Structured content authoring

Well-governed content development that gets you to market faster

RWS
Tridion
Docs

Contents

The pressure's on for content developers

Nobody wants the launch of a product to be held up because vital supporting information isn't ready and can't be approved on time, or errors are discovered in key documents late in the day. As go-to-market schedules accelerate and regulatory control becomes more stringent across many industries, it becomes harder for content developers to keep pace. As much as they want to work efficiently, they're faced with challenging realities and constraints, including:

So many people

The most vital materials often require input from large teams of people, including technical writers, subject-matter experts (SMEs) from different parts of the business, external advisors and reviewers, owners of the content development process such as regulatory operations, and other content stakeholders. Dozens of people – in-house and external – may be involved in seeing one document through to completion. The problem is exacerbated when documents get very large – up to hundreds of pages sometimes – with different people contributing to different parts.

Regulatory requirements

Many content types must adhere to particular specifications for information structure, using specific templates or formats. If regulatory approval or an audit is required, that adds complexity to the process and makes it especially risky for organizations to sacrifice best practices for faster turnaround. Regulated content must also generally remain available and auditable for many years, even when no longer current, making effective version control and reliable audit trails essential.

Quality management

Many organizations use a quality management system (QMS), which among other things helps them adhere to document control procedures for the creation, review, approval, revision, publishing, distribution, archiving and disposal of documents. But these systems, whether paper-based or digital applications, aren't designed to simplify or streamline content creation or revision. As much as they help with good governance, they can't deal with the inherent weaknesses of document creation that are challenging content creation teams today.

The document lifecycle requires adequate controls

So why do so many content teams struggle with large numbers of contributors, regulatory requirements and the needs of well-governed quality control? Fundamentally, it's because they're using inadequate tools and processes.

1
Creation

2
Review and approval

3
Revisions

4
Publishing/ distribution

5
Archiving

6
Obsoleting/ disposal

Content development challenges

As the speed and complexity of content development increases in industries as diverse as life sciences, financial services, manufacturing and more, content teams are finding that their standard applications and processes are no longer up to the job. Inefficiencies and risks that previously were manageable are now causing unacceptable delays and costs.

Today's content creation challenges fall into three categories:

Collaboration   **Governance**   **Reuse**

Collaboration challenges

Concurrent authoring and reviewing: absent or unreliable

When multiple stakeholders are involved in content development, efficiency depends on how well they work together. For too many organizations, this collaboration happens sequentially or in parallel, rather than concurrently. They email word-processing files or PDFs around, or sometimes even print and annotate documents by hand. It's a clumsy, slow process that typically creates a version-control and consolidation nightmare – even more so when collaborating with external stakeholders such as advisory consultants or regulatory approval bodies.

Some organizations have moved to cloud-based word-processing platforms that do offer concurrent authoring and review. But they find that when multiple stakeholders – internal or external – work simultaneously in these shared environments, they're simply not scalable or stable enough to avoid conflicts and crashes.

The more contributors there are, or the larger the documents, the worse these issues get.

Lack of granular control

With a word-processing document or PDF, you may be able to limit stakeholders to only viewing (or reviewing) the whole document – but you can't allow them, for example, to edit part A while only reviewing part B. Nor can you indicate when they should ignore parts of a document that aren't for their attention at all. Without this control, people are unclear about what they need to do and often waste time offering input that others are better placed to give.

Inefficient review

Besides the lack of granular editorial control, standard word processors have limited reviewing features in other ways too. Comment filtering is basic at best and there's no dashboard summarizing what has and hasn't been resolved. Nor can writers and editors give instructions to reviewers or set review deadlines without using a separate method such as email or a workflow application.

Governance challenges

Audit trails: missing or unreliable

At worst, organizations find that their authoring and reviewing process has entirely failed to deliver a useful change history for audit purposes, because there is simply no single place where everyone has provided feedback and edits.

At best – when using a cloud-based word-processing platform – they get a change history not designed to provide the detail required for audits, nor the robustness over time necessary for regulatory compliance. Word processors store their change histories within the document rather than in a separate database, making them vulnerable to corruption or failure and difficult to work with or search.

No help for compliance

Standard word processors offer writers, editors and reviewers little or no help when content needs to follow specific templates or formats. If any contributor is unaware of a mandated requirement or happens to forget it, it's all too easy for the wrong formatting or structure to be used without anybody noticing.

There's also no way to hide part of a document from those who need to see some of the content but shouldn't have access to sensitive information elsewhere in the file. Access is all-or-nothing with standard word-processing documents and PDFs, making it difficult to ensure data security.

Inaccuracies arising from content duplication

With a standard word processor, the only way to reuse approved content – for example, when adapting an existing document for a new product model – is to duplicate it through 'save as', copy-paste or retyping. But the latter two can easily introduce errors, and any form of content duplication creates content updating challenges down the line. Whenever you need to update a part of the content – which happens frequently in critical product-related content that evolves over decades – the challenge is to identify everywhere the same content appears. This is very labour-intensive and it's common for instances to be missed, leading to diminishing accuracy in content over time. This is often a problem for compliance and can sometimes be downright dangerous for those relying on the accuracy of the content.

Reuse challenges

Content for different product variants or purposes

Besides being a governance challenge, content duplication affects the efficiency of the content development process. Every time a writer creates a variant of a document for a new product model or a different geography – or reuses content for training materials or any other purpose – they simply have no way to track or show what has already been approved, what has been adapted and what is completely new. Standard word processors aren't designed to do this, so reviewers waste significant time repeatedly reviewing and approving identical content. Or they assume that content has been approved because it looks familiar, and fail to notice that an important change has been made that needs their attention.

Content silos across the business

When these issues are considered across an organization, the inefficiencies multiply. Different departments repeatedly recreate content that already exists, because they have no single source of truth to refer to. Errors and inconsistencies proliferate. And neither individual departments nor the business as a whole can gain any real insight into content use.

Content for different channels

Increasingly, the same content is needed in different formats for different channels of communication. Online support content must be available via a variety of devices. Training is delivered in new augmented or virtual reality (AR/VR) formats as well as more traditional ones. Content must be accessible to machines for use in end-to-end digitized workflows, or for chatbots and other AI applications. Every time content is duplicated for a different channel, the same inefficiencies and governance issues proliferate.

> In an enterprise of 1,000 knowledge workers, at least once per day **16.5%** of workers will create a new information asset, only to learn that a similar asset already exists.
>
> **IDC, *"The Future of Knowledge Management: Agile, Governed, and AI-Ready Componentized Content Services"***

Structured content authoring: transforming content development

As content development inefficiencies and governance issues start to bite, content development teams are turning to intuitive structured content authoring (SCA) tools such as Tridion Docs Collective Spaces.

Collective Spaces is the SCA module of Tridion Docs, a complete component content management system (CCMS) that covers content authoring, management and delivery in one solution.
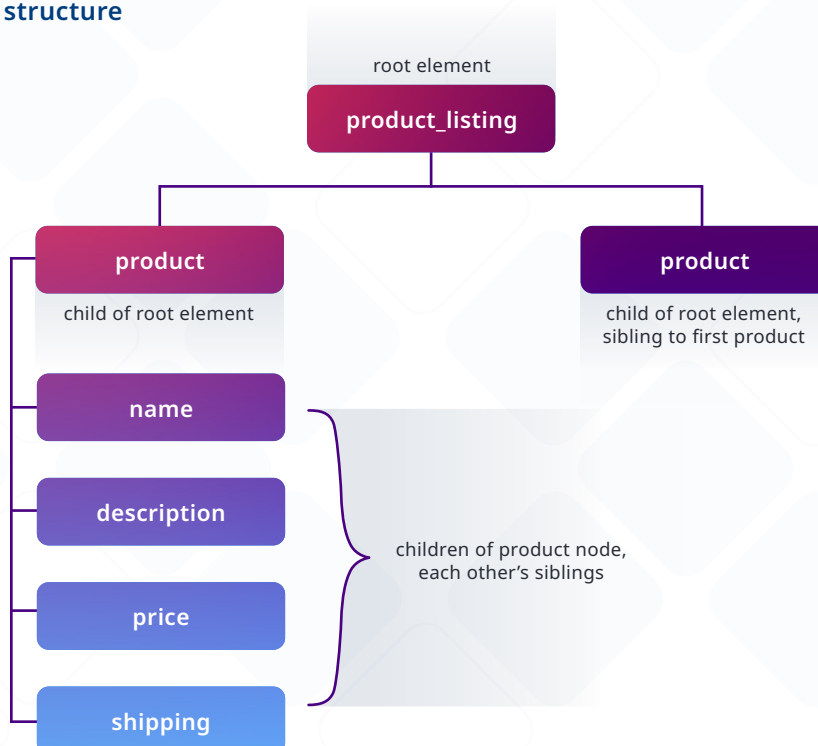
What is structured content?

Structured content is information organized in a predictable way – defined by a set of rules called a schema or content model – and typically also enriched with descriptive information called metadata.

Structured content schemas specify relationships between content components (also known as modules, atoms, topics or fragments). As such, the creation of structured content requires an authoring tool built to handle content components and their relationships.

XML is a common format for storing and sharing structured content, but other formats also exist. Most of these are open (non-proprietary), making information accessible to any application or channel, readable by both humans and machines.

XML structure

root element

product_listing

product

child of root element

product

child of root element, sibling to first product

name

description

children of product node, each other's siblings

price

shipping

Structured content authoring

Intuitive, Word-like interface

Not all SCA tools are intuitive to use, but Collective Spaces definitely is. It combines the familiarity and user-friendliness of Word with a host of features for creating content efficiently and accurately, including built-in governance best practices and the ability to reuse content without duplication.

50%
increase in efficiency on a yearly basis[1]

Collaboration

Enable any number of co-authors, editors and reviewers to work on the same content – whether they're in-house or external. Use granular controls to specify who can do what with content and streamline the review process with sophisticated features.

See page 11

Governance

Capture every edit and comment in a 100% reliable audit trail and improve adherence to regulatory requirements for documents. Improve content accuracy and compliance by eliminating content duplication and streamlining content updates.

See page 13

Avg. 32%
reuse of content after 5 years[2]

Reuse

Unlock your content by reusing it without duplication to create accurate, risk-free variations and different formats wherever they're needed. Create a single source of truth for your business.

See page 17

100%
reliable audit trails

1 Source: Tridion client data

2 Crimson Consulting Group, *"Quantifying the Benefits and High ROI of Tridion Docs"*
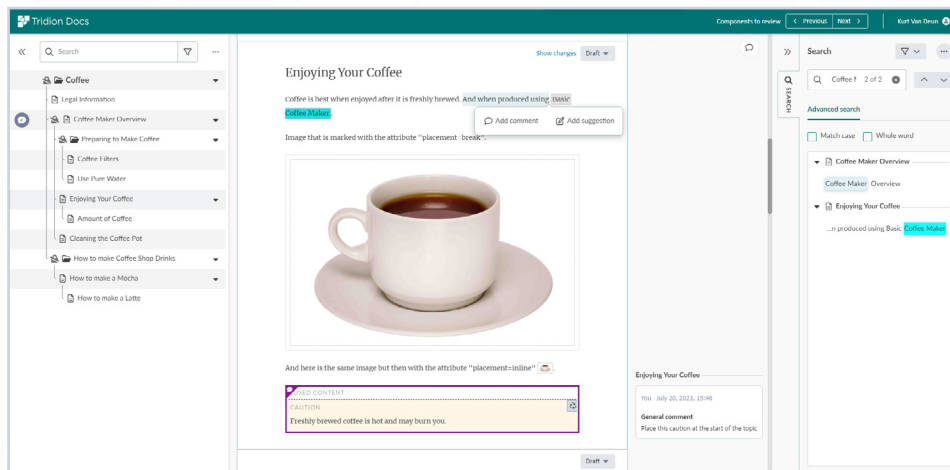
Designed for more effective collaboration

Unlike standard word processors, which store and manage content as documents, SCA tools store and manage content as smaller components (or topics, modules, atoms or fragments). A component could be a phrase, paragraph, series of paragraphs, image, video, table, or any other piece of content. Each component is stored and managed individually, with documents or other deliverables created by assembling relevant components into a whole.

Intuitive, stable and scalable

In Collective Spaces, this componentized architecture combines with a web-based authoring and reviewing environment to transform collaboration. The online platform, accessible via any standard web browser, can display components as if they form a single publication, using an intuitive, familiar Word-like interface. Authors, editors and reviewers can view and work on publications just as if they were created in the traditional way, using all of the word-processing features they know so well. But because the underlying architecture is different – much more scalable and stable – it can easily handle documents of hundreds of pages and any number of concurrent users without getting laggy or crashing.

Structured content authoring

Reliable concurrent authoring and review

Since everyone – in-house or external – has browser-based access to the same content, they're always working on the most up-to-date version, all together in the same place. Reviewers can comment on the same content at the same time without any conflicts arising, and their suggested edits are clearly visible for others to see and respond to in real time. Before writers or editors actually amend content, the system automatically ensures that the component they're working on is 'locked' so that nobody else can edit it at the same time. Again, this reliably prevents conflicts arising – something standard word-processors can't do.

Granular control and streamlined review

Because Collective Spaces operates at component level under the hood, it lets you specify who should do what to content – author, edit or review – down to component level. You can ask a contributor to edit one part of a document while only reviewing another, creating clarity for everyone. Writers and editors can also write instructions for reviewers and set deadlines. They can filter comments in a number of ways and 'go back in time' to see what content looked like when a comment was made if it no longer makes sense.

These are just a few among many features contributing to an efficient and transparent process that significantly reduces the effort and cost of document creation and review.

> [We] have more control over high-level content that really doesn't need any experience in DITA or XML to produce. All we need to do is give them a link for access, they make their changes, and we publish... It's a much more efficient way of working.
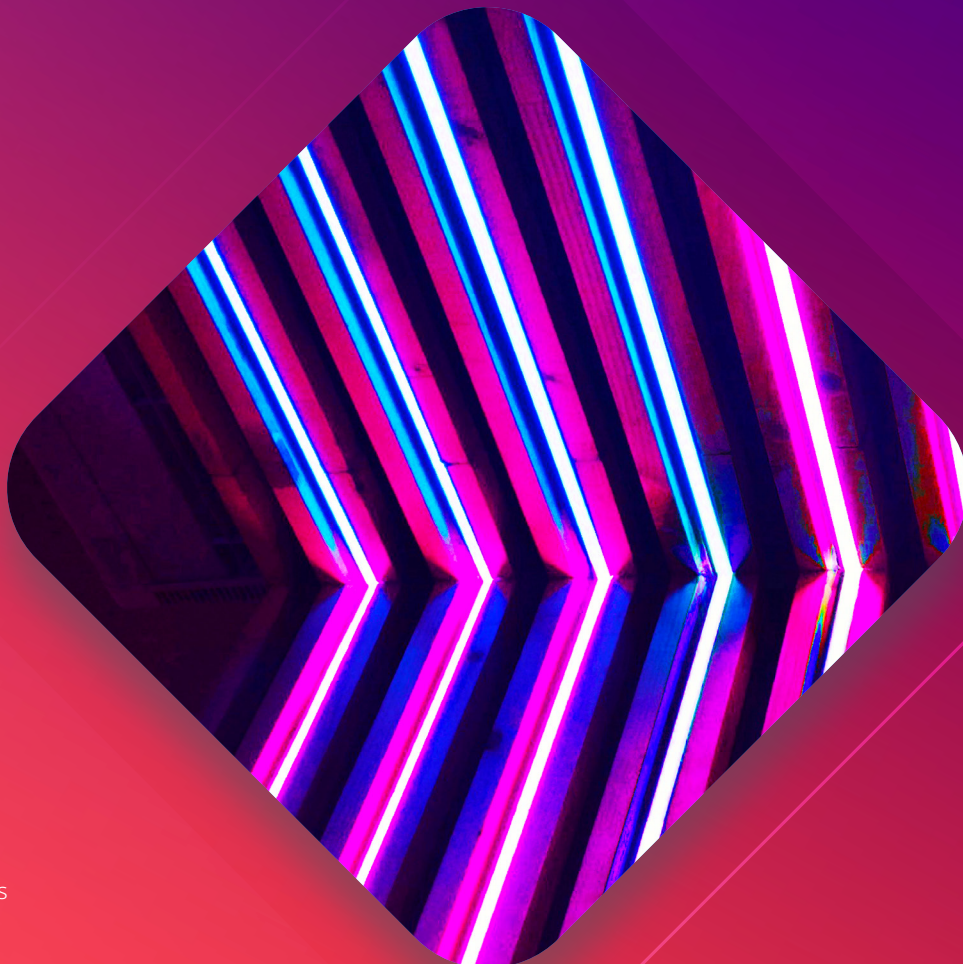>
> **CommScope**

Designed for excellent content governance

Collective Spaces addresses the content development issues that quality management systems don't, which is why many industries are now using Tridion Docs together with their QMS – seamlessly integrated – to improve information governance.

100% reliable audit trails

Collective Spaces automatically captures every change made to your content, along with the time it was made and who made it. Because everybody works in the same place, nothing goes unrecorded. Every change – to text, images, structure, attributes and more – is captured, along with the review and commenting history.

This history is stored in a separate database, ensuring its preservation and stability for however long you need to retain it. It comes with an intuitive user interface, including strong search capabilities, significantly simplifying audits and helping writers and others to understand what has happened in the past, to inform what they need to do next.

Simplified regulatory compliance

Collective Spaces can help you comply with a range of mandated requirements through:

Structure validation

When content must conform to a particular structural template, SCA can enforce this through the rules set by the schema or content model. As writers or editors work on content, if they leave out a required element or try to put it somewhere it shouldn't be, real-time validation will ensure that this isn't allowed.
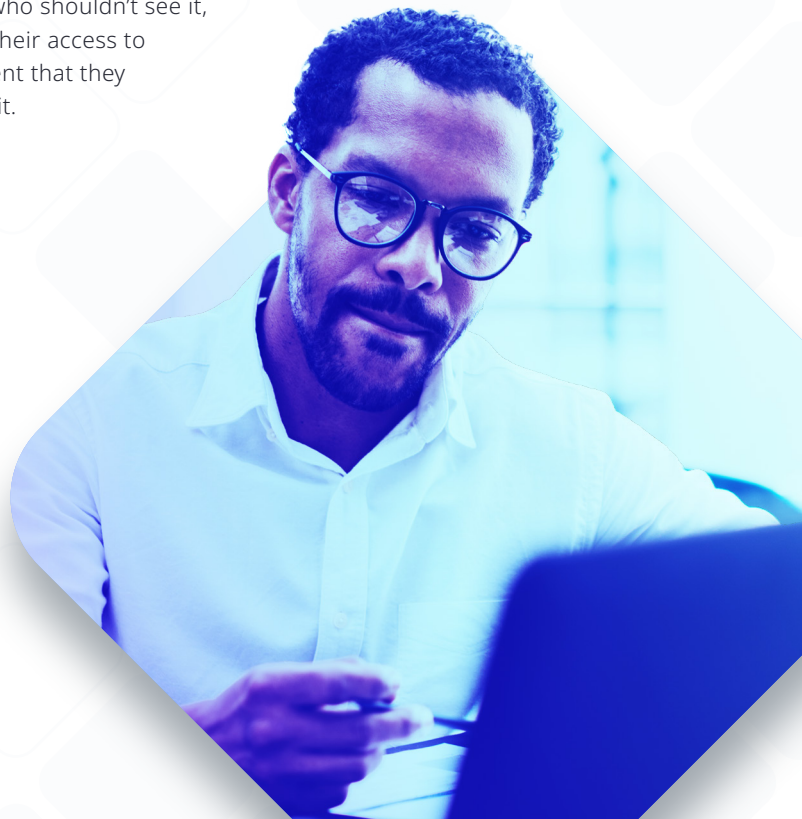
Automated downstream formatting

Writers, editors and reviewers don't have to worry if content requires specific formatting for compliance purposes, since Collective Spaces can automatically apply the correct publishing templates and style sheets once content is ready to publish. Content contributors can focus fully on content, where their expertise lies (but can still preview the final deliverable if that's helpful).

Granular access control

The component-level controls that improve collaboration also improve data security by letting you give access only to those allowed to see specific components. You can effectively block a part of a document from the view of those who shouldn't see it, without compromising their access to the parts of the document that they do need to review or edit.

Accuracy and timely updates assured

When you use an SCA tool, documents and other deliverables don't exist as a single file until they're compiled from components and published. When this happens, components aren't duplicated – an approach known as COPE: 'create once, publish everywhere'. As an SCA tool, Collective Spaces enables the 'create once' half of the equation, while other Tridion Docs modules handle the 'publish everywhere' half.

When it's time to update a piece of content, no longer do writers or editors have to worry about manually updating it in all the places it has been used. They simply update the relevant component in Collective Spaces, and Tridion Docs knows where it has been used so it can instantly be republished wherever needed.

Collective Spaces also lets you create links to any data source or content repository, so that writers and editors no longer have to copy-paste or retype data or other content from these integrated sources. They can reference the information directly and have it update automatically when the source does.

By eliminating content duplication, COPE improves accuracy across your content touchpoints. You eliminate errors that arise through copy-pasting or retyping, and no longer need to worry about finding – or failing to find – content that must be updated. With compliance often requiring timely, comprehensive updates to content, it's often a driver for moving to SCA.
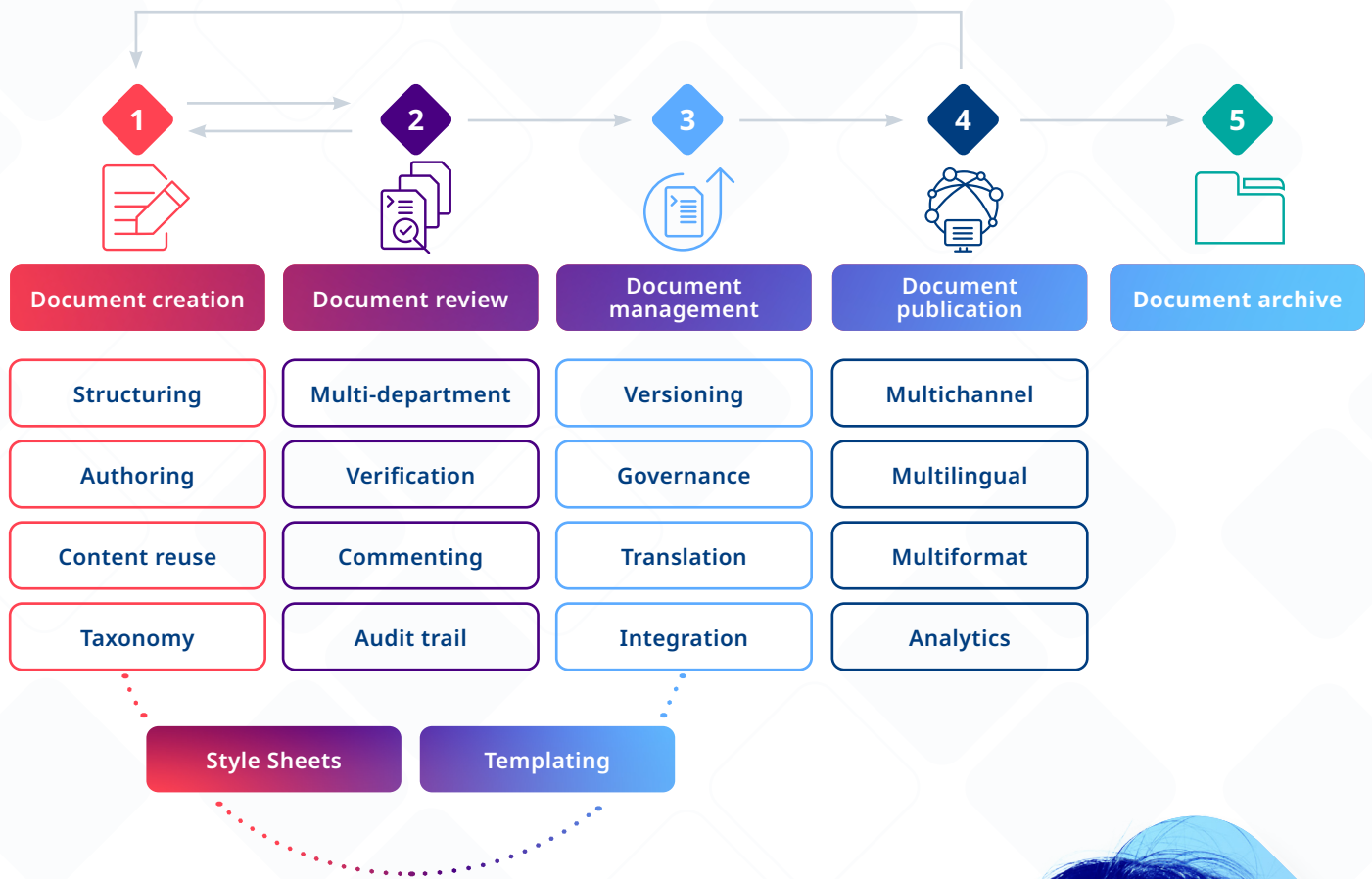
> **"**
>
> What truly minimizes processing time and personnel resources is the fact that all text modules flagged as final ... can be reused indefinitely without ever having to be checked again.
>
> **Linde**

Structured content lifecycle

Document creation	Document review	Document management	Document publication	Document archive
1	**2**	**3**	**4**	**5**
Structuring	Multi-department	Versioning	Multichannel	
Authoring	Verification	Governance	Multilingual	
Content reuse	Commenting	Translation	Multiformat	
Taxonomy	Audit trail	Integration	Analytics	

Style Sheets   Templating

Designed for efficient content reuse

Collective Spaces lets you write and review content components once – then use each component in any number of different places without duplication. This frees you to reuse content without any of the usual risks or inefficiencies.

Create variations with ease

Once a component is approved, there's simply no need to review it again. Collective Spaces has built-in features to show reviewers when content is unchanged and already approved. Conversely, it's very clear when a component has been adapted and must be reviewed again. And because you also have the wider content management capabilities of Tridion Docs, you can seamlessly manage content versions and variations through their whole lifecycle.

Develop a single source of truth

Collective Spaces is the foundation for creating a single source of truth for your organization. Besides eliminating content duplication, it lets your content developers apply metadata at a much more granular level to make your content more easily findable. If people can easily find it, they're much less likely to recreate content that already exists. With a single source of truth across your business, you can also start to leverage meaningful analytics about the use of content.

Use content anywhere

Because your structured content is stored format-free and designed for easy sharing, it's straightforward to apply appropriate formatting to components for different purposes and channels. Collective Spaces supports omnichannel publishing, immersive AR/VR experiences, and the supply of content to chatbots, virtual assistants and other applications.

> **"**
>
> We needed a way to manage the variations of our content across different brands and products ... Tridion Docs provided a compelling system that met our requirements and empowered us to achieve our objectives.
>
> **Atlas Copco**

Summary

Why it matters

Many industries are under pressure to produce complex content more quickly. These pressures are frequently exacerbated by the sheer number of people involved in developing many types of business-critical content.

Much of this content is subject to regulatory approval and must comply with specified standards. Content that remains in use while evolving over decades must always remain accurate and up-to-date, and after use may need to be retained for years with a complete record of its history.

Challenges

Standard word-processing tools make it difficult for in-house and external contributors to collaborate effectively. Concurrent authoring and reviewing is impossible or unstable, there's little control over access to content, and the whole reviewing and approval process is cumbersome and time-consuming. It's impossible to create a stable, reliable audit trail of a document's history, and it's entirely down to contributors to remember what's required for regulatory compliance.

Content can only be reused through duplication, which introduces errors and updating challenges that are bad for compliance and safety. Even as businesses want to reuse and reformat content for a growing variety of reasons, it's painfully difficult to do so.

Solution

With Collective Spaces you create content as format-free components within a shared online authoring and reviewing environment.

Based on components, this environment is stable and scalable, enabling any number of co-authors, editors and reviewers to use it concurrently without conflict. Access controls specify who can see or edit individual content components, while intuitive features streamline review and improve adherence to regulatory requirements. Every edit and comment is captured in a 100% reliable audit trail.

Components are reused without duplication, improving accuracy and simplifying content updates. Besides ensuring compliance and safety, this frees you to create a single source of truth and repurpose content efficiently, wherever and however you need to.

Making the right choice

Collective Spaces is a cutting-edge online SCA tool with an intuitive Word-like interface. It uses the **DITA** specification (an XML-based authoring and publishing standard) and gives you a range of features you typically won't get straight out of the box with other SCA tools. These include integrated taxonomy management and AI-powered smart tagging, which help writers apply the most appropriate metadata tags to content to improve its findability (optimizing content for search).

Because Collective Spaces is part of **Tridion Docs**, you also benefit from other AI-driven capabilities built into the Tridion platform, as well as all of its CMS functions. There are **many advantages** to choosing an SCA tool that is already integrated with a CMS, as Collective Spaces is.

But if you need a standalone SCA tool, or DITA isn't right for you, talk to us about **Fonto**, another SCA tool available from RWS. Fonto offers most (but not all) of the same capabilities as Collective Spaces, in a solution that can be configured for any XML schema and paired with any CMS.

Choose Tridion Docs Collective Spaces for:

◆ **50% increase** in efficiency on a yearly basis[1]

◆ Future-proofed content

◆ **30-50% reduction** in content development and localization costs[1]

◆ Reduction in errors and inaccuracies

◆ Avg. **32% content reuse** after 5 years[2]

◆ Enhancing the benefits of a QMS

◆ **100% reliable** audit trail

1 Source: Tridion client data

2 Crimson Consulting Group, *"Quantifying the Benefits and High ROI of Tridion Docs"*

Structured content authoring

To discuss your requirements and identify
your ideal SCA solution

Talk to us