



Quality management system in today's world





Business Excellence

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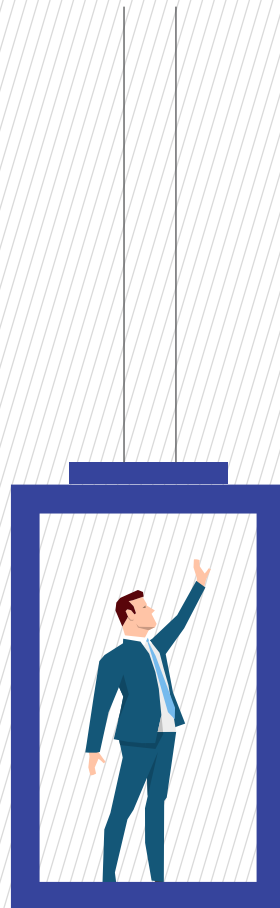
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Background





'Process' can be simply explained as 'how we do what we do'. Organisations with less number of employees usually have fewer processes in comparison to those with large number of employees. Over a period of time, as an organisation grows in terms of business units, clientele, adoption new technologies, geographic regions, and employees, a number of processes are developed at various levels to manage responsibilities, data and projects. All processes are at times interdependent on each other. Processes for similar kind of activity are usually followed in multiple ways within the organisation, which make it difficult to harmonise the efforts, upgrade the process or align it with leading industry practices.

In this dynamic world where business and delivery models are expected to rapidly change based on the client's requirements, the Quality Management System (QMS) plays a pivotal role in business success. QMS can empower organisations to address sustainable and predictable progress. The following questions can help reveal whether we understood the pulse of QMS.

'Is our QMS resilient enough to adapt to change?'

'Is our QMS capable enough of supporting the organisation's goals or is acting as a hurdle to progress?'

This report attempts to highlight the expectations and the common challenges faced by employees with their QMS and how they can be mitigated with the right architecture. Currently, only 4 per cent of organisations in the whole world have necessary matured processes and mechanism of continuous improvement¹. Study also claims that the importance of process, spread across different roles, varies as per the needs of the organisation. 'Process' is often perceived as a limitation to creativity, however, if planned well, it can act as catalyst that helps accelerate the organisation's growth.

1. APQC analysis, December -2015

Introduction





QMS is a collection of policies, core business processes, standard procedures, organisational structure etc. which are required to meet the need and augment the client's satisfaction level over period of time. The key here is the parameters which can help measure the success or failure of a project. While there are many dimensions to look at, if we see from the quality management angle, there are several pointers such as looking for right templates or keeping a checklist ready for audit, reviewing design, testing products, searching for the right domain understanding, customer support, compliance check, process tailoring and many more. Numerous activities occur in myriad forms throughout an organisation.

The combination of all such tasks can sometimes be an overhead for a project and eat up significant amount of time. As the Pareto's principle says 'roughly 80 per cent of the effects come from 20 per cent of the causes.' Nearly 80 per cent of project result come from 20 per cent of work. Then why not we just focus on that 20 per cent? That is where QMS comes in to help filter out those key 20 per cent of work which can add to the success of a project and help meet client's expectations. This document attempts to highlight key challenges and expectations of an ideal QMS.

A quick glance at how people see processes or QMS.



QMS is just a design document. We don't need because, we have tools.

Engineers



Repositories to use or get help from during setting up and execution of new project.

New project manager



Quick guide to expedite the project execution and delivery.

Experienced project manager



We just care about the processes, we do not deal with the project work.

SEPG team



Find best practice and other information related to their business

Domain expert



We have to harmonise processes before we can release them

Process owner



To find quality, guarantee and satisfaction criteria

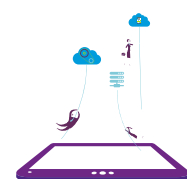
Client/partner



Note: The above is for illustration purposes only.

Trends in QMS





Several QMS are home grown application: with few basic process mapped and few checklists/templates. As the organisation grows, the QMS also tends to adapt to the new business requirement and changes over period of time.

Here are few trends in QMS we witnessed over the last couple of years.

Centralised vs decentralised

Organisations may have their QMS defined centrally or in distributed environment. A centralised processes are commonly managed by corporate quality team or Software Engineering Process Group (SEPG) team. Their focus is on high-level process improvement goals, standardise processes, establish training programmes.

Organisations that take a decentralised approach are comprised of a number of independent business units that are managed by different geographical regions or service lines. These enterprise could have scaled up through inorganic growth and work towards consolidating centralised processes.

Automation vs manual

Creating automated or integrated QMS in an organisation can enable them meet the challenges to drive operational efficiency and improve overall compliance.

Many organisations have paper-based, non-integrated, and manual QMS. This creates gaps in various business units and makes it difficult to understand and use processes. Manual QMS also has challenges in terms of maintaining processes in real time and releasing new processes can become a rather tedious task.

Money spent on QMS

There are two types of costs involved in maintaining QMS.

- Governance – helping ensure that everyone has the latest process information
- Enhancement - reflecting addition or modification in existing process information

Study shows that an organisation invests only 1.9 per cent of its total IT spend to maintain its QMS¹.

Reference frameworks

Many reference frameworks have been built around process management to improve process performance and help an organisation achieve industry benchmarks. Key frameworks in the IT industry are mentioned below:

American Productivity & Quality Center (APQC) – Process Classification Framework

It is a taxonomy of cross-functional business processes intended to allow the objective comparison of organisational performance within and among organisations.

The Process Classification Framework (PCF) was developed by APQC and its member companies as an open standard to facilitate improvement through process management and benchmarking, regardless of industry, size, or location.

It organises operating and management processes into 13 enterprise-level categories, including process groups and more than 1,000 processes and associated activities².

Baldrige Excellence Framework

The Malcolm Baldrige National Quality Award recognises U.S. organisations in the business, health care, education, and nonprofit sectors for performance excellence³.

The Baldrige Excellence Framework has three parts:

The Criteria for Performance Excellence, Core values and concepts, and Scoring guidelines.

KPMG International's Business Architecture Framework⁴

It is the framework to model enterprise business information, and is mapped against the Value Driven Framework (VDF) allowing us to comfortably pull through the referenced content between methods and insights.

This Framework adopted the 5-level process framework from the 'APQC Process Classification Framework' for functions and sectors; this underpins all insight assets.

1. KPMG in India's analysis, March - 2016

2. APQC, November – 2016, profile: <https://www.apqc.org/pcf>

3. Malcolm Baldrige, November-2016, profile: <http://www.baldrigepe.org/>

4. Global Collaboration - Source, profile: <https://deliverybackbone.kpmg.com/collaboration/display/SOURCE/KPMG+Business+Architecture+Framework>

Market study on QMS





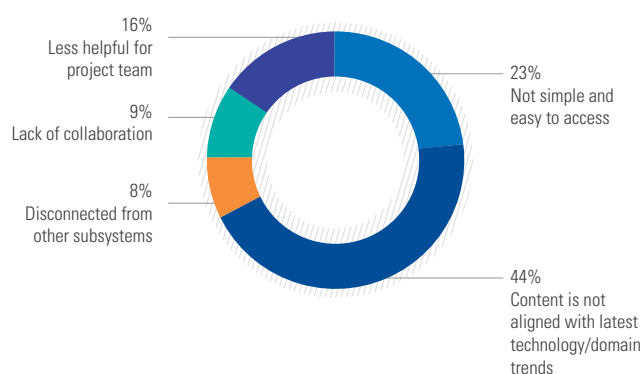
Study:1 - Challenges in QMS

In January 2016, we conducted a study among professional users from various organisations to understand the challenges and expectations of/from QMS.

Following are the top rated challenges-

1. Content is not aligned with latest technology/business trends
2. Not simple and easy to access
3. Less helpful for project team

Synopsis of the study



Source: Challenges in QMS, KPMG in India's analysis, January -2016. N = 100

Not simple and easy to access

'Simplicity and easy accessibility' is one of the highest challenges people face. Search and navigation capability always help people find the right information in less time. This is a very important feature not only in QMS but also in any other system. Every person in an organisation have different personas and this is one of the challenges for process team to provide multi-dimensional look for audience.

Content is not aligned with latest technology/ domain trends

Cognitive computing, data visualisation, Internet of Things (IoT), robotic automation, digital sidekick, analytics, DevOps and many latest technologies are setting the stage for future. A large number of people find it challenging to track updated process information and benchmarks in QMS. One of the most important factors which can act as a game changer in today's competitive world for any organisation is the 'time required by the organisation to adapt the change'. Hence a flexible QMS which can adopt to changes quickly and make a difference to the organisation's working is the need of the hour.

Disconnected from other sub-systems

Unless we have connected system, we cannot achieve higher productivity among people. The QMS should be connected to knowledge management, audit tool, compliances, predictive analytics tool, project management tool, and application life cycle management tool to get maximum utilisation and productivity.

Lack of collaboration

While we are moving more towards social or corporate networking, our study reveals that 'collaboration' is an essential but optional requirement. Although we can work on other key aspects before bringing 'collaboration' into QMS.

Less helpful for project team

One of the key aspects of QMS is to help new project teams with respect to start-up kits or other artifacts as per the type of project. For example a new project manager may need help to set-up a project, plan for resources, prepare for audit, gathering checklist/template and so on. And an experienced person in an organisation may look for quick help in QMS when they get stuck during a critical project execution.



Study:2 - Process management maturity

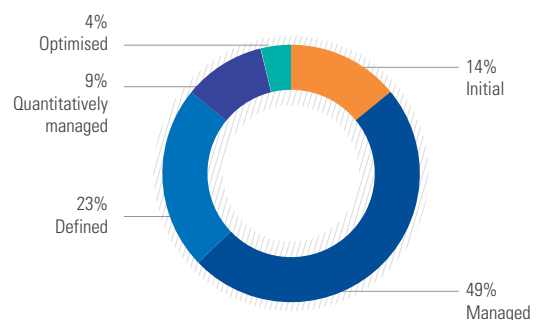
Maturity models can help organisation enhance process capabilities and effectiveness by aligning with best industry standards. The following five maturity levels represent theories about how an organisation's capabilities evolve in a stage-by-stage manner from level one to level five:

- Initial: No organised processes and success depends on skillful employees
- Managed: Some organised processes and established process management discipline
- Defined: Most processes are defined and performed consistently across the organisation. Processes are qualitatively predictable, but measurement is not enforced
- Quantitatively managed: Process variations are identified and corrected, and performance is both controlled and predictable
- Optimised: Processes are continually improved based on quantitative measures of common causes of variation in processes.

Synopsis of the study

APQC survey around 78 organisations around the world to study process maturity. During the study, it was found that most organisations are at maturity level two, and only 4 per cent of organisations in the world were able to maintain maturity level five and work on improving their process management.

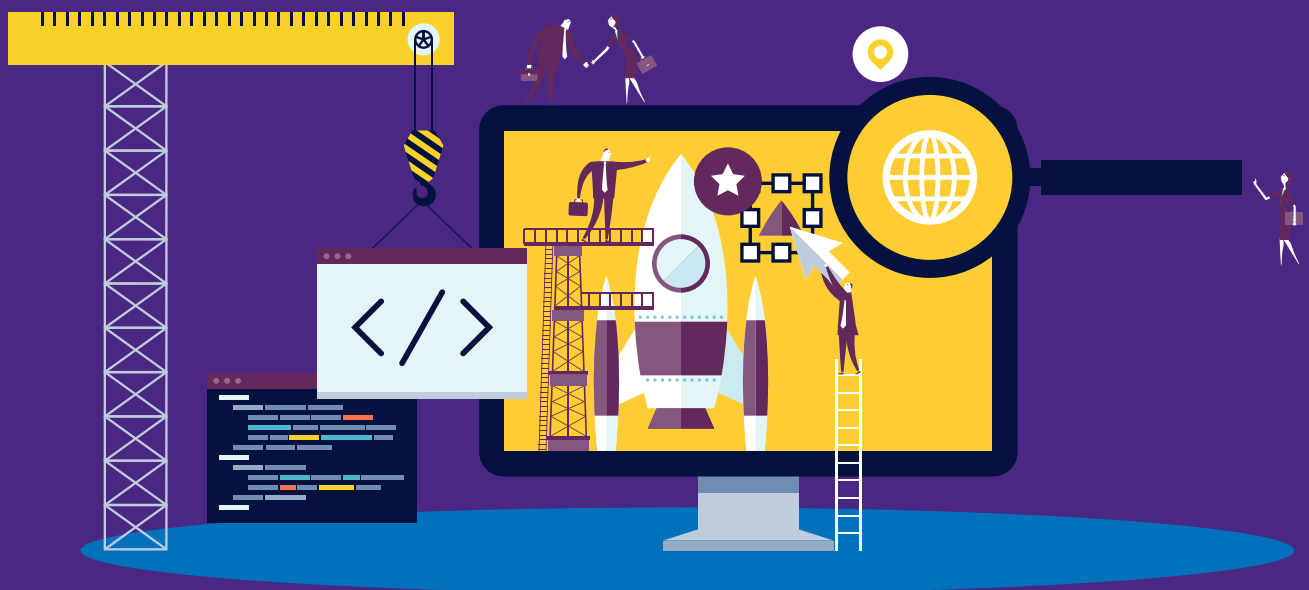
Synopsis of the study

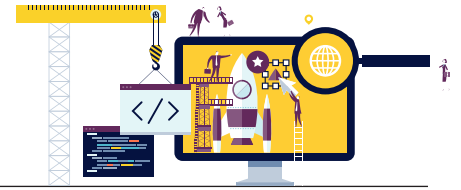


Source: Putting Process frameworks into action, APQC's analysis, November - 2015. N = 78, profile: <https://www.apqc.org/knowledge-base/documents/putting-process-frameworks-action-apqc>



Is it the right time to relook our QMS?





Enterprises considering to improve, automate and upgrade their QMS, should consider the following five parameters for effective working:

Architecture

Organisations execute myriads of project types starting from lifecycle model projects (for example- agile, waterfall etc.), to business model (for example – time and material, fixed etc.), technology related (for example- .NET, Java, etc.), size (for example– very small, small, large, etc.). Their domain and geography also needs to be considered while building or adopting an effective approach. If we model a fixed process diagram, it is too fragile, and can be costly to maintain and change. The selection criteria for right set of processes are very critical. Correct architecture along with a good set of tailoring guidelines can work out terrific.



Project taxonomy

Note: The above diagram is for illustration purposes only



Search

QMS should have easy navigation and quick search facility to encourage users to use it more frequently. The focus should be on creating simple artifacts and making quality management free from jargons or acronyms. One can also limit to short phrases (six words or less). Also ensuring all processes are unique and minimize redundancies.

Knowledge sharing

One can learn a great deal from past experiences, not only his own but others too. In terms of processes too which are always evolving, people want to know how others benefited by using certain artifacts or methods. We may call it 'word of mouth' or 'lesson learned' or 'experience sharing', this is one of the most vital tenants of good QMS today. With this help, we can encourage employees to follow the right process. This can provide multiple approaches to help resolve issues, allowing organisations or project managers select the best suited approach to overcome the challenge.



My experience during ERP implementation in ABC bank

Ravi Gupta

Oct 26, 2013 at 3:15 PM

135 likes

36 comments



Banking industry has many [See more](#)

Balaji



A successful compliance audit journey

Sonali M

Dec 16, 2012 at 4:11 PM

140 likes

57 comments

Experience sharing

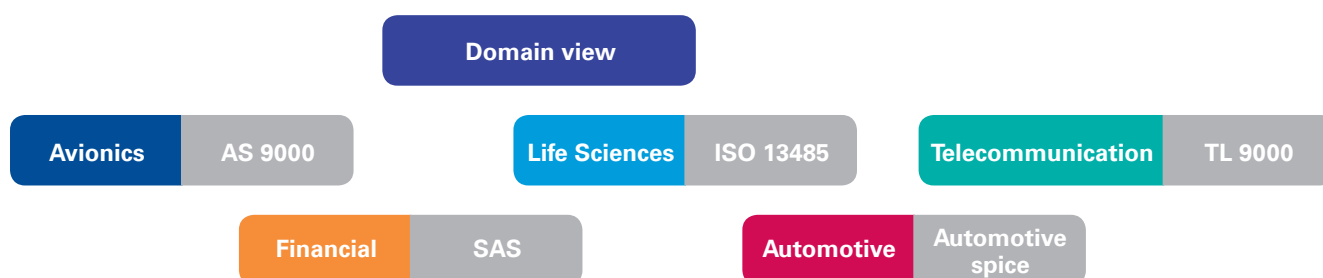
Note: The above diagram is for illustration purposes only



Compliance

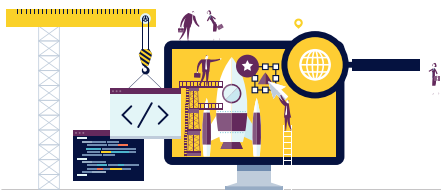
We live in a regulated world where process conformance is essential as organisations follow several compliance levels. If our QMS is capable of mapping organisations or business processes with the compliances and industries standards, it can help save lot of time before and during various quality checks. Mapped compliance also helps to generate gap analysis and practice implementation indicator description (PIID) report on demand which can act like GPS or guided mechanism for projects and overall organisation.

Service Lines	Certification/ framework applicability					
Infrastructure	ISO 9001	CMMI SVC	ISO 20000	ITIL		
Business process outsourcing	ISO 9001	CMMI SVC	CoPC	ITIL		
Product engineering	ISO 9001	TL 9000	ISO 13845	ASPICE	AS 9100	US FDA CFR Part 11 and 80
Application services	ISO 9001	CMMI Dev	CMMI SVC	ISO 20000	ISO 20000	
Testing	ISO 9001	TMMi				



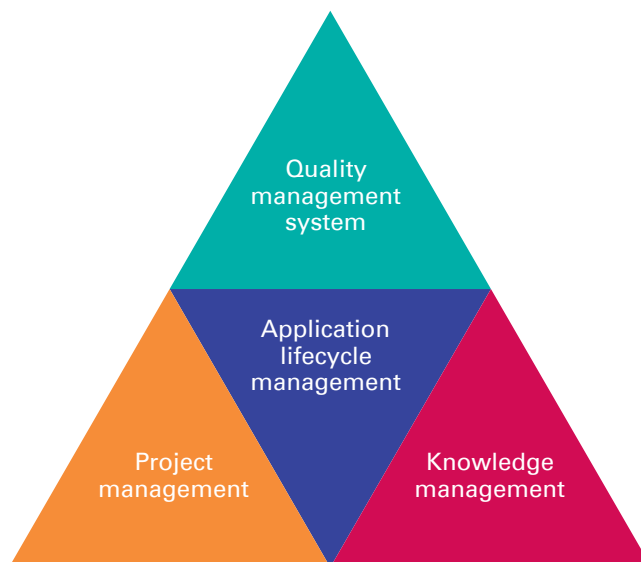
Compliances for service lines/domain

Note: The above diagram is for illustration purposes only



Integration

QMS can be integrated to the existing legacy and IT eco system such that information can be sourced, shared and reported to help improve productivity and efficiency of the team. Additionally, this can help reduce business silos and get accurate measurement of the organisational metrics and real time improvement areas. This is not the end but the starting point where an organisation can design its current growth and how the future potential may look like. Leading organisations usually automate and develop continuous process improvement culture.



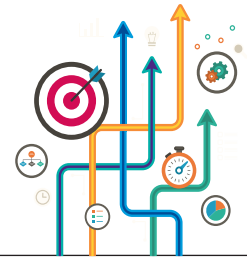
Positioning QMS in IT landscape

Note: The above diagram is for illustration purposes only



Potential benefits of framework and automation





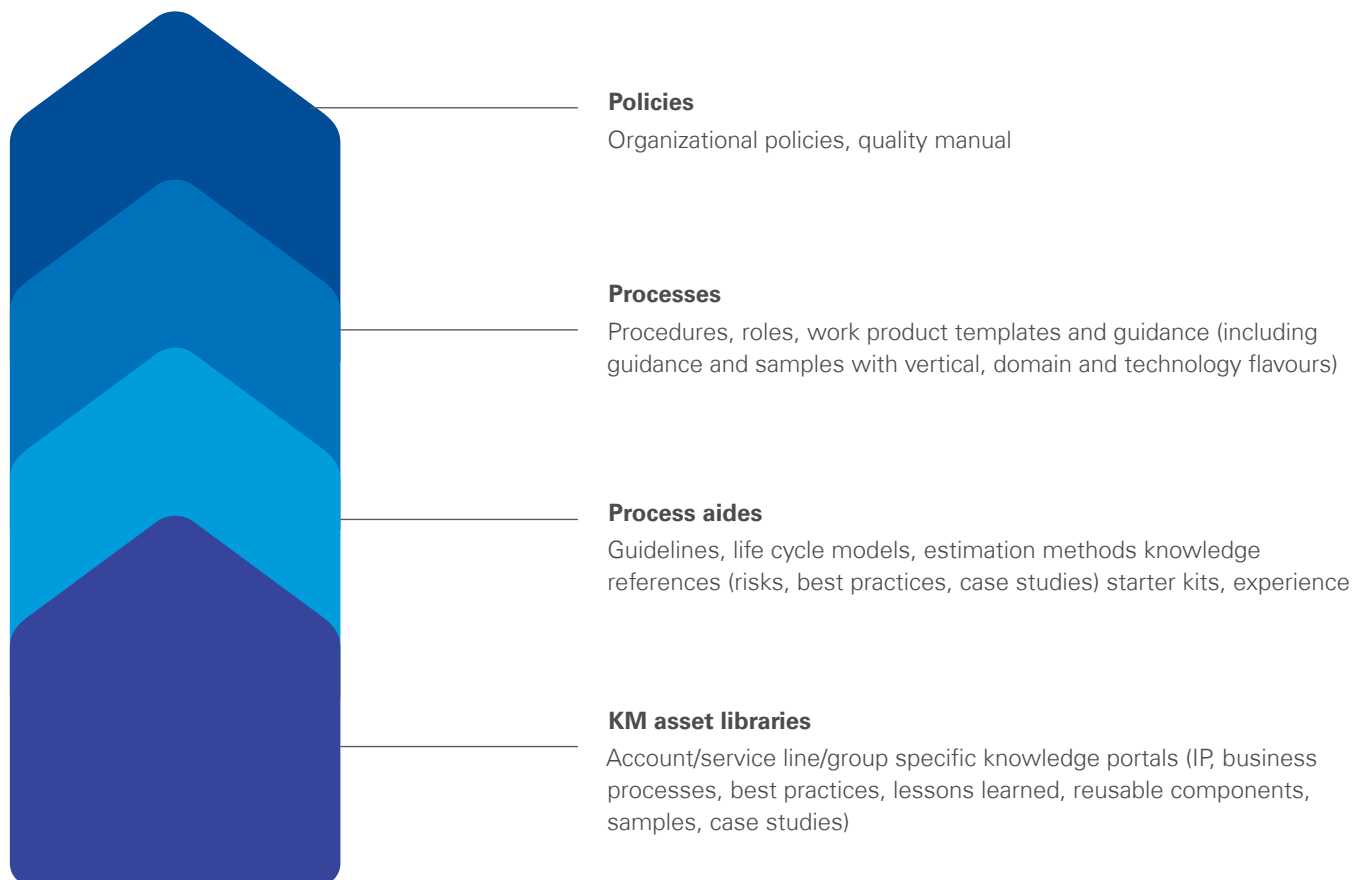
Framework

A thorough framework can give more clarity to implement QMS in an organisation.

It broadly comprises the organisational structure, policies, processes, procedures, standards, and resources. The following framework helps address the alignment of those key components within QMS.

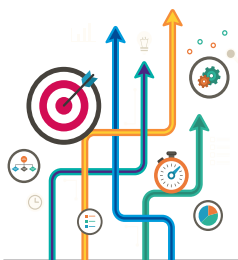
Potential benefits

- The framework standardises an approach to a number of crucial needs, such as process management, benchmarking, and content management
- It gives multidimensional views to various processes (management processes, value processes, support function processes just to name a few) within an organisation
- Consolidating enterprise content and knowledge
- It helps avoid duplicative interpretations of basic processes among multiple business units within an organisation (for example – preparing invoices, providing customer support, etc.)
- Easy governance of processes and its resources



Process framework

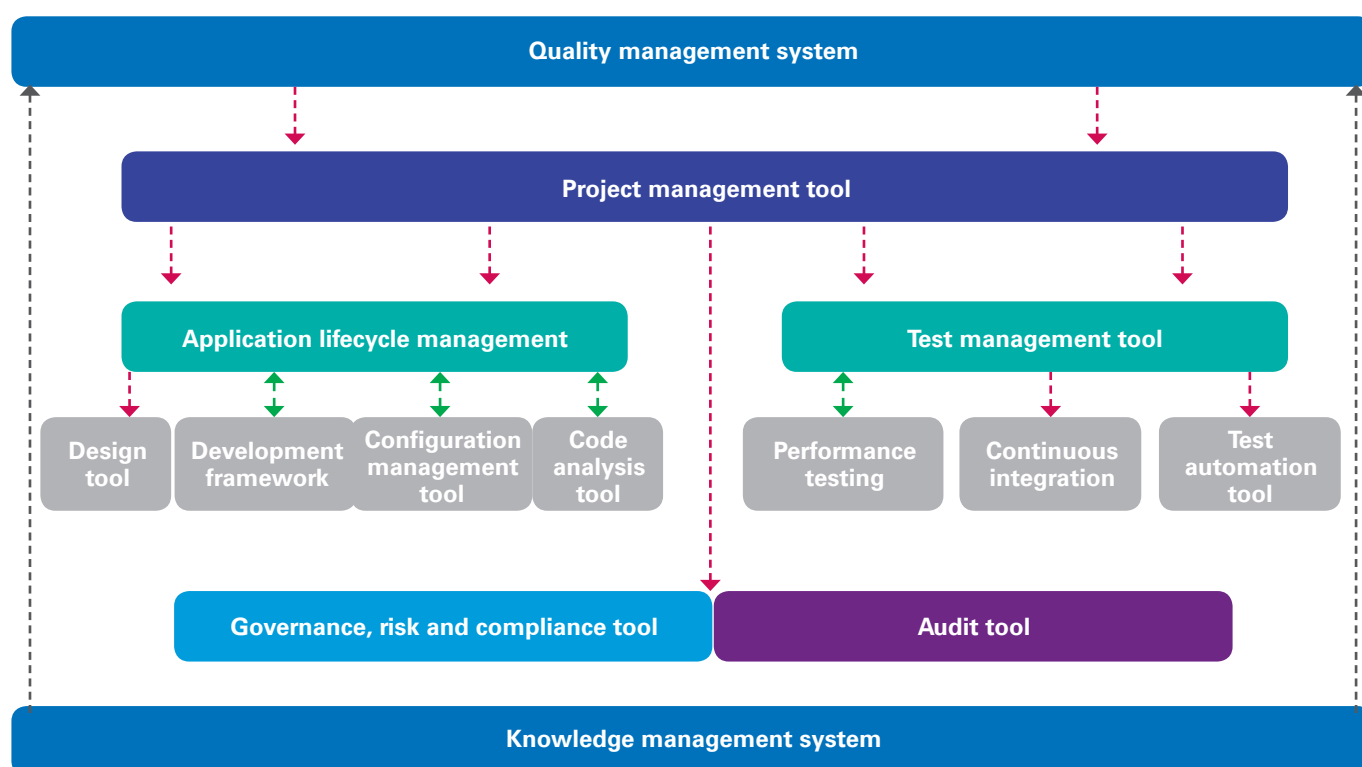
Note: The above diagram is for illustration purposes only



Automation

Automation of QMS refers to not only the automating activities within the system but also to creating rich and seamless integration with outside systems or sub-systems in the IT environment.

Following diagram illustrates a typical automation landscape of QMS and other sub-systems or tools for an IT organisation:



QMS integration with subsystems

Note: The above diagram is for illustration purposes only



Legend:

Red arrow: Downward dataflow

Green double arrow: Bi-directional dataflow

Grey arrow: Upward dataflow

If adopted, automation can provide multiple benefits to QMS. Following points illustrate the profits or benefits an organisation can draw from an integrated QMS.

Potential benefits:

- Automation allows us to view processes centrally across domain and support functions
- It's a bridge between processes defined at organisational level and ground level practitioners
- Seamless tools enactment with QMS can bring process consistency
- Integration and automation can bring real time aggregate data for measurement of overall process performance for an organisation
- Team can improve quality of product or service through automation of quality process and at the same time they can reduce cycle time
- Tailoring of processes for specific program can be done automatically and in a controlled manner
- Automating QMS with various compliance frameworks can help to improve business quality and smooth compliance assessment
- Automation helps to increase visibility and aligning to dynamic world.

Conclusion





Business needs can be addressed through better management of 'how' people do their work. We may consider our work as more important and different from majority, however, we still have to maintain standard processes and consider that there is always scope for improvement with the help of right framework and automation.

The more flexible our framework, the easier it is to change or adapt to the market evolution. The key is to select relevant framework according to business needs. Framework adaption in QMS for organisation can bring complete alignment of business decisions with organisation's goal.

Once we have a relevant framework in place, we can plan on integrating various aspects into QMS. Driving automated process flow within organisation's ecosystem brings a number of benefits.

Implementing QMS can bring a common vision of quality all over the organisation. This carries several profits, such as higher value addition to customers, maintain commonality in terms of delivery and increase in employee satisfaction.

In summary, considering the enormous benefits of QMS, sometimes the challenge for an organisation is not why a QMS should be improved, but how to begin this process.

Acknowledgement





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