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ActiveDocs' **NICK CHIVERS**  
discusses document automation and  
its relation to IT and business strategy

# document automation

## What is the definition of document automation?

**D**ocument automation is the use of technology, systems and processes to allow people and/or programs to create documents. It is based on the concept of using a template and adding data to it to create a document.

## How does document automation relate to overall document management?

Document automation starts the document life cycle by creating the document. Then, document management takes over and manages the document throughout the rest of its life cycle. Document management systems are becoming a necessity, but they are only as good as the quality of the documents that they manage.

## Is the purpose of document automation to create better documents?

Yes. Documents are primary touch points among employees, customers and partners.

In order to understand how document automation creates better documents, it is important to understand how a business creates documents. Without document automation, there are only two ways a business can create documents. The first way is to create a new document from nothing, which is not a very efficient process. The risk is that the documents may be inaccurate or incomplete.

The second way is to copy from an existing document. This can save time, but involves even more risks. For example, one could start with the wrong document or transfer unwanted personal data from one person's document to another.

## So the drivers here are to improve efficiency and mitigate overall risk?

Yes, that's correct. The two methods that I mentioned are inefficient and carry a high risk of creating poor branding and incomplete or inaccurate documents. This can cause embarrassment, expensive legal action and, in some cases, criminal liability.

There has to be a transition from unmanaged document creation to managed document creation. A document automation solution must help manage the document creation process, minimize

risk and improve efficiency. This way, one can create accurate, timely and personalized documents.

## How does a document automation solution work?

A document automation solution must help do three crucial things. It must enable a company to create great templates, have a means of acquiring the data and then merge the template and data to assemble the document. Additionally, there must be systems and processes around these functions that tie them together.

Consider a simple example of Document Automation technology – a basic template with placeholders, perhaps just some highlighting to show data is required. We can add a system (put the basic template in a shared folder) and a process (we ask the user to use the template: find it, copy it, edit it and save the result).

This simple example has a few flaws. The user needs to figure out which template is needed, find it, copy it and then edit it with a painful, manual, find-the-placeholder-and-replace-with-data process. This will almost certainly involve re-keying data already stored in our system, so we haven't addressed efficiency, and we still have the risk of missing some of the placeholders or inconsistently completing them.

Once that process is complete, the document has to be saved. Then, a number of questions arise, such as: In what format do we save it? To where do we save it? What happens to it next? How do we enforce the desired processing?

## In other words, this simple example seems to work in theory, but the complexities of the "real world" prevent it from being a viable solution.

That's correct. It must be easier for users to find the templates that they need and for those templates to be easier to use. To achieve this, there must be an improvement in the way they are created and maintained. With our document automation solution, once the document has been created, the system itself comes back into play to facilitate the rest of the process – formatting, storage, delivery and passing the document to other applications, such as Document Management Systems.

## What does an ideal document automation solution provide?

An ideal solution provides integration of template design, data acquisition and document assembly. It will have usable and robust systems and processes to manage these things, and will provide an appealing document creation facility. It should also involve an enterprise-grade application, thus; the platform and infrastructure requirements must be reviewed to see how they fit with the corporate systems. The solution must also be able to integrate with corporate data sources, as well as pass completed documents to other applications.

Beyond that, the business units should be able to manage the templates themselves, rather than tie up the IT department with unnecessary work. The users should also be able to easily keep up with regulatory and market changes, but there must be plenty of control over how the change process is managed. Lastly, the solution must enable direct program-to-program document creation by other applications, but still allow the business to perform easy template maintenance.

## What makes for better template design and management?

A Document Automation Solution might offer enhanced Template Design by adding macros or other tricks. But the ideal scenario is for business units to do the Template Design, and they won't want to work with the intricacies of code. So the preference for Template Design is a higher level of abstraction for designers.

Template Design is like document design with added functionality. The solution should ideally use a tool that hooks into an established document design tool, like Microsoft Word, and leverages a very wide skill base.

More than one template is necessary, because companies produce more than one type of document. Still, there will be common content, such as standard terms and conditions, as well as common data, such as customer information. They should be managed in one place, so a modular approach is best. In fact, beyond a critical mass of content, the modular approach becomes essential. Corporate data sources should be integrated to help template designers map the template's data requirements



to the data sources available. This helps eliminate the risk of users re-keying data. This approach addresses efficiency, as well as helping to avoid the inevitable errors of transcription.

There should be support for multiple environments, like development, quality assurance and production, so that different types of users can create, test and finally deploy those templates in a live production environment. This must be supported by a robust, well-managed and controlled method for moving templates between those environments. There should be version control, where changes can be rolled back, as well as a way to get approval from impacted parts of the business before templates are used.

All of these requirements are meant to allow users to easily find and use the right templates. If they cannot do this, then they will fall back on the old habits of copying, cutting and pasting.

### How can data acquisition be improved?

Let's assume the Template Design and Management team can put the templates where users can find them.

Now consider the user interface for Template Selection and Data Acquisition. Is an expensive client installation required, or can users work through a thin client, ideally a Web browser? Will the solution provide a level of abstraction via a Wizard or Forms interface for users so they don't interact directly with the template?

The focus on Data Acquisition is about how best to get data from users. This goes beyond data source integration as discussed in Template Design. Looking back into design, that's where most of the technology is added to the template to enable users to do their job.

Among the useful features would be validation, field typing, controlled and filtered access to data sources, optional data capture, default value calculation, free text, table and graphical data capture and presentation, incorporation of business logic via data-driven rules, and a process for the document creator that makes logical sense and flows properly. This will be enabled in design only if the design environment is rich enough.

If our designers can add these features into templates, the document creator's task is simplified and better structured. Adding the right user interface for the document creator provides some confidence that a well-designed template can be matched with good-quality data to produce a good document.

### What makes for better document assembly?

Document assembly merges the template with the data acquired from users to produce the document. Better document assembly adds sophistication. Business logic will determine whether parts of the document get created or not, as well as whether there will be common text, such as terms and conditions, or modular components.

There are a couple of questions that must be asked when looking at solutions for programmatic document creation. Are we looking at a push model where the other application provides all of the data for the document? Alternatively, are we looking at a pull model that is driven by the template's data requirements itself? How much more than just document assembly do we want to be able to do this way? The engine's design is going to be critical for enabling various functionalities.

### Given that, do we need to look beyond document assembly?

Yes, to find a good solution, one must look beyond just document assembly. For instance, will the document be converted into various formats, stored in or forwarded to other systems, and delivered through existing infrastructure? Also, it might be necessary to consider alternative workflows. A company may want the ability to edit and approve the document after it has been created.

### How does ActiveDocs Opus address the document automation solution requirements?

ActiveDocs Opus is a result of our substantial experience in document automation. We started doing individual customization of templates for customers and identified a need for an application that would allow customers to do this for themselves, without involving IT skills. Thus, we developed a desktop suite several years ago, which evolved into our first server-based application, ActiveDocs Enterprise. This then led to ActiveDocs Opus. ActiveDocs is a Microsoft Gold Certified Partner, and our products are all built on Microsoft.NET (v3.0) technology.

ActiveDocs Opus provides a client module for template design and management, and we use Microsoft Word to design templates and then add our technology to them. We fully embrace the modular concept, so we have reusable content for sharing terms and conditions and other common

content. Additionally, we offer publication control and approval prior to the templates being made available to users. Our designers then upload templates to the composition server, making them available for users to select and use through a standard Web browser.

Next, we have a wizard process that automatically renders all of that functionality in the template. Once the document is created, we can produce the output in every standard format. We support post-production editing, so we allow documents to be edited and permit a peer group to approve documents before they are delivered outside of the system. We include delivery as well, and that integrates with existing prints, e-mail and fax infrastructure. We can store the documents in a local database or pass them through to other applications. We also allow the Document Wizard to be executed from other applications, such as the CRM, and we deploy Web services that use the push model for programmatic document creation. It is a comprehensive and well-designed document automation solution.

### Where is the document automation market right now?

It is still an emerging market. There are approximately a dozen significant players involved in it. What we have been seeing recently is a high level of venture capital input and acquisitions. One of the principle forces driving this is end-to-end integration.

It's a huge market when you extrapolate from the number of organizations we talk with that don't use Document Automation. Some are constrained by how their existing line-of-business applications generate documents, or by commercial arrangements with print shops where the organization might not even own the templates that create its mission-critical documents.

We believe that the accelerating uptake and maturing of document management and enterprise content management systems is leading to the realization that these systems are only as good as the quality of the documents they manage. In the end, if you are creating imperfect or flawed documents, these documents are what will be stored in your DMS. It is imperative that documents are created correctly, and that is what Document Automation is designed to achieve. Document Automation provides significant benefits to every organization and we are excited about continuing to be part of this vital market sector. **BTQ**



**NICK CHIVERS** is Director of Product Marketing for ActiveDocs, a world leader in Document Automation Software. Nick has had a 25-year career in software development and marketing around the world, working with companies such as Ford, GE Capital, BP International and CAP Gemini. He joined ActiveDocs in 2006 after a mid-career update studying business, marketing and information technology at AUT University. In addition to his primary role, Nick is part of the company's Product Management Group and keeps in touch with customers and the marketplace presenting ActiveDocs solutions in pre-sales engagements and in ActiveDocs' open-seminar programs.



# DOCUMENT EXCELLENCE THROUGH INNOVATION

ActiveDocs™  automates the production of business communications across your enterprise using smart technology, systems, and processes, to ensure your document creators can easily create properly branded, accurate, personalized documents. ActiveDocs Opus gives you the tools to manage document generation through secure design, publishing, approval, and delivery, to ensure you're up to date with your customers, regulations, and the market, and keeping your business in business.



  
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