

BUSINESS SCENARIO:

CHALLENGE OF ENFORCING A SPECIFICATION DRIVEN SYSTEM WHEN THE QUALITY MANAGEMENT SYSTEM IS OUTSIDE THE WORKING METHODOLOGY

Oil and Gas – Highly Specification driven to ensure Quality

Most of the companies in the oil and gas domain demand process technology of the highest standard from their consultants since productivity and quality are the main factors that determine the company's success. To ensure a high level of quality in the projects in this domain it is important that the specifications defined during the design phase are adhered to. Non-conformance to the specifications need to be tracked and rectified through timely audits. Preventive measures are to be taken well in advance and a continuous improvement policy is followed.

All the companies in the Oil and Gas sector have a fool proof quality policy which demands a highly process-driven working methodology. Every task in the engineering methodology will have a process associated with it in which there is a review and approval stage which will ensure that specifications are adhered to at every stage in the quality process. Quality checks like the "Inter department Squad Check" are defined in the process, where a committee from different departments will scrutinize the deliverable quality in a specified sequence that will leave no room for errors. Checklists are included in each stage using which each resource can cross check if he has deviated from the given specification. There is also provision to generate a number of reports to highlight the deliverables quality

Defining a quality system is easy, the Challenge lies in enforcing

The definition of quality management system in most companies is elaborate and detailed enough but the pain is in enforcing the same. A detailed study of all the companies in the sector divulged that "most of the quality process is still on paper". Pressure from the client, constant firefighting, lack of resources, elaborate documentation required in the quality process are some of the deterrents that lead to deviations from the specified process. Also complex information flow associated with engineering environment makes it even more difficult.

Most of the companies realize this and invest in automation of quality process only to find that the working methods are not user friendly and in fact hinder rather than ensure better quality. This is because such systems do not address the issues of quality enforcement in its totality and are half baked solutions that cannot be relied on.

Let's look into a typical scenario that highlights the challenges in enforcing quality:

- Ms. Maya(Management Representative):** *Chris, the findings in the internal audit on the Design department is disappointing. The team is not following the templates specified nor the quality checks and there is no documentation. I have sent the nonconformities by mail, kindly rectify the same and give me a closure date.*
- Mr. Chris(Project Manager):** *Maya, I am managing 5 projects this quarter and we are behind schedule too. I am sorry but I can only give closure dates for the NCRs next quarter.*
- Mr.Vivek(Engineer):** *Documentation again! It will take me at least 3 days to finish the documentation formalities. Can't you guys come up with something simpler?*
- Mr. Chris(Project Manager):** *This whole exercise is futile! Quality audits bring a standstill to the entire process, the documentation takes up too much time and even with all this even a squad check is not enforced.*
- Sam(Quality Head):** *We are getting nowhere! We need to find a way to enforce the quality process better. The quality management process is bringing into very little value to the organization and our customers. And if we work this way how can be scale up to a higher standard?*

THE CRUX : The quality system is unable to get under the skin of the engineering process

Static Nature of a Paper based Quality process:

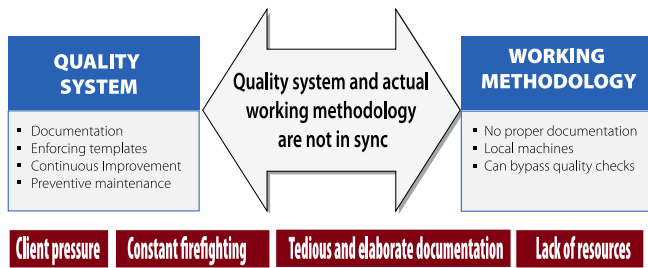
Nothing is more exasperating for a Management Representative when there is a clearly defined quality process which was reached after hours of analyzing and brain storming that now lies unused in the quality manual. Enforcing a paper based quality system on an engineering team who work mainly on automation creates conflicts and is time consuming.

Enforcement is through Manual process:

Take for instance how a squad check is executed. The document controller takes a hard copy of the drawings and its reference information and attaches it to squad check report sheet. The squad check report will have the members of the details like the names of the Interdepartmental committee, the sequence of execution, time, date of the check etc. This is now sequentially taken to each member of the squad team for review and the comments are entered into the report. These reports are sometimes misplaced or lost and the whole process is time consuming.

Related Documentation is tedious and time consuming:

Tedious documentation is another pain of practicing the quality processes. There is always the option to carry on without these procedures often documentation will be waived.



Breathe life into the quality process: Quality process IS the working methodology!

Automated Quality process:

In order to enforce quality in the engineering process it's important that companies scale up from the paper based manual quality management system that is outside the working methodology to an innovative industry specific solution that is embedded into the working methodology.

Wrench Enterprise is a PLM solution that tackles the challenges of enforcing quality by mapping the quality processes into an integrated platform. The entire organizational data and process migrate to the automated and integrated platform where the quality process is enforced.

Ease of Use:

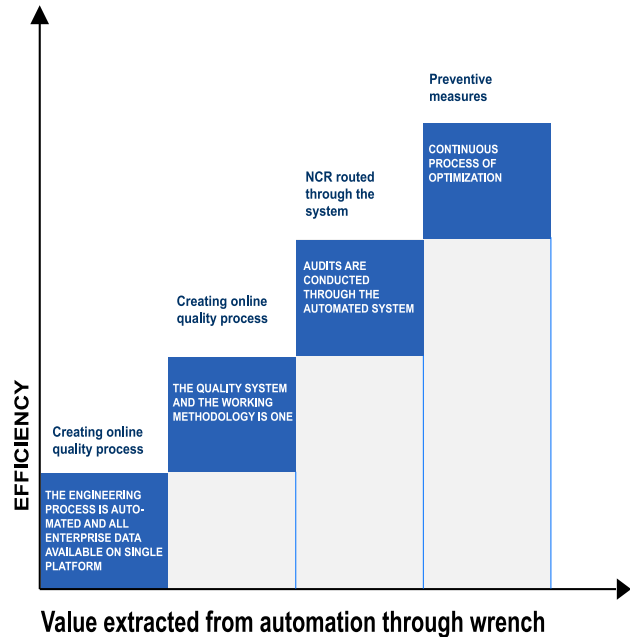
Wrench Enterprise's work environment is modeled like MExplorer so that users are familiar with it even before they are actually trained to work on it. Each user will have an organized workspace where tasks are routed to specific folders. The entire process will be automatically captured and system documented as when they happen. Creation of Workflows can be actually drawn, the information flow can be specified, the user can be defined, security rights can be allotted and Checklists embedded into each stage effortlessly. The budgeting details and % of completion can be defined for every stage and the system updates this in the master schedule enabling correct project status without manual intervention.

Quality audits without disrupting Work!:

The automated system contains the entire information required for audit inputs. The auditor can be given "View" privileges and can log in to Wrench Enterprise and conduct the audit without disrupting work. From the system documentation available any number of reports can be generated. Minutes of meeting provision also provides the facility to define action items against the NCR and route it across to the auditee's workspace. Closure of the task is system documented.

Continuous Improvement:

Wrench Enterprise provides the perfect platform to implement the policy of continuous improvement. Since it's designed to take care of all documentation and document status capture the quality head can improve on the quality process. The elaborate document and functional security definitions that come with the product and the ease with which the quality processes can be enforced enables the organisation to scale up to higher quality standards without wasting effort and time.



- Mr. Chris (Project Manager):** The quality audits don't take up any of my time since everything is already available in the system. Even the action items in the Mom get routed to each person's workspace.
- Mr. Vivek (Engineer):** It's a relief to have the system do the documentation. I can focus on my work now that all that is taken care of.
- Mr Sam (Quality Head):** The quality management system is directly impacting the deliverable quality at last! I think our quality process has matured enough to scale up to the next quality standard so I can start working on that. Maya, Good job.
- Ms. Maya (Management Representative):** Well I think moving into WRENCH ENTERPRISE has made a huge difference. Audits are now automated and archived in the system, the MOMs and the routing information of the NCR, the closure dates are all system documented. Change requests are all available too. For once I am ENJOYING my job!