, putting the auditee at ease, explaining what is required, listening to the response, and avoiding personal judgement. There are a few basic questions that are nearly always asked, at least to begin discussions. It should be noted that interviews are situation-specific, and many other clarifying questions may follow those listed below:

First Set

- Are you familiar with the policies and Integrated Management System?
- What do you do in case of a procedural non-conformance?
- What do you do in case of an emergency?
- What kind of training have you received?
- How do you communicate concerns or ideas?

Second Set

- What are the significant aspects and impacts associated with your function?
- How do you know what to do? (ask for procedures and operating criteria).
- What specific training have you received?
- Are there any objectives and targets associated with your function?

- Are you responsible for any monitoring and measurement activities?
- What records do you keep?

Typical auditees

- Plant management;
- Management representatives;
- Department managers;
- Document control and record departments;
- Research and development;
- Engineering;
- Operations employees (plant, administration);
- Human resources and training;
- Contractor management and purchasing;
- Security.

4.10 Documentation review

During the audit, the auditor will be reviewing a wide variety of documentation. Documents will vary from high-level management policies and procedures to specific records. In general, the documentation review is part of the overall evidence, gathering phase. More specifically, the auditor is looking for the following:

- Does your documented system respond to the standard?
- Do the procedures describe what's happening?
- Is the documentation controlled?
- Are all employees informed?
- Are the procedures followed by everyone all the time?
- Is there objective evidence that the procedures are being followed?

For example, listed below are typical documents reviewed when auditing against various management standard elements. Obviously, the title and format will vary from site to site. The following list includes typical document types in addition to required procedures, which will facilitate verifying conformance to the specific standards:

Aspects procedure

- Aspects list -Significant aspects/impacts list.

Legal and Other Requirements

- Applicable legal and other requirements list;
- Appropriate instructions for compliance;
- Permits, manifests, etc.

Objectives and Targets

- Minutes of objectives and target development;
- List of objectives and targets;
- Related action plans.

Structure and Responsibility

- Job descriptions;
- Organizational charts.

Training Awareness and Competence

- Training needs listings/matrix;

- Manuals, course materials;
- Sign-in sheets;
- Test records, certificate copies, etc.

Communication

- Specific work instructions;
- Records of communication and correspondence.

Document Control

- Documents, procedures, and manuals

Operational Control

- Critical operations/aspects listing/matrix;
- Specific work instructions;
- Environmental issues and instructions within other work instructions;
- Contractor policies, work orders, etc.
- Supplier requirements

Emergency Preparedness and Response

- Emergency plans and protocols;

- Practice and drill results.

Monitoring and Measurement

- Function-specific procedures and work instructions;
- Objectives and target action plans;
- Records of monitoring and measurement data collected, including calibration records.

Non-conformance, Corrective and Preventive Action

- Corrective action reports;
- Evidence of discussion and follow-up.

Records

- Records;
- Specific audit procedures, checklists, forms, schedule;
- Audit notes and working documents;
- Audit reports.

Management Review

- Meeting agendas and attendance;
- Meeting minutes and action items;
- Evidence of follow-up actions, reports, etc.

4.11 Audit completion

Once the evidence has been collected, the audit team meets to agree on the findings. Recall that findings are the comparison of evidence to criteria to ascertain if the management system is in conformance to planned arrangements. Therefore, findings will be either that the IMS is or is not in conformance.

It is important that the auditor records all the objective evidence available, both of deficiencies and of conformance with the procedures. This enables the findings to be reviewed, subsequently with the other members of the team. If a deficiency has been observed, make sure that the escort or guide and/or department representative agrees at least to the facts of what has been observed. It is not usually appropriate at this stage to try and reach agreement with the guide on the interpretation of these facts.

Ideally, evaluation of findings should be carried out after completion of the interviews and examination rather than on the spur of the moment. This allows cross checking against the detailed working of the procedures and against the findings of other team members. If a non-conformance is to be written, then there must be objective evidence that the requirements of the EMS and/or the company procedures are not being satisfied.

4.12 Closing meeting

It is very important that the audit team agree on findings prior to sharing them with the auditee in order to avoid unnecessary disagreement and confusion. Once the audit team agrees on the findings, a closing meeting is held with the auditee. Whether the report, described below, is prepared before or after the closing meeting is a function of the organization's own audit plan and procedures. The main purpose of this meeting is to come to agreement on findings before closing the audit.

At the closing meeting the team leader (or sole auditor) must present any findings backed up where necessary by supporting evidence. It is essential that the audited department acknowledge any non-conformances that are being written even if they do not accept the auditor's interpretation of the facts. It is in this respect that the use of non-conformance notes is a distinct advantage. These can be presented at the closing meeting and the departmental representative can study them before countersigning to acknowledge they have been issued.

It is important that this opportunity is taken to clear up any misunderstandings and to explain any limitations on the performance of the audit. A little extra time spent at this stage to ensure that the audit is perceived as a constructive exercise with everyone being thanked for their cooperation will make the task of the next person to audit the department that little bit easier.

4.13 Audit report

4.13.1 Basic principles of audit report

The audit report is prepared by the lead auditor; although he or she may have other team members prepare portions. The content of the audit report is determined by the audit plan and the organization's IMS audit procedures. Having completed the examination phase and evaluated the collected data observations, etc., the assessor is faced with the problem of documenting any deficiencies he or she may have found. There are many different methods of documenting deficiencies, ranging from inclusion in the body of the audit report to producing non-conformance notes or corrective action requests. Irrespective of which method is adopted, the basic principles to be followed are similar. The audit report should include:

- the identification of the organization audited and of the client;
- the agreed objectives, scope and plan of the audit;
- the agreed criteria, including a list of reference documents against which the audit was conducted;
- the period covered by the audit and the date(s) the audit was conducted;
- the identification of the auditee's representatives participating in the audit;
- the identification of the audit team members;
- a statement of the confidential nature of the contents;
- the distribution list for the audit report;
- a summary of the audit process including any obstacles encountered;

- audit conclusions such as:
 - IMS conformance to the IMS audit criteria;
 - whether the system is properly implemented and maintained;
 - whether the internal management review process is able to ensure the continuing suitability and effectiveness of the IMS.

4.13.2 Audit conformance category definitions

- **Conformance (C):** A judgment made by the auditor that the activities undertaken and the results achieved fulfil the specified requirements of the audit criteria.
- **Partial Conformance (PC).** A judgment made by the auditor that the activities undertaken and the results achieved partially fulfil the specified requirements of the audit criteria. While further improvements may still be possible, the minimum requirements are being met.
- **Non-conformance (NC).** A judgment made by the auditor that the activities undertaken and the results achieved do not fulfil the specified requirements of the audit criterion. This may be caused by (a) the absence or inadequate implementation of a system or part of a system; or (b) failures by Supervisors and/or workers to follow documented systems or procedures, or (c) lack of evidence to demonstrate that requirements are being met.
- **Not Applicable (NA).** A judgment made by the auditor that this criteria does not apply to the work unit.
- **Not Verifiable (NV).** A judgment made by the auditor that this criteria cannot be verified.

4.13.3 Reporting non-conformances

All non-conformance notes must contain certain basic information. Earlier we considered the requirements for recording observations during the assessment and emphasized the need for them to be factual and to contain objective evidence that the system requirements were not being satisfied. Although this appears to be fairly straightforward, in practice this is often not the case. It is not unusual for inexperienced auditors to identify a deficiency only to fail to communicate the findings in a manner that facilitates implementation of the appropriate corrective action. The non-conformance note, while not being over long, must contain sufficient information to enable a person not present during the audit to be able to gauge the seriousness or otherwise of the observation.

In constructing the report two specific objectives must be borne in mind.

- (1) The report has to provide objective evidence of effective implementation of the audit procedure.
- (2) The report has to allow for corrective action to be addressed and that the follow-up requirements can be established and initiated.

Where there are non-conformances, there are various options regarding deficiency reporting.

One option is to describe each of the deficiencies identified in the main body of the report along with any supporting evidence, and if requested, corresponding recommendations. Although this may result in a comprehensive report of audit findings, it has the disadvantage that the individual deficiencies are often difficult to locate, particularly when trying to monitor follow-up actions. This can be partly overcome by writing separate corrective action requests for this purpose.

A useful alternative that is less time consuming is to restrict the description of deficiencies in the body of the report to general summaries only. Details of deficiencies can then be included in non-conformance notes. Ideally, the non-conformance note should also provide space for agreeing corrective actions and recording subsequent monitoring of that corrective action. In this manner, any duplication of effort with respect to audit reporting is minimized, thus producing a more easily managed system. Before considering the steps in preparing the non-conformance note we must be clear about their purpose.

- To convey to the auditee the findings in a clear and accurate manner so that they know what to do next;
- To advise the IMS personnel or other auditors what you have found so that he can follow it up;
- To present a record that can be reviewed remotely from the scene and be understood;
- The physical area being audited.

Failure to record this often results in great confusion 3 to 6 months later when a follow-up visit is carried out to review corrective action implementation. The specific clause(s) of the assessment standard(s) against which the non-conformance is issued. If the auditor is unable to readily identify the applicable section of the IMS manual or the procedure against which to issue the non-conformance, he must question whether or not he is justified in writing the non-conformance. It is good practice to re-read the requirements of the relevant system documentation to confirm that these can be interpreted as supporting the non-conformance. If they do not, then the non-conformance cannot be issued.

The use of descriptive terms such as extensive, several, isolated, etc... is essential to communicate accurately the nature and extent of the deficiency, but care must be taken to ensure that their use does not result in a lack of objectivity; e.g., the term extensive can only be included if there is irrefutable evidence to justify its use. The auditor must also take care to ensure that the description is not only accurate but it is also fair, e.g., a statement that 50% of manifests were incorrectly signed may be accurate but is hardly fair if only two manifests were sampled.

Having documented the nature of the deficiency, some audit systems require the auditor to grade the deficiency or non-conformance, e.g., major and minor. It is not intended to discuss grading systems in detail since there are many potential variations that companies may wish to adopt. Irrespective of what system is being adopted, the auditor must ensure that the grading given and the text describing the deficiency are completely compatible.

Distribution of the audit report and nature of documentation are decided between the auditor and auditee, although this too is usually addressed in the audit plan. An audit is considered successful when the auditee and client feel that they have useful, constructive feedback that allows them to improve the system.

V. Discussion

A well-defined integrated system can have multiple benefits: (a) effective utilization of time due to combined efforts; (b) relatively simple, less documentation, (c) Less audit time, and resulting more time available for Management & audits and (d) get the overall picture of system weaknesses in balanced manner. Ideally, the organisation should have an Integrated Management System that runs the organization and addresses all of the objectives at once, whatever they may be. It is a challenge to satisfy the requirements of several management systems while running a business but achieving this can be beneficial to the organization's efficiency and effectiveness, as well as reducing the cost and disruption of external audits.

VI. Recommendation

Integrate multiple management systems to optimize the organization's efficiency. Certification registrar's offers integrated audit programs to assess compliance with requirements for a combination of management systems established in the organization. An integrated management system will improve the business' efficiency as it reduces costs and disruption by external audits. Once the organization is certified to an individual standard or certified to multiple standards, the next logical step to ensure minimum efforts are spent on system maintenance and get maximum benefits from certification. Standards against which the existing management systems may be simultaneously certified through an integrated audit include: (a) ISO 9001 Quality Management Systems, (b) ISO 14001 Environmental Management Systems, (c) OHSAS 18001 Occupational Health & Safety Management Systems and (d) ISO 27001 Information Security Management Systems.

VII. Conclusion

The main advantage of having a truly integrated system is that there are elements of all standards that are similar or the same. The common features include control of documents, Control of records, Training, competence and awareness, internal audit, Management review, Monitoring and measurement, Continuous improvement, Corrective and Preventive action. An IMS can therefore reduce the auditing time on site because some elements only need to be verified once rather than for each separate management system. By avoiding duplication of systems it leads to a more efficient management process. A culture and track record of integrated management systems is proof that the organisation is committed to enhancing performance while remaining cost effective, increasing employee and customer satisfaction, and facilitating continuous improvement.

References

- [1]. Annex SL (normative) Proposals for management system standards.
- [2]. ISO/CD 9001 Quality Management Systems – Requirements.
- [3]. ISO/CD 14001 Environmental Management Systems – Requirements.
- [4]. ISO/CD 18001 Occupational Health and Safety Management Systems – Requirements.
- [5]. ISO/CD 27001 Information Security Management Systems – Requirements.