Project Management Approach for Integrating Management System in an Oil & Gas Industry

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Abstract

Petroleum Industry is the backbone of economic and social strength for countries depending on Oil Economy.

Oil & Gas Exploration, Refining, Storage and Transportation are all associated with high-risk activities. Occurrences of incidents can result in impact to people, damage to the assets, impact to the environment and hereby resulting in deterioration of organization's reputation.

Organizations are developing, establishing and maintaining management systems as tool for managing the Health, Safety and Environment to minimize the likelihood of incidents and reducing the severity in case of any incidents.

Inconsistency, contradiction and duplication among the procedures, systems & processes are the major obstacles to Success of an Effective HSE Management System. Many organizations fail to recognize and resolve the inconsistencies & contradictions and avoid duplication.

This article provides an Optimum and Effective approach to integrate various management systems established in an organization.

Keywords: *Management System, Project Management Process, Integration*

1. Introduction

1a. Management Systems

Management Systems are the frameworks of policies, processes and procedures used to ensure that an organization can fulfill all tasks required to achieve its objectives and promote continual improvement within. Management Systems are explained as documented and tested step-by-step method aimed at smooth functioning through standard practices.

Benefits of an effective management system include:

- More efficient use of resources resulting in optimizing of cost

- Improvement management of various processes and activities

- Increased customer satisfaction as services and products consistently deliver what they promise

- Improved management of business risks including the Health, Safety & Environmental risks

- Systematic and controlled framework for continued and sustained growth

Various Management Systems which can be applied in an Oil & Gas Industry are:

i. Quality Management System (QMS) based on ISO 9001 Standard

ii. Environment Management System (EMS) based on ISO 14001 Standard

iii. Occupational Health and Safety Management System (OHSMS) based on OHSAS 18001 Standard (which will be shortly transformed into ISO 45001 Standard)

iv. Petroleum, petrochemical and natural gas industries - Sector-specific quality management systems -- Requirements for product and service supply organizations based on ISO/TS 29001 Standard

v. Process Safety Management (PSM) based on OSHA 3132 and OSHA 3133 Guidelines

vi. Information Security Management System (ISMS) based on ISO 27001 Standard

vii. Energy Management System (ErMS) based on ISO 50001 Standard

viii. Business Continuity Management System (BCMS) based on ISO 22301 Standard

There are few other Management System Standards which are commonly used by the various industries. These standards include, but not limited to the following:

i. Risk Management System based on ISO 31000 Standard: This standard is mainly used to Identification, Analysis, Evaluation and Treatment of Risks while implementing various Management Systems.

ii. Social Responsibility based on ISO 26000 Standard. This standard is used to identify the needs and expectation of the society and other stakeholders from the organization.

These are not such Standards which are subjected to Certification; but used as tools while implementing the requirements of the Management System Standards listed above.

1b. Shortcomings And Inadequacies In Independent Management Systems

Most of the organizations assign different departments/ divisions to establish individual Management System standards – like Quality Department for QMS, Safety Department for OHSMS, Environment Department for EMS, IT Department for ISMS, Process Department for PSM, Finance Department or Planning Department for BCMS, etc.

The Departments/ Divisions will be working in isolation, developing excellent management systems and obtaining certification as per the Audit Procedures and Standards.

The common shortcomings and inadequacies in establishing independent Management Systems includes:

a) Inconsistency and Contradiction of requirements in the Procedures, Process Descriptions and Systems developed for various Management Systems.

b) Employees responsible for implementing the Management Systems are recognizing the least stringent requirement and implementing same in various activities; putting themselves, colleagues, assets, environment and reputation in high vulnerable situation.

c) Duplication in Procedures. e.g. Document Control, Training, Internal Audit, Management Review, etc.

d) Lack of coordination among the Team responsible for implementation of various Management Systems.

e) Increased Administration efforts in Controls of various tasks and Conflict Management

f) Appointment of multiple Certification Agencies for external audit of the various Management Systems.

1c. Integrated Management System

Integration of Management System is the optimum solution of these shortcomings and inadequacies.

An integrated management system (IMS) is a management system which integrates all components of a business into one coherent system so as to enable the achievement of its purpose and mission.

Integrated means combined; putting all the internal management practices into one system but not as separate components. For these systems to be an integral part of the company's management system there have to be linkages so that the boundaries between processes are seamless.

There are several good reasons for integration:

- reduce duplication and therefore costs

- reduce risks and increase profitability

- balance conflicting objectives

- eliminate conflicting responsibilities and relationships

- diffuse the power system

- turn the focus onto business goals

- formalize informal systems

- harmonize and optimize practices

- create consistency

- improve communication

- facilitate training and development

- lesser administration

2. Integration of Management Systems

For integrating the Management Systems; there are 2 aspects viz. Technical and Administrative; which need to be focused.

2a. Integration Process

For the Technical aspect of integration; there are several approaches which can be taken, depending on an organization's current position. However, *"PAS 99 – British Standard of Common Management System Requirements as a Framework for Integration"* is a useful and commonly used guideline.

If an organization has a certificated Management System, it can build upon that by adding the necessary processes to cater for requirements of other management system

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standards. All systems should share the following processes:

- Policy
- Planning
- Implementation and Operations
- Performance Assessment
- Improvement
- Management Review

3b. Project Management Approach

Project Management approach is the effective method to manage any endeavor. Management System Integration is not an exception.

The Project Management Process; *"Initiation – Planning – Execution – Monitoring & Control – Closeout";* advocated by Project Management Institute (PMI); is the most commonly adopted administrative tool for managing the Integration Process of Management Systems.
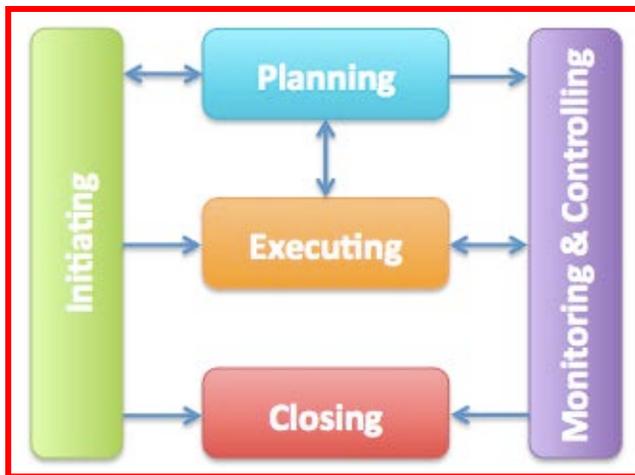
Tasks in the **Initiation Phase** shall include:

- Preparation of Project Charter. Recommended Templates are given in the PMI Book of Knowledge (BOK)

- Securing the Management Commitment. This can be made evident to the Employees across organization through releasing a communication by the Top Management to all employees through various communications medium.

- Launching the Project – Formally announcing the intend of Integrating the Management Systems

- Mass Campaigns on Integrated Management System (shall be Generic and not Specific to any procedures, processes, etc.)

- Constituting High-Power Committee with well-defined Roles, Responsibilities, Authorities and Accountabilities. Representation from Top Management shall be ensured n this Committee

Tasks in the **Planning Phase** shall include:

- Developing the Project Planner and Long-Term & Short-Term Plans. These plans shall be with appropriate Resource Loading.

- Constituting Teams and Sub-Teams to manage various major tasks identified in the Project Manager. Competency of individual employees shall be adequately evaluated while constituting the teams and sub-teams.

- Clearly outlined Line of Reporting shall be defined within the Teams and among the Teams.

- Methods and Frequency of Progress Monitoring, Reporting, Reviews and Controls shall be described.

Tasks in the **Execution Phase** shall include:

- Organize Brainstorming Sessions to generate ideas for the Integration of the Systems

- Planning and Conducting Trainings and Workshop to create awareness on Management Systems, its Integration and Possible Methodologies to Integrate the Systems.

- Development, Modification and Rolling Out of Integrated Procedures and Processes

- Assist the Department/ Divisions for effective implementation. Procedures and Processes may need further modification at this stage.

- Conduct Internal Audits and Management Reviews

- Organizing the External Audits

Tasks in the **Monitoring & Control Phase** shall include:

- Reviewing the Progress based on the Project Planner and Long-Term & Short-Term Plans

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- Generating the Catch-up plans where the progress falls behind the plans

- Compiling the Progress Reports and Reviewing the progress through Periodic Meetings

- Appraising the Top Management on the Project Progress and obtaining approvals for catch-up plans and additional resources

Tasks in the **Closeout Phase** shall include:

- Capturing the Lessons Learned during the Project Life-Cycle. This shall include the recognizing strengths which should be sustained and the areas of improvement.

- Compiling the Project Close-out Report and presenting it to the Management

- Organizing a Valedictory function to Celebrate the Success, Sharing the Lessons Learned and Recognizing the Team Members & Key Contributors

- Disbanding the Implementation Team and formally Transferring the responsibility of continuing Implementation to the respective Department/ Division.

3. Results And Discussion

The Project Management Process approach was adopted by a Control Valve Maintenance Center and a Division of Multi-Disciplinary Contracting Company in Kuwait as a pilot venture. It was observed that the approach reaps better results than the informal mediocre method.

The following challenges may be expected while introducing a project on Integrating the Management Systems:

- Employees from the Department who were managing the individual Management System may feel loosing the importance and may become stumbling block in the roadmap of the integration. This challenge can be easily managed through appropriate communication and ensuring that the representatives from the department is included in the High-Power Committee as the Mentor for the specific Management System.

- Employees may not be familiar with the Project Management Process and may object the introduction of such formal process. They may advocate and persuade to follow the status quo project implementation system – which may be an informal process. This issue can be controlled by providing

appropriate training and organizing workshops on Project Management Process.

4. Conclusions

The Project Management Process Approach merged with the Guidelines in PAS 99; is getting prominence in the industry. Benefit of adopting PAS 99 as Guideline for Integration; it will be easy for further integration of other Management Systems on a later day.

During the "Exchange of Experience" session organized by TEC Alumni Association in Kuwait, in which Certified Management System Auditors participated; it was reiterated that the Integration of Management Systems through Project Management approach along with PAS 99 Guideline has been effectively used by Small-Medium-Large Scale organizations in wide spectrum of Industries.

References

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e) www.pmi.org : Project Management Institute

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