ActiveDocs

DOCUMENT AUTOMATION SOFTWARE

SMART CONTENT REUSE
THE GOLD IN YOUR ORGANISATION

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Abstract: Document automation products that support content reuse should enable organisations to capture expert knowledge and make it available in accessible form to people who need it to generate adocuments and other communications. ActiveDocs is a document automation product that provides an extensive range of functionality that helps organisations build up their reusable content and leverage it effectively.

Copyright

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1   What is content reuse?

Content reuse means using the content sourced from one place, in different places and/or at different times.

This whitepaper focuses on the context of content reuse in documents.

1   What is content reuse?

2   Why is content re-use important?

Organisations work best with consistent presentation and messaging that comply with the demands of internal and external stakeholders.

Consider an organisation's statement of its terms and conditions of business. These may be included in many types of document produced for customers, suppliers, employees, and shareholders, and reproduced in less document-centric scenarios such as usage notices in software, and on web pages.

For most organisations, terms and conditions are important. Creation and maintenance of the content takes time and effort. Standards of language and legality apply to it. Valuable legal and operational expertise typically contributes to it. The organisation's institutional self-knowledge – embodied in people and systems – influences it.

In use, terms and conditions require enforcement and control. While mandated generally, they typically need variations for compliance in particular markets and legal jurisdictions, and variations will always occur over time.

At any given time within any given sphere of operation, the smart organisation should publish the same terms and conditions everywhere. Getting the right terms and conditions in the right place at the right time, is a prime example of the importance of content reuse.

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Content reuse enables consistency and compliance by embodying the wording itself and, where necessary, the knowledge and rules that determine its use. With appropriate mechanisms for management and deployment, it should reduce effort and risk, and improve responsiveness.

Content reuse is important and makes good sense, so **how do smart organisations reuse content**?

3   How do smart organisations reuse content?

Most organisations will recognise the utility of content reuse, even if such recognition occurs only in high-level contexts like 'compliance' or 'branding'.

Some organisations may operate with an implicit recognition of such contexts and content, coupled with an expectation that this is 'common knowledge' and so reuse will happen 'automatically'.

As an example of reuse at the 'implicit' level or 'reuse by expectation', that global corporation around the corner expects every employee to know what its logos and mission statements look like, and to know that changes do not happen without authorisation, advance warning, and preparation. The corporation's expectation is that its employees will not invent variations of logos or mission statements, because they have no authority and indeed no reason to do so (but a smart organisation might recognise that while inventing new graphics is unlikely, going off-message in text is easy, so may look for control there).

Organisations may decide to capture institutional knowledge, ranging from 'always done this way' examples through to proven tried-and-true methodologies and the testimony of experts, using such knowledge as the basis for content reuse – at some level.

Organisations might take the 'reuse by decree' approach, leverage the knowledge they have captured, and be explicit about the correct form of wording for some types of content. They may use sample documents and forms to embody content ranging from T&Cs and mission statements, through to address structuring, how to start a letter of thanks or admonition to an employee or customer, and the structure and content of the writer's signoff (*scanned image 150x150 pixels, name in Calibri 10 plain, Job Title in Calibri 10 bold…*). They will insist, 'by decree', on the use of such resources.

Regardless of its origins in expectation, experience, or expertise, almost all organisations with real or imagined knowledge embodied in reusable content will expect their non-experts to utilise this knowledge, as a routine part of their business. Successful outcomes will depend on **which content reuse methods are most effective**.

3

4   What content reuse methods are most effective?

The importance of content reuse applies for most organisations in most of their activities. Small and tightly run organisations might successfully manage content reuse through implicit expectations and the assumption of common knowledge.

Such informal approaches essentially depend on low communication overheads, which may also enable avoidance of the expense of knowledge capture. For most organisations of any size or value, the effort of communication and the risks and costs of failure will rule out the informal approach.

Those organisations will typically accept the necessity of knowledge capture, and then might consider the 'by decree' approach to enforce content reuse.

Unfortunately, like the informal approach, this still relies on an underlying expectation. When the wrong terms and conditions leave the organisation with a multi-million dollar mistake to fix, the organisation can lock the stable door and admonish the stable hands – but that horse has bolted.

Other organisations will progress further and develop processes to enable and empower their people and systems to reuse content and the knowledge embodied therein. They will do this, as far as possible, by making it the natural, easy, and even automatic, thing to do. These organisations are preparing for a better result from **effective content reuse**.

Figure 1 below compares different content reuse types; their effect on how the organisation's knowledge is captured, and how it can impact organisational confidence in the accuracy of the content.
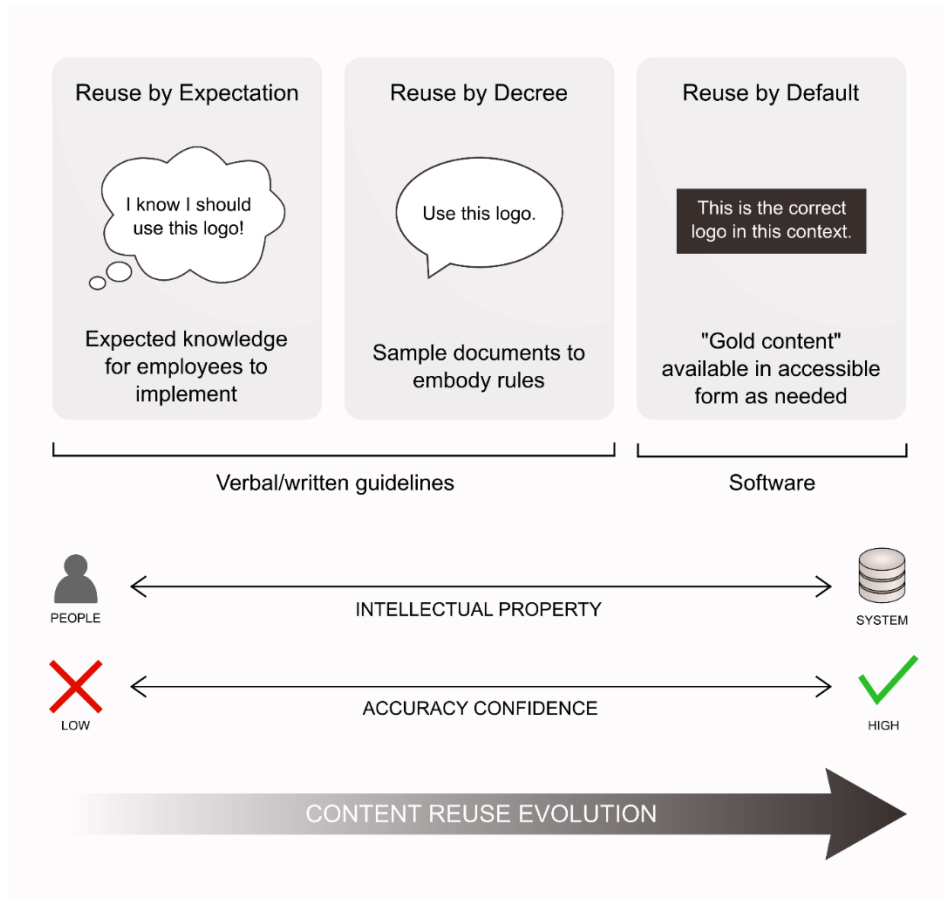
FIGURE 1: CONTENT REUSE TYPES COMPARED

5   Preparing for effective content reuse

Effective content reuse depends on strategies that divide broadly into identifying, capturing, and managing reusable content, and its actual reuse. While these are naturally interdependent, it is helpful to describe them separately.

The following questions and topics may help with preparation and planning for identification, capture, and management of reusable content.

- Where are the opportunities to reuse content, and what content is reusable?

- Who will capture it, and what is the best way to do that?

- Content requires some form of storage that facilitates and tracks its creation, maintenance, and use. What is the best way to do that?

- Whether it evolves or becomes redundant, content always needs management. What are the drivers or triggers of evolution and redundancy of content?

- Who will manage and maintain the content? How will they know, and manage, the impact of changing or archiving content?

The following topics and questions may help with preparation and planning for the actual usage of the content.

- The effectiveness of content reuse depends on always – and only – using it when needed.

- Usage 'by decree' is unlikely to work. Better outcomes are possible through making content easy to find and use.

- What will enable and empower non-experts – or systems – to find the content they need, when they need it?

- What will make the process so easy and seamless that no alternatives are attractive; in other words, a 'no-brainer'?

- What will make sure it happens every time? What safeguards will prevent use of the wrong content?

- At some point, an exception may occur and it will be necessary to track or review the maintenance history, and actual usage, of a particular content item. What will underpin and enable those audit processes?

- Some scenarios may need more detailed expert knowledge to direct the 'when and how' of content use. For example, the correct response to a request for assistance might **not** be the 500-page manual that **contains** the answer. It might be more useful for embedded expert knowledge to determine the **precise** sentence or paragraph that is **relevant** in the context.

6 Practical content reuse – in theory

In theory, the process involves a few steps.

- Analysis of business processes to identify where and how content reuse happens, can happen, or should happen.

- Identification and capture of reusable content.

- Implementation of storage, management, and retrieval methods and mechanisms.

- Provision of resources and procedures for maintaining the content.

- Implementation – in the first instance, publication – of processes and procedures for reusing content in everyday business activities.

As noted, content reuse is unlikely to succeed with 'implementation by decree'. It requires a framework. There is a choice of framework types, ranging in complexity from verbal or written guidelines, to smart software. Frameworks also represent different management philosophies: some positively enable, empower, and encourage content reuse, and some do not.

Frameworks that manifest as unhelpful or even hostile also invite dismissal. Frameworks that enable, empower, and encourage should result in better user buy-in and confidence.

"For managing the content, software tools with features to control access, versioning, and publishing, should also enable better outcomes."

A framework of guidelines, even in the form of strong written rules, is little more than a higher form of 'implementation by decree'. It requires conscientious compliance by all involved and provides no practical support for users. In the event of non-compliance, it will provide 20-20 hindsight and perhaps a means of allocating blame.

Given the obvious practical difficulties and expense of having human assistants or enforcers on hand for every user, to step up from usage guidelines requires software. For managing the content, software tools with features to control access, versioning, and publishing, should also enable better outcomes.

Thus, software systems and tools may be the better solution to management and use of reusable content.

7 Practical content reuse – the software framework

With a focus on document generation, the software framework would ideally be part of, or integrated with, a document automation system. To make such an overall solution work, a few key considerations arise.

7.1 Content compatibility

Reusable content must be compatible with the context in which it used. Text in images such as scanned pages is not compatible if the context requires 100% of content to be text-searchable. Inserting text from a basic note-taking application into a rich text document will not work well unless the insertion process can apply formatting. Inserting rich text into another piece of rich text and making it look right, requires compatible formats or a sophisticated format-merging feature.

As a rule, reusable content should offer the same range of text styling and formatting capability, and support the same rich content elements – tables, graphics, and layout options – as its end-use requires.

In practice and in the context of document generation, this requires storage and management compatibility across the entire solution from fragments like reusable content, through to the templates (a universal element of document automation solutions) that generate the documents, which contain the reusable content.

None of this requires absolute matching of styles and formatting across all content in a solution, but it does require compatible styling methods and taxonomies to enable merging to happen.

Some document automation systems achieve wide compatibility by leveraging the extensive capabilities of the ubiquitous Microsoft Word. Others use proprietary mark-up, thereby obliging users to learn to use another editing interface, while complicating or ruling out compatibility with the vast amount of Word-compatible content around them.

7.2 Static or Active Reusable Content?

Terms and Conditions are unlikely to require personalisation for the ultimate consumer of a document hence the text itself does not change when used. There are many similar examples of Static reusable content, the common theme being that it does not change dynamically in use.

Active reusable content will embody Template-like qualities that may allow replacement of placeholders with contextual information, and implementation of business rules.

An extreme example of Active reusable content, and embodying the reuse of business rules and data across multiple scenarios, is presentation of addressee information. Physical delivery works most efficiently with addresses formatted for the destination. Across the world there is a broad range of variations, from the order of elements to the location of postal or zip codes. An organisation looking for the best delivery outcomes will recognise that the destination is more relevant than the origin. Its 'reuse' of address structuring rules will mean a single global implementation of a content solution that will work from everywhere, to anywhere. All usage will be dynamic and the entire 'content' can change between one use and the next.

In theory, there is a spectrum of content ranging from the purely Static (Terms and Conditions), adding Active-ness by degrees to arrive at the purely Active extreme (per the above example).

In practice, most forms of Static content require dynamic selection at the point of use and are therefore dependent on 'external' Active automation to be of any real utility. This makes it attractive to use 'self-selecting' or 'autonomous' content. Such content typically embodies all of its own possible variations in one monolithic entity, and contains sufficient automation (Active-ness) to perform appropriate internal self-selection based on external information (global settings such as origin and destination).

The advantage of self-selecting or autonomous content is that, given a consistent platform, adding new uses – e.g. new jurisdictions for T&Cs, or new documents that need T&Cs – involves the least possible work on the 'using' entities.

There is no one-size-fits-all answer to the question of what type of reusable content is 'best'. It is clearly not practical to create one content element per customer to express that single customer's name and address; some degree of automated 'Active-ness' is necessary. On the other hand, an organisation may prefer for its own reasons to forgo self-selecting T&Cs and accept the maintenance overhead, to keep management of local T&C variations in the hands of local personnel by allowing separate local elements.

The appropriate ratio of Static to Active, and the degree of 'Active-ness', will depend on the needs and disposition of the organisation.

7.3   Change-impact evaluation and content origin reporting

By definition, reusable content will have uses in different contexts. Those who maintain it need to know what those contexts are, to help them understand the impact of any changes to the content – before they make changes.

Those who use it or who are responsible for the outputs of systems that use it, will also need to know those contexts, and will frequently need to know the precise origins of the content of a particular document or other output. Such requirements could go as far as the time of day of a document's generation, to determine the applicable version of a content element and by whom it was last changed.

If any reusable content can be manually modified after use, then the organisation may need to take note of 'how often' and 'how much' to determine if the content is fit for purpose and adapt it if necessary.

The common need expressed here relies on built-in capacity in the design & maintenance environment for recording and tracking relationships between every content element and other elements that use it, or have used it in the past.

The usage environment must meet similar requirements with built-in capacity to recognise relationships between all input and output elements; it should be possible to know the exact inputs, including reusable content elements, that built any given document, email, or other output element.

7.4   Maintaining reusable content

Enterprise-wide content reuse requires enterprise-grade management. This in turn necessitates specific and clear enforcement of access rights for both maintenance and use. As content reuse becomes the norm, the expectation will be that subject matter experts and other qualified contributors can capture their knowledge and other types of gold-standard content

Any solution must enable contributors to build reusable content as easily as possible, facilitating collaboration both internally and with external parties for creation, review, verification, and approval of content. Functionality to support these requirements should include:

- Detailed versioning and change history
- Collaborative editing
- Review and approval
- In-document commenting
- Ability to use non-automated and externally provided documents
- Use in email content
- Access by internal and external users for creation, maintenance, and review

7.5 End user horizons: automated personalisation and the human touch

Software needs data to populate variable content or to drive business rules, but not all information is data. We may intuitively know the tone and tenor of communication we want to use with Customer X, but there is no way of systematically defining our intuition in the CRM, to say nothing of attempting to drive business rules from it.

In short, not all information about clients or employees (or others) is amenable to capture and storage in electronic form. In turn, these natural limitations of data systems limit the real scope of automated personalisation of documents, even with the smartest automation and even with the smartest reuse of content.

"If business rules and pure data cannot choose the correct content,

allow the user to choose."

If the situation demands human understanding and input beyond data, a human being is available: the user. Thus, there is a solution to allow personalisation to the finest degree, from salutation to sign-off – the human touch. If business rules and pure data cannot choose the correct content, allow the user to choose. If content requires adjustments that only a human being can make, allow the user to edit it. If appropriate, allow the user to both choose, and adjust, content.

All this needs is a document automation product that allows the user to select and/or edit content during document generation. To achieve this, it must enable solution designers to specify the high-level rules – the contexts, conditions, and permissions – that make it appropriate and necessary to allow such user actions, and it must provide the means to enable the actions.

7.6 Extending content reuse beyond automation

Organisations invest effort into building libraries of reusable content, usually in the context of automated document generation. There is extra value in this 'gold content' and it comes from the next opportunity for content reuse, in email and other document types.

These may not be the output of document automation systems, but the benefits of content reuse still apply – and the document automation product is the enabler of content reuse.

Extending content reuse requires the document automation product to be accessible in a wider context. It requires the product to integrate easily with other document-generating software – such as email clients and word processors – and to provide the means of finding and using content.

Ideally, the product's integration provides a search function, but whatever means of content acquisition it provides, it must only allow access to appropriate content. This means that permissions-based access is necessary – a given in the document automation context and no less valid at this level of usage. If a user who is not part of the Human Resources group cannot create HR documents or use HR content in the document automation context, then it is reasonable to expect the same control outside of that context.

This level of content reuse may result in access to both Static and Active content. In the case of active content, it is important that the embedded automation remains functional. This implies seamless support for features like placeholders, rules, access to data sources, and the use of dynamic questionnaires.

8   Using ActiveDocs Snippets to manage reusable content

ActiveDocs is an enterprise-grade document automation product that enables organisation-wide reuse of content in both automated documents and communications, and within the realm of non-automated documents.

ActiveDocs manages reusable content in the form of Snippets that support both Static and Active content. Like ActiveDocs templates, Snippets use the Microsoft Word document format and the design environment is Microsoft Word.

Incorporating ActiveDocs automation in Snippets uses the same tools and techniques used for Templates, and, for both, the use of Word facilitates all of its rich styling, formatting, content, and layout capabilities. ActiveDocs enhances maintenance with comprehensive review, commenting, and change tracking tools that enable collaboration both within and outside of the organisation.

The rich automation functionality of ActiveDocs leverages reuse of both design elements and content, from the Data Views that connect data sources, through Static and Active Snippets, to complete Templates.

Content reuse with ActiveDocs, especially through Snippets, eliminates unnecessary duplication of content. This can massively reduce the overall number of templates, reducing the effort needed to make changes across multiple templates, and enabling the organisation to respond very quickly when documents need to change.

Figure 2 shows ActiveDocs functionality that enables more expert knowledge to be captured within reusable content, and helps reduce the number of templates an organisation needs to maintain.
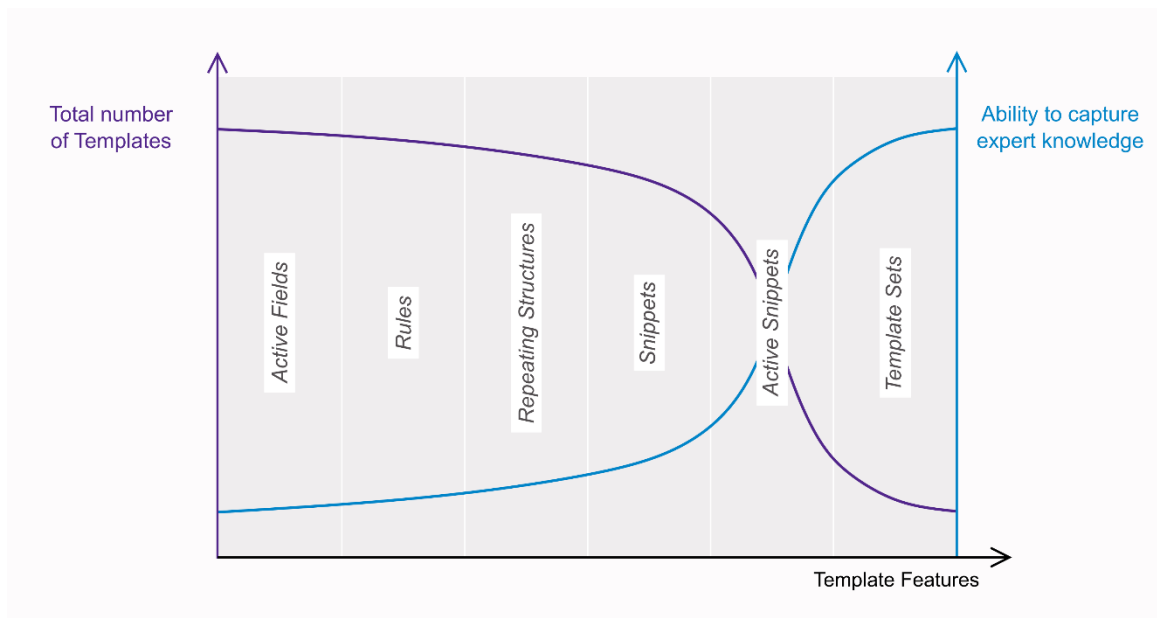

FIGURE 2: ACTIVEDOCS FUNCTIONALITY THAT ENABLES GREATER EXPERT KNOWLEDGE CAPTURE AND REDUCTION IN TEMPLATE NUMBERS.

For organisations operating multiple brands, ActiveDocs enables content reuse in differently branded and styled documents. Smart merging ensures that content from Snippets always adopts the brand style, while automation allows rule-driven selection of brand-specific content when needed.

ActiveDocs fully supports the 'beyond automation' use case outlined above. Beyond automated document generation it integrates with email clients and other document creation applications like Outlook and Word to contribute to their respective output via controlled use of both Static and Active Snippets.

In the 'human touch' use case, ActiveDocs enables use of Template and Snippets in scenarios that require document-specific selection and/or editing of reusable content. For example, the user may select from dynamically determined categories of Snippets to obtain the 'best-fit' content, and then edit the content within the same interface as a seamless part of the document generation process.

ActiveDocs supports in-depth reporting on Snippet deployment in both Templates and generated documents. These facilitate better understanding of the effort and impact of changes, and traceability of content usage.

ActiveDocs is a document automation product that empowers organisations to capture and reuse expert knowledge and other content across their operations. Regardless of who generates it, or how, every document and communication can be accurate, personalised, compliant and well branded, underpinned by 'gold content'.

9 Real-life examples of the benefits of Snippets for ActiveDocs clients

Core business knowledge use and management (Commercial Property Insurer in the USA) – view case study.

Management of health and safety documents (Silver Fern Farms) – view case study.

Generation and updates of large volumes of documents (Employsure) – view case study.

10   Summary

Content reuse enables organisations to operate more efficiently and generate communications that comply with internal and external standards and have accurate, personalised content.

Document automation products that support content reuse should enable organisations to capture expert knowledge and other 'gold content', and make it available in accessible form to people who need it to generate accurate, personalised documents and other communications. This capability needs to be available within both automated and non-automated documents and communications.

ActiveDocs is a document automation product that provides an extensive range of functionality that helps organisations build up their reusable content and leverage it effectively. In design and management of automation and content, it facilitates collaborative creation and review. It provides the tools for two-way tracking of content origin and use. In the creation of documents, through formal automation or by integration with other applications, it provides supremely flexible content reuse.