

Smarter Document Control

By Alec Dorling

Introduction

ISO9001 has a set of general requirements with respect to documentation including the control of documents and the control of records.

It specifies that a documented procedure or procedures be established to define the controls needed and sets out seven requirements for the control of documents including the review, approval and control of changes.

Maintaining an effective document review and approval process causes an organisation many problems being seemingly bureaucratic and driven by the need to maintain records as objective evidence for auditors.

Collaborative management tools facilitate and manage group activities and help organisations leverage new technologies to increase innovation, productivity and agility.

The use of such tools has the ability to transform the efficiency and effectiveness of the document collaboration, review and approval process and help to realize improved economies as well as many other business benefits.

Coventi Pages is one example of a new generation of innovative collaborative management tools that will be used to illustrate what can be achieved. It includes full life cycle control of the process.

ISO9000 Quality Management Systems

ISO 9000 is a family of standards for quality management systems.

ISO 9000 is maintained by ISO, the International Organization for Standardization and is administered by accreditation and certification bodies.

ISO 9001:2000 **Quality management systems Requirements** specifies requirements for a quality management system for any organization that needs to demonstrate its ability to consistently provide product that meets customer and applicable regulatory requirements and aims to enhance customer satisfaction.

A company or organization that has been independently audited and certified to be in conformance with ISO 9001 may publicly state that it is "ISO 9001 certified" or "ISO 9001 registered."

ISO9000 is employed across a wide range of organisations from manufacturing and service oriented organisations to IT and software development organisations.

ISO9001 requirements

ISO9001 requires that an organisation shall establish, document, implement and maintain a quality management system and continually improve the effectiveness.

It requires that an organisation

- Identify the processes needed for the quality management system and their application throughout the organisation
- Determine the interaction and sequence of these processes
- Determine the criteria and methods needed to ensure that both the operation and control of these processes are effective
- Ensure the availability of resources and information necessary to support the operation and monitoring of these processes
- Monitor, measure and analyse these processes and
- Implement actions necessary to achieve planned results and continual improvement of these processes.

Control of documents under ISO9001

ISO9001 has a set of general requirements with respect to documentation including the control of documents and the control of records.

It also specifies that a documented procedure or procedures be established to define the controls needed.

During both the requirements stage and product development the organisation needs to perform systematic reviews and control design and development changes at suitable stages during the life cycle in accordance with planned arrangements. Records of the results of reviews and any necessary actions need to be maintained.

Seven requirements for the control of documents including the review, approval and control of changes are specified.

Document approval

Documents must be approved for 'adequacy' prior to issue. For most organisations, review and approval will be a two stage process. The first stage will involve review of the technical content of the document with the subject matter expert 'owner' of the document. The second stage will involve the approval of a document to ensure that the requirements of the quality system have been met and/or to seek a management approval to release the document.

Review and update of documents

Documents must be reviewed and updated 'as necessary' and re-approved. In most systems, a specified document owner is responsible for monitoring the currency and content of their documents. The reviewers of a document will normally include those technical persons who have been deemed competent with the relevant technical or business skills to review the document.

Changes and status of documents

'Changes' to documents and the 'current revision status' of documents must be 'identified'. Identification is commonly understood to mean the fact of change and therefore the amendment to the revision status of a document will confirm that change has occurred. Identification may also be understood to mean that the nature of the change must be identified. This provides a challenge for many organisations who find it difficult to clearly identify changes within documents themselves.

The use of 'underlining' or 'right bars' is generally inadequate to describe what changes have occurred, or to identify changes when deletions have been made. Maintaining a 'change log' within a document is common practice, but generally it fails to provide a clear indication of the full nature of changes made. Emails are often used to inform when a change to a document has occurred.

Where online documentation is used, the current document revision status may be satisfied through the use of configuration management tools which may allocate a revision number when checking documentation into the system. However many organisations try to maintain version numbers on the electronic document as well as through the configuration management system and this can generally lead to a loss of version control.

Relevance and availability of documents at points of use

Relevant versions of applicable documents need to be available at their points of use. Complex systems are often used to ensure that specific documents are distributed to those who perform the work. The versions distributed and the locations of users must also be factored into the system used.

In online document control systems, the locations and specific requirements of individual users can be ignored, as users will have access to the latest versions through an intranet although paper distribution may still be required to external holders of documents.

Legibility and identification of documents

Whilst this may be an issue with manually written documents, it rarely is a problem with electronic documents as any document control system would ensure legibility and identification of documents.

External documents

'Documents' also include relevant documents of 'external origin' which need to be subject to the same controls as internally generated documents.

Obsolete documents

Preventing the unintended use of obsolete copies of documents are easily achievable through the use of online documentation systems. Online document systems need not retain obsolete copies unless specifically required by the business needs of the organisation. Where documents are retained in an archiving system then controls must be defined to identify those obsolete documents.

Gaining control of the process

An effective document review and approval process is one of **the** essential elements of a quality management system. The process, however, is one that causes an organisation many problems being seemingly bureaucratic and driven by the need to maintain records as objective evidence for auditors.

Coordinating the review and approval process has become a time consuming task leaving many opportunities for the ISO9001 external auditors to find non conformances with the process.

Project and product development teams in many organisations are increasingly dispersed over many sites, countries and time zones making collaboration on documents increasingly difficult.

Document collaboration and the review and approval process are often performed through an iterative process of sending emails with documents attached requesting review comments by a given deadline. Getting approval sign off becomes a time consuming especially when the signatory is unavailable due management meetings, travelling or other activities.

When comments are received they often come in a multitude of different ways: as comments made in the body of the text, as marked up comments on PDF generated documents, on formal review forms, by email, in interactive chat dialogues or even as podcasts. There is no easy way to anchor all the comments received to text that is being referred to.

Many organisations faced with the increasing use of virtual business-based networked teams work are turning towards technology solutions in order to improve collaboration and cooperation efficiency. This applies equally to small companies as to larger organisations.

Collaborative software is the basis for supported cooperative work. Collaborative software is designed to help people involved in a common task achieve their goals.

Collaborative management tools facilitate and manage group activities and help organisations leverage new technologies to increase innovation, productivity and agility.

A smarter way to document collaboration

Coventi Pages is a new innovative collaborative management tool that has the potential to dramatically influence how we work in document collaboration and includes full life cycle control of the review and approval process.

It is an excellent example of everything that is done right in the new world of enterprise software.

Not only does it provide implementation support for ISO9001 requirements for document control, review and approval, it is actually fun to use and takes away all the bureaucracy in maintaining records, the whole process is taken care of.

The biggest hurdle in implementing any collaborative software is convincing people to use it. Training and mentoring is usually required to make people comfortable using such software, and if people don't feel comfortable with the software, they won't use it.

Highlighting text and writing notes in the margin is something we're all used to from pen and paper. The same simple concepts are built into Coventi Pages. A reviewer can easily identify comments and changes to be made in a document. All comments are entered into an electronic version of the margins of a hard copy document.

Using a tool like Coventi Pages, the executive sponsor of a quality management system has an instant solution to full life cycle document control. Improved economies and other business benefits can quickly be realized through the use of a more efficient document collaboration, review and approval process.

To understand why tools like Coventi Pages are so powerful you only need to look at the typical inefficiencies with the traditional review and approval process.

- Distributing the document for review
- Ensuring all reviewers receive the document
- Tracking comments due by review deadline
- Following up for missing review comments
- Collating the review comments provided in multiple formats (email, pdf, voice mail, forms)
- Consolidating comments on similar issues
- Following up comments on other reviewers comments
- Assigning review actions
- Tracking review actions to closure
- Gaining review sign of implemented actions
- ... Repeating for further review cycles
- Circulating the document for approval
- Waiting for the approval signatures

Key features

Coventi Pages has the approach that a document is owned by an author, with consensus-building and discussion in the foreground rather than bolted on as an additional feature.

Some of the key features are described below.

The screenshot displays the Coventi PAGES website. At the top, the logo "Coventi PAGES" is visible on the left, and a link to "Watch our 'Introduction to Pages' Video" is on the right. Below the logo, the tagline "The smartest way to work together on documents." is centered. The main content area is divided into several sections:

- 3 steps to get started.**
 - 1. Sign up for an account**
Using our hosted version of Coventi is free. All you need is an email address.
 - 2. Create a document on Coventi**
Or upload a file (Word or OpenDocument) directly.
 - 3. Invite people to give you feedback**
Just like pen and paper, people give you feedback by highlighting a piece of text and writing notes in the margin.
Everyone you've invited to the document can see each other's comments and respond in real-time, so it's like having IM chat sessions, tied to the content of your document.
- Powerful features set us apart.**
 - **Browse feedback in context** No more wading through your inbox to sort out who said what.
 - **Get email updates** when people post new comments or a new revision of a document.
 - **Set review deadlines** and let us ping the group as the deadline approaches.
 - **Request formal approval** and track your document's progress.
 - **Create and save groups** so you can invite a list of people you often work with in one click.
 - **Download a complete record** of participants, comments and approvals for your archives.
- Log in** form with fields for Email and Password, a "Remember me on this computer" checkbox, and "Sign in" and "Sign up for a free Coventi account" buttons.
- New: Pre-order the Server Edition** section with an "Order Form" button.
- News** section with a "News" button and a list of recent news items.
- Security** section with a "Learn more" button.

Watch the introductory video at <https://www.coventi.com/videos/IntroToPages.aspx>

Starting a new document

- Upload a document in WORD or other formats or
- Create a new document in the tool

Sharing a document

- Invite people to collaborate on the document
- Define the role for collaborators – owner, author, reviewer or approver
- Establish named groups of collaborators

Reviewing (discussing) a document

- Set a review deadline and automatically send reminder emails out to the group as the deadline approaches
- Create a comment or suggest a change using a highlighted pen
- Comments are placed in context in the document
- Find comments by reviewer or page
- Browse feedback in context (directly where made in the document)
- Enter a response to a review comment
- Resolve review comments adding notes where needed
- Close the review comment
- When a reviewer approves the document, authors are notified over email.

Revising a document

- Select to revise a document
- Documents are updated in real-time
- Spell check the document
- Baseline the document for next review or approval
- All documents are version controlled
- Compare revisions to see changes made between drafts - changes are highlighted in the document

Track status

- View online who has reviewed/approved a document
- Send email alerts as reminders
- Get notified when review comments or new revisions have been made

Save document and review records

- Download a record of all comments and approvals in PDF - comments are referenced in text of document [1]
- Document the different versions of the document in various formats e.g. WORD, PDF, RTF, TXT, ODT

System requirements

Coventi Pages is a web based application, is free to try and works with the following browsers:

- Firefox 1.5 or above
- Internet Explorer 6.0 or above

Security should not be a concern. At the application layer, comprehensive security checks are made to ensure that no one can see documents or comments unless they've been invited. At the system level, backend systems employ 128-bit SSL, hardware firewalls, server storage in a secure facility and data backups on a regular basis to aid disaster recovery.

A server edition of Coventi Pages is being developed for release in the fall 2007. This will offer the power, convenience and control of hosting the service on a company's own intranet.

Conclusion

As a consultant I use virtual collaboration and emerging technologies at every stage in the business process to increase business efficiency and effectiveness.

Coventi Pages is a key business asset that joins a portfolio of other tools used on a regular basis, for instance

- Start page - radar screen www.netvibes.com
- Electronic signature of contracts www.echosign.com
- Proposal tracking www.pipelinedeals.com
- Project management www.basecamphq.com
- Web conferencing www.gotomeeting.com
- VOIP, chat and presence www.sykpe.com
- Telephone conferencing www.highspeedconferencing.com

It solves a major problem faced by most organisations that implement an ISO9001 quality management system - that of how to efficiently and effectively manage the document control process.

It allows the design and development team to concentrate their efforts on the technical development activities whilst at the same time providing a collaborative approach to consensus-building and discussion in the review process. The ability to easily control documents throughout the lifecycle creates accountability and responsibility.

Whilst Coventi Pages provides support for an ISO9001 quality management system, its use for general document collaboration and review is the primary goal.

I was recently participating in a proposal preparation against a very tight deadline. The collaborative effort involved two sales and marketing representatives, two management representatives, four technical developers, a quality manager and the legal department. All these functions were located across different country sites and offices. Post submission of the proposal I could only think how

much time could have been saved and how much more effective the process could have been using a tool like Coventi Pages.

If you are looking for an easy, efficient and effective way to collaborative on documents, I can highly recommend that you to take a look at such document collaboration tools. Coventi makes the collaborative writing and review process a whole lot easier, and a lot more precise.

About the author

Alec Dorling is an internationally recognized expert in the field of quality management, process assessment and improvement. He is a regular speaker and keynote presenter at conferences and seminars around the world.

Alec has been involved with many of the UK Government's initiatives in software engineering and software quality including the STARTS programme, the Software Engineering Solutions programme, the Quality Management Library, TickIT and SPICE. He was consultant to the Software Quality Unit at the Department of Trade and Industry providing advice and priorities for software quality, standards and certification when TickIT was launched.

Alec is one of the founding contributors to the TickIT initiative having co-authored the initial TickIT guide, helped developed the training syllabus, trained the initial TickIT auditors, and contributed to the ISO90003 guidelines. He has also taken several certification bodies through the process of accreditation.

He is also the international convener of ISO/IEC 15504 Process Assessment and the SPICE project manager.

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About Coventi

Coventi Pages is an online tool with a simplified approach to sharing, discussing, and revising documents.

The Coventi founders are Peter Lee and Dan Wilson from Princeton University and Stanford University in the USA.

For more information visit www.coventi.com