CCQM IMS2 METHODOLOGY

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Integrated Management Systems – CCQM IMS2 Methodology

Integrated Management Systems Overview

An integrated management system (IMS) is a management system which integrates all the organization's systems and processes into one complete framework. This allows organizations to incorporate all components of a business into one coherent system, and as such, facilitate the realization of its purpose and its mission. The integrated management systems have developed into an increasing interest to businesses, as they can incorporate different aspects that affect their organization into one system. Management systems have increasingly improved the governance and optimized the business processes of organizations, as such making the interaction of different systems crucial in helping organizations move forward. Incorporating different MS systems, such as those related to quality, information security, business continuity, environment, health and safety, and so on, generates greater results in terms of business excellence.

An integrated management system is not an essential part for an organization that has decided to adopt two or more management systems, but rather an opportunity to achieve the collaboration, in terms of used resources and gained experience. Anything that can have an impact on the business outcome can be integrated and be a part of the integrated management system. All the results and documents that describe each of the processes would be incorporated. Integration can include: Bringing all the internal management practices into one system but not as independent elements, rather as formalized systems directing quality, environment, health and safety, staff, banking business, security, resources (facilities& equipment), processes (documented in each management system and applied throughout the organization), and so on. In practice, an integrated management system includes merging existing formal systems and implementing specific best practices organization-wide. An IMS also tries to combine different aspects of different management systems to help perform easier the management procedures, minimize paperwork and reduce costs.

A large number of organizations try to implement and certify multiple management system standards simultaneously. Based on these requirements, ISO/TMB developed the Annex SL with the main purpose of transferring regular and agreeable management system standards to make this process manageable.

Annex SL defines this structure, which refers to creating the basis of management system standards in terms of an identical clause sequence, common text, and terminology. Annex SL was created by the ISO Technical Management Board and it serves as a way to help businesses reduce duplications in implementation, time and money, and helps towards an increased efficiency. Some of the standards that have adopted the high-level structure include

ISO 27001, ISO 30301, ISO 22301, ISO 9001, ISO 14001, and so on. It is expected that in the following years, all management systems will be based on the high-level structure.

Requirements	ISO 9001:2015	ISO 14001:2015	ISO 27001:2013	ISO 22301:2012	ISO 30301:2011
Objectives of the management system	6.2	6.2	6.2	6.2	6.2
Policy of the management system	5.2	5.2	5.2	5.3	5.2
Leadership and commitment	5.1	5.1	5.1	5.2	5.1
Documented information	7.5	7.5	7.5	7.5	7.5
Internal audit	9.2	9.2	9.2	9.2	9.2
Continual improvement	10.3	10.2	10.2	10	10.2
Management review	9.3	9.3	9.3	9.3	9.3

The main objective of Annex SL is to improve the flexibility and adjustment of existent and future ISO management system standards to contribute to connected and acknowledged high level structure. It gives description about a set of complementary requirements that function altogether, regularly referred to as a 'systems approach'. The high-level structure is helpful in cases where organizations implement and perform several Management Systems they usually are challenged with contrasting and periodically with contradicting requirements, terms and definitions. Annex SL will be very valuable for organizations that aim at meeting the requirements of two or more management systems at the same time.

Implementation of a Management System with IMS2 Methodology

Making the decision to implement a Management System based on an International Standard may often be a simple one, as the benefits are well documented. It is important to follow a structured and effective methodology to cover all the minimum requirements for the implementation of a management system. Most companies now realize that it is not sufficient to implement a generic, "one size fits all" management program. For an effective implementation methodology, organizations need to take into account specific risks that would impact their performance. A more difficult task is the compilation of an implementation plan that balances the requirements of the standard, the business needs and the deadline to become certified.

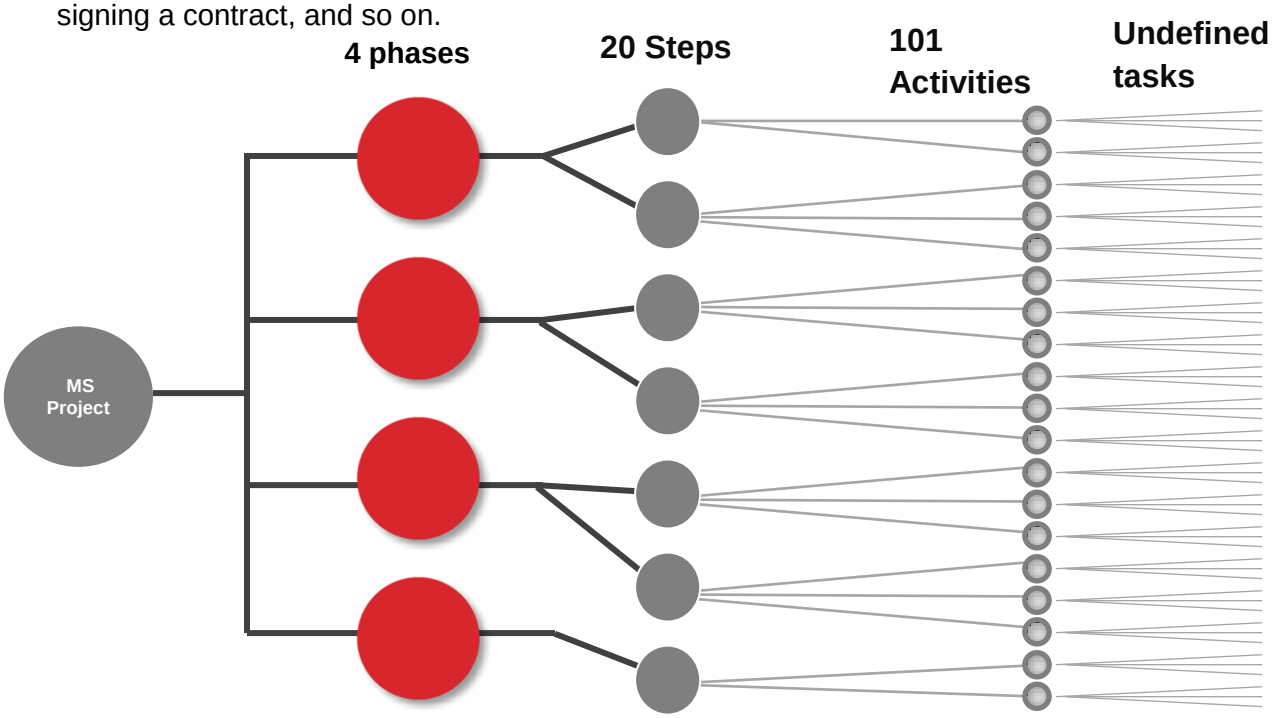
There is no single blueprint for implementing the management systems that will work for every company, but there are some common steps that will allow the organization to balance the often

conflicting requirements and prepare for a successful certification audit. Whatever methodology used, the organization must adapt it to its particular context (requirements, size of the organization, scope, objectives, and so on).

CCQM has developed an approach and methodology for implementing a management system, named "Integrated Implementation Methodology for Management Systems and Standards (IMS2)" and it is based on best practices. This methodology is based on the guidelines of ISO standards and meets the requirements of management systems.

IMS2 is based on the CCQM cycle divided into four phases (Plan-Do- Check- Act), also called the Deming wheel, which is applied to the structure of all the processes in a management system. Each phase has between 2 and 8 steps, which are divided into activities, and then activities into tasks. In the CCQM trainings, these steps and activities are presented and illustrated in the chronological order of the course of an implementation project.

Tasks will not be detailed, since they are specific for each project, depending on the organization`s context. For example, the activities like (Establish the MS Project Team) will involve a series of tasks, such as drafting the job descriptions, interviewing the candidates, signing a contract, and so on.



Structure of PDCA Cycle

A business process is a set of interrelated activities designed to produce a specific output. Business processes exist in all types of organizations, and they are used to keep track of the workflow influx. Processes are a fundamental factor for the proper functioning of a business. Each process usually has well defined goals, which create the foundation for satisfying the business needs. The Deming cycle also follows the process approach, which allows the management systems implementation process to use the requirements and the expectations of the stakeholders as inputs, understand how it produces these requirements with the necessary actions and processes, and also verification of the management system results.

The table below shows how each clause of the management systems can potentially be implemented by following this structure. This structure includes mainly the requirements that are generic and existent in almost all the management systems. However, it should be adjusted based on the specific standards that the organization is implementing and include additional clauses as necessary.

1. Plan	2. Do	3. Check	4. Act
1.1 Initiating the MS	2.1 Organizational structure	3.1 Monitoring and measurement	4.1 Treatment of non-conformities
1.2. Understanding the organization	2.2 Document management	3.2 Internal audit	4.2 Continual Improvement
1.3. Analyze the existing system	2.3 Design of procedures	3.3 Management review	
1.4. Leadership and approval of the MS	2.4 Communication		
1.5 Scope	2.5 Awareness & Training		
1.6 Policy	2.6 Operations management		
1.7. Risk Assessment			
1.8. Statement of Applicability			

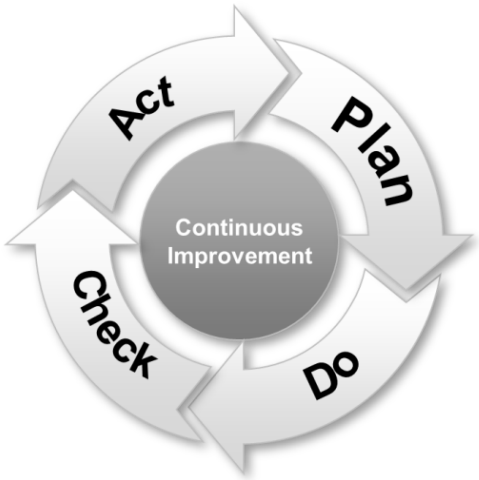
Following the Deming cycle as specified below has proven to bring success for organizations that are implementing a management system, or integrated management systems. Well defined processes drive long-term competitive advantage, but in order for them to do so they have to be optimized regularly.

Please check the flow of the process in each stage below:

1. Plan (plan the establishment of the management system)

The overall objective of this phase is to set priorities, to develop strategic plan, to focus on organizational resources, systems, and culture. Also, this phase includes establishment of the policy, the objectives, processes and procedures related to risk management, and improvement of the information to provide results in line with the global policies and objectives of the organization.

The steps to be followed in the Planning phase are described below:



Walter Shewhart introduced PDSA (Plan, Do, Study, Act) cycle. This methodology was later adopted by Deming, who made it very popular and modified it to PDCA.

1.1 Initiating the MS Implementation - The main objective of this step is to determine the methodological approach for the project management of MS Implementation, and select a project methodology for the MS implementation.

1.2 Understanding the organization is essential before starting the management system project implementation. It is very important to gather the necessary information to plan the Management System Implementation, to understand how the organization is structured internally, how it is situated in its external environment, and to ensure that the MS objectives are aligned with the business objectives of the organization.

1.3 The analysis of existing management system stage includes analyzing the processes, procedures, plans and measures currently implemented within the organization, to avoid re-work or unnecessary costs. This action will help the organization to identify the gap between the system in place and the requirements of the management system. It is also necessary to identify the processes, procedures, plans and measures currently implemented within the organization, identify the actual level of compliance to the requirement of the standard, and analyze the gap required to reach a desired compliance with the requirements. An evaluation of the effectiveness and maturity level of the processes in place within the organization must be conducted, which can be used as reference on where the company is heading with the MS implementation.

1.4 Leadership and approval of the Management System- During this step, the MS team uses all the gathered information in the previous steps to get the management approval on the MS or IMS implementation. Management support is crucial when implementing and IMS, as time and resources are spend for such projects. The top management will also define the roles and responsibilities, as well as approve the policy and objectives which must be aligned with the strategic direction of the organization. Therefore, having the leadership understand the relevance of the MS project will make them approve the project, and give the authority and credibility to legitimize the MS project to the stakeholders of the organization.

1.5 Scope - During this stage the organization defines the scope of the certification, and identifies the project boundaries in organizational, technological and physical terms. A clear definition of the scope is an important factor for the success of the QMS implementation. By defining a scope which is a continuation of the mission of the organization, it is easier to obtain management support and the commitment of stakeholders in the project and justify an added value for the interested parties.

1.6 Policy - The objective of this step is to provide guidance on how to create policy models, and define the policy drafting process. Following that, the company should draft the policies to promote the integration of management system in business processes of the organization.

1.7 Risk Assessment - The purpose of this step is to select and define an approach for risk assessment that is aligned with the management of the organization. Therefore, this stage provides a generic framework for risk management adapted to the needs of the organizations of different sizes and types.

1.8 Statement of Applicability - is the final stage of the planning phase of the management system, where the actions included in the management system are identified. Furthermore, the choice of selected and unselected actions is justified and the formal approval is obtained from the management before the implementation of the management system.

2. Do (implement and operate the management system)

The overall objective of this stage is to implement and put in place the policy, actions, processes and procedures of the management system.

The steps to be followed in the Do phase are described below:

2.1 Organizational Structure: During this stage the organization must establish and implement an organizational structure, with clearly defined roles and responsibilities of key stakeholders. The establishment of such a procedure ensures the effective management of the management system implementation in alignment with organization's needs.

2.2 Document management: During this stage the organization must develop and maintain the documentation necessary to ensure an effective management system, tailored to the specific

needs of the organization. Furthermore, in this stage the organizations must ensure the control and adequacy of MS documentation and records.

2.3 Design of controls and procedures: During this stage the organization must design actions and write procedures, and ensure that compulsory documents are drafted.

2.4 Communication: All users inside the organization should be properly informed, trained and made aware to the importance of processes inside the organization. The incidents might be minimized or avoided by implementing a rigorous program of training, and awareness on management systems.

2.5 Awareness & Training: The main objective of this step is to ensure that all personnel who are assigned responsibilities defined in the MS are competent to perform the required tasks, and that all relevant personnel are aware of the relevance and importance of thein contribution towards the achievement of MS objective.

2.6 Operations Management: Ensure the maintenance of the MS in the organization in a long-term and transfer the MS project to the operations of the organization.

3. Check (monitor and review the management system)

The overall objective of this stage is to assess and, if applicable, measure process performances against the policy, objectives and practical experience, and consequently report the results to management for review.

The steps to be followed in the Check phase are described below:

3.1 Monitoring, measurement, analysis and evaluation: The purpose of this step is to evaluate the effectiveness of the implemented management system, and to verify the extent to which management systems` requirements have been met.

3.2 Internal Audit: During this stage the organization must conduct an internal audit to objectively evaluate how well the minimal requirements of the standards are fulfilled, and follow-up on non-conformities.

3.3 Management review: The purpose of this step is to perform regular and methodical reviews regarding the suitability, adequacy, effectiveness and efficiency of the Management Systems.

4. Act (maintain and improve the management system)

The overall objective of this stage is to undertake corrective and preventive actions, on the basis of the results of the internal audit and management review, or other relevant information to continually improve the system.

The steps to be followed in the Act phase are described below:

4.1 Treatment of Non-Conformities: The purpose of this step is to eliminate the cause of non-conformities, and cause of potential non-conformities and improve continually the effectiveness of the Management System.

4.2 Continual Improvement: Continually improve the effectiveness of the MS, ensure that the MS objectives are kept aligned with the business objectives and the plans and procedures are continuously up-to date.

Conclusion

PDCA (Plan-Do-Check-Act) or the Deming Cycle is one of the most popular process improvement methodologies, which CCQM has used as a framework for the management system project implementation. Taking into account that PDCA cycle is inherent in each activity that any organization performs, from the simplest operation to the long term results of the organization, it can be used as a process approach for continual improvement and learning.

The PDCA cycle simplifies many of the possible difficulties that may arise in the integration of different management systems. Basically, PDCA is a simple system that allows complex systems to be divided into their simpler sub-systems for an easier investigation and improvement.

CCQM IMS2 Methodology is based on the well-known Deming Cycle (PDCA), which is an essential approach for all management systems. Despite the type of the organization and structure of the management, each organization is able to use its components for integration. These components are connected from the definition of policy and organization's objectives, though having their resources organized, having defined and described processes, procedures and documentation, and having performance indicators in place with perspective to continuous improvement.

In today's ambitious business environment, it is very important to consolidate operations in such a way to keep costs low. When the organization incorporates the management systems, it reduces the duplication and improves the efficiency, which enables higher advantages than running separate management systems in parallel.

There are a large number of structured methodologies that allow any management standard, regulation, license or other stakeholder formal requirement to be completely defined to a single integrated structure fixed specific procedures. The existence of many such methodologies demonstrates that fully integrated management systems can be designed through taking into consideration all the requirements set forth by the standard, industry, stakeholders, and legal and statutory requirements. However, the CCQM IMS2 methodology has proven to be highly successful, and bring business excellence by incorporation the elements of different management system into one coherent framework.

Key benefits of IMS include eliminating conflicting elements and providing less redundancies (integration helps the overall business requirements of a company by reducing repetition and

conflicting elements that are commonly found when two or more separate systems are performed), improving efficiency (since an IMS focuses on business requirements and provides added values because the company re-evaluates its needs while doing what brings profitability and success)**,** reducing costs (improved effectiveness leads to a reduction in cost). Therefore, it would be less expensive to implement an IMS, than numerous separate management systems.

Well defined processes drive long-term competitive advantage, but in order for them to do so they have to be optimized regularly. Once the organizations set the processes, they should continuously improve them. Dysfunctional processes might stimulate customer and employee dissatisfaction, increase errors and delays, and increase costs. The CCQM IMS2 methodology allows organizations to optimize the processes regularly.

By following a structured and effective methodology, an organization can be sure it covers all minimum requirements for the implementation of a management system. As mentioned above, whatever methodology used, the organization must adapt it to its particular context, and not apply it like a cookbook. The key to implementation lies in a contextualized and adaptable approach by the organization, which will ensure a robust outcome.

The sequence of steps required in this process may be changed (inversion, merge), to meet the most suitable outcome. For example, the implementation of the management procedure for documented information can be done before the understanding of the organization. Many processes are iterative because of the need for progressive development throughout the implementation project; for example, communication and training.