ActiveDocs

DOCUMENT AUTOMATION SOFTWARE

ACTIVEDOCS INTEGRATION

DATA SOURCE INTEGRATION AND APPLICATION INTEGRATION WITH EMPHASIS ON MICROSOFT® SHAREPOINT AND MICROSOFT® CRM

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Abstract: This document provides an overview of the integration options supported by ActiveDocs, with particular emphasis on data source integration, and integration with other applications such as Microsoft® SharePoint and Microsoft® CRM.

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1 Introduction

ActiveDocs provides Template Designers with the tools to develop Templates that can use external sources to provide answer data for documents.

ActiveDocs also provides a number of options for integration with Microsoft® SharePoint, Microsoft® CRM and other Customer Relationship Management systems, and other applications. While ActiveDocs is built on Microsoft® and .NET technologies to leverage that powerful environment, and requires a Microsoft® operating system for itself, the open nature of the application means that integration with applications running on Microsoft® and other operating systems is exceptionally well supported.

This document provides an overview of ActiveDocs integration with template repositories, document repositories, data sources, and other applications.

2 Template/Snippet Storage and Retrieval

ActiveDocs allows Templates and Snippets to be stored in, and retrieved from, locations other than its built-in database. These options include:

- File system.

- Microsoft® SharePoint.

- WebDAV-compliant applications.

The ActiveDocs Content Manager module allows Template and Snippet Folders to be mapped to these alternative locations.

Snippets are ActiveDocs Design Components which can be used to build Templates, and are often used for common content such as standard terms and conditions, sign-off paragraphs, and legal clauses. Companies which already have such common content in use as Microsoft® Word XML files stored in locations such as those listed above, now have the option to map those locations to ActiveDocs and achieve wider use of the material in documents created from ActiveDocs Templates.

3   Document Storage and Retrieval

ActiveDocs allows documents to be stored in and retrieved from locations other than its built-in database. These options include:

- Web Services.

- File system.

- Microsoft® SharePoint.

- WebDAV-compliant applications.

ActiveDocs Composition Server's management utilities allow the specification of alternative storage locations on a subsite basis.

3.1   Web Services

This feature was introduced in ActiveDocs Opus Mako to allow completed documents to be sent automatically to a nominated Web Service, from where they can also be retrieved.

Using a Web Service as a document repository opens up exciting new possibilities for post-creation handling of documents. ActiveDocs provides a specification for the Web Service interface that allows the document bytes, metadata, and Answers to be sent. The Web Service, developed by the customer or a third-party integrator, would typically interact with another application such as a Document Management System, storage system, or workflow product, using the document information to make intelligent decisions about the onward handling of the document.

3.2   File System

Any file system location accessible by the ActiveDocs Composition Server can be nominated as a document repository where documents are sent automatically on completion. Alternative locations may be specified through the use of document compilation in Automated Mode.

Using the file system as a repository opens up further possibilities such as the use of monitored "hot folders".

3.3   Microsoft® SharePoint

Any Microsoft® SharePoint library accessible by the ActiveDocs Composition Server can be nominated as a document repository where documents are sent automatically on completion. Alternative locations may be specified through the use of document compilation in Automated Mode.

Documents sent to a Microsoft® SharePoint library are subsequently managed by Microsoft® SharePoint according to that library's configuration.

3.4   WebDAV-Compliant Applications

Any WebDAV-compliant application accessible by the ActiveDocs Composition Server can be nominated as a document repository where documents are sent automatically on completion. Alternative locations may be specified through the use of document compilation in Automated Mode.

Documents sent to a WebDAV-compliant application are subsequently managed by that application.

4   Data Source Integration

ActiveDocs is designed to help organizations to produce high quality documents. Documents are built from Templates and data, both of which contribute to the quality of the finished document. ActiveDocs Designer enables organizations to create high-quality Templates with exceptional capabilities for data validation.

Data validation is achieved through a combination of a wide range of data types (text fields for text, date fields for dates, numeric, percentage, yes/no, and image types for their respective uses), mandatory & optional fields, default calculations with optional scripting capabilities, field locking, range & format checking, and the ability to select data from single-column and multi-column lists.

List values may be built into the Template by the Template Designer, or the Designer may choose to obtain the list values from an external data source. ActiveDocs provides the means to achieve this level of integration through the use of Data Views.

Data Views are ActiveDocs Design Components which allow connections to any visible ODBC- or OLE- compliant data source, from a spreadsheet to a corporate database.

ActiveDocs Opus Mako added the ability to connect to Web Services, for which ActiveDocs provides the interface specification. The use of such Web Services – written by the customer or by third-party integrators – opens up exciting possibilities for the use of data sources which may be remote (where keeping direct links open is not an option), or require auditing (the Web Service is told who is making the request), or not suited to ODBC/OLE representation (specialized services, legacy systems).

The ActiveDocs Data View wizard enables Designers to specify the source data type and the source location, optional SQL, column selection, post-query filtering, and optional caching.

The Data View then becomes a Design Component available for use in Snippets, Templates, and Design Item Sets, in which selected fields or collections of fields may be linked to the data source via the Data View. Dynamic filtering may then be applied; for example, a user's known business area may be used to filter the available customer records based on their relationship with that business area.

Fields may be auto populated from filtered Data Views. This feature is especially useful for Repeating Items – groups of fields typically used to populate variable numbers of table rows – and single-column lists.

ActiveDocs Opus Viper adds the ability to use Stored Procedures with single or multiple parameters which can be populated dynamically at run time. The use of Stored Procedures makes ActiveDocs more powerful and flexible, makes the database more efficient as the query plan can be worked out in advance by the DBMS, and reduces network traffic as smaller result sets are returned by the database in comparison with post-query filtering.
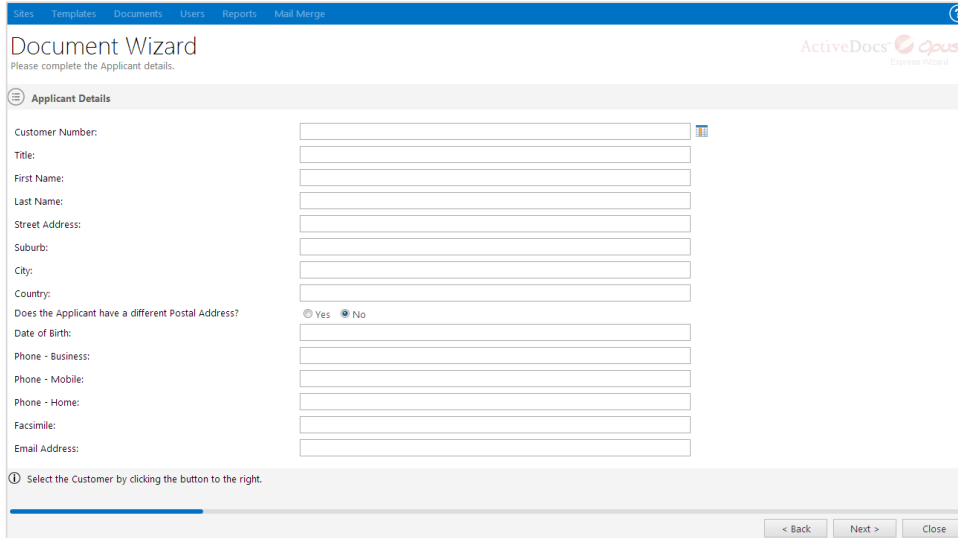
5 Document Wizard

The Document Wizard is the ActiveDocs browser-based module that provides interactive use of ActiveDocs Templates. It works with all such Templates, using an interview-style, step-based process to elicit from the end user or document creator the information ("Answers" in ActiveDocs terminology) required to populate and produce the finished document.
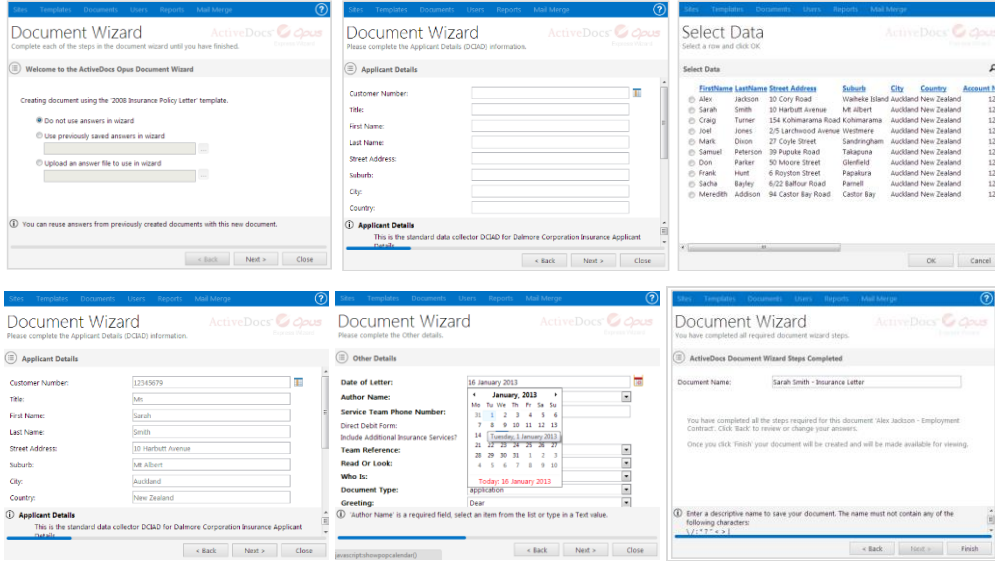
A standard ActiveDocs installation allows document creators to use the Document Wizard from the ActiveDocs Express Wizard. The Express Wizard is a browser based interface that allows document creators to select a Template or Template Set from a folder-based list of the Templates that the document creator is given access to.
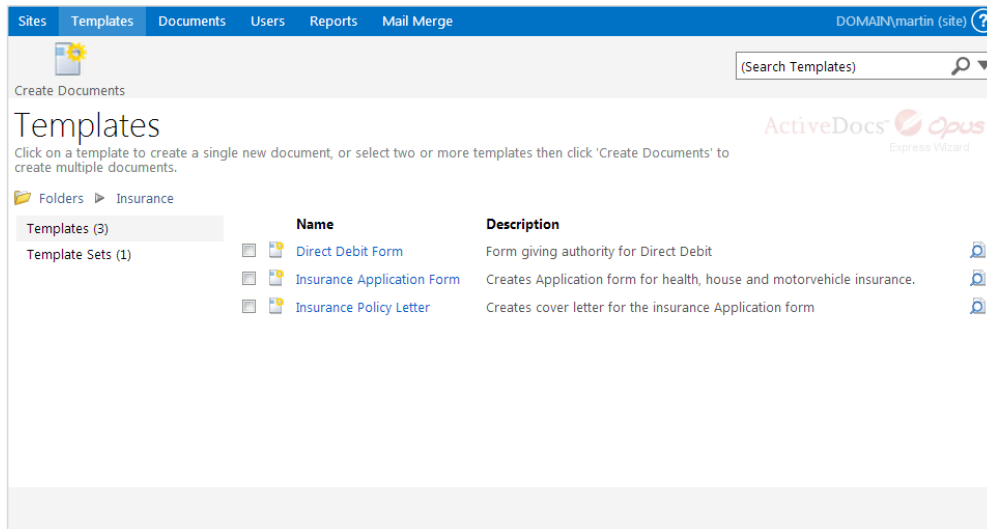
Express Wizard is a simple and easy product to use, but many organizations prefer not to ask their document creators to learn and use yet another interface. In this case, ActiveDocs provides the ability to run the Document Wizard from almost anywhere – in fact, anywhere that a URL can be specified.

The URL typically specifies the name of the ActiveDocs Composition Server site and the name or ID of the required Template. It may also contain optional information such as the web page to go to on completion of the Document Wizard, the required dimensions of the Document Wizard window (ActiveDocs Viper introduces smart resizing cropping) and, most usefully, the name and location of an Answer File which can be pre-populated with some or all of the answers required to populate and produce the finished document.

This style of integration allows the power and flexibility of ActiveDocs Templates to be used to create documents via the Document Wizard from just about any application in the organization's Information Technology suite. The diagram below shows the Document Wizard being invoked from both Express Wizard (Example 1) and from another application (Example 2).
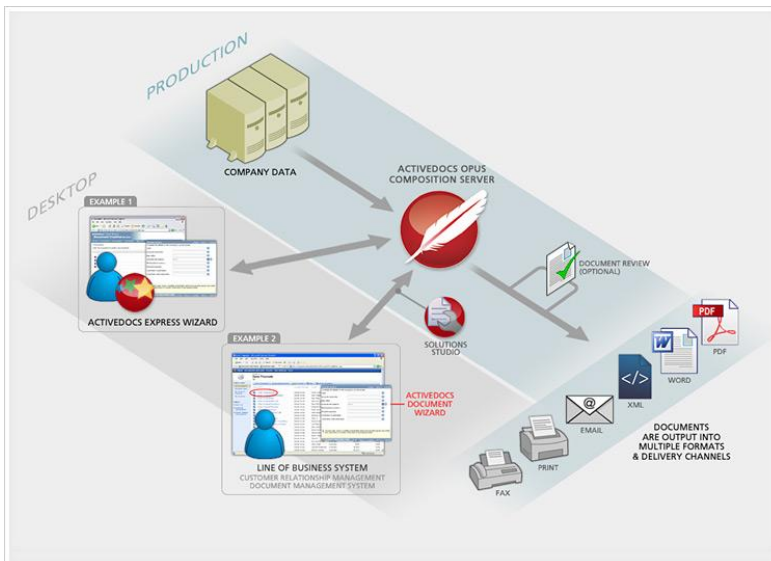

Allowing the Document Wizard to be invoked from another application requires a licensed copy of ActiveDocs Solutions Studio Module and some customization of the other application. The degree of such customization depends on the required functionality.

5.1   Document Wizard Invocation from Microsoft® SharePoint 2010

A combination of ActiveDocs Web Parts for Microsoft® SharePoint 2010 enables the creation of the following example of an individual user's workplace page, which uses ActiveDocs Web Parts for Microsoft® SharePoint 2010 to include a Template List, In-Progress Documents, and the ActiveDocs Document Wizard:
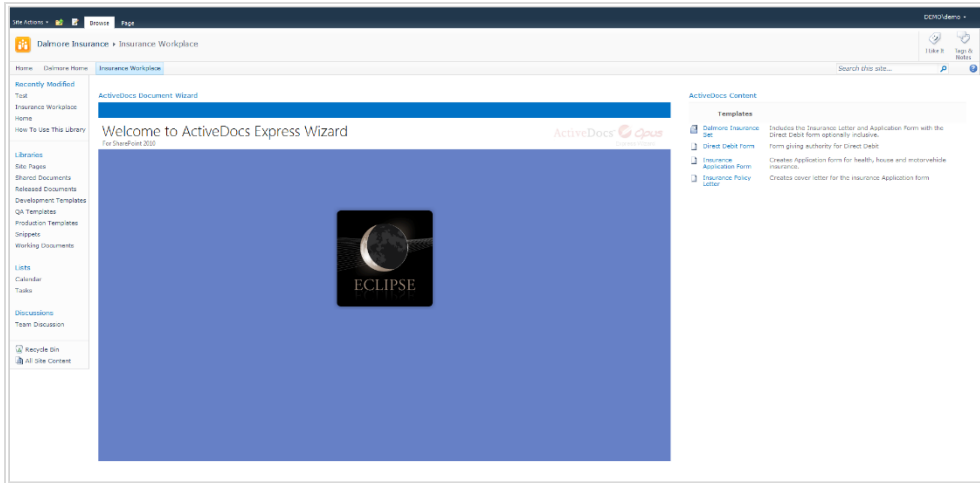

By clicking on a Template's name in the Template list, the Document Wizard is invoked automatically:
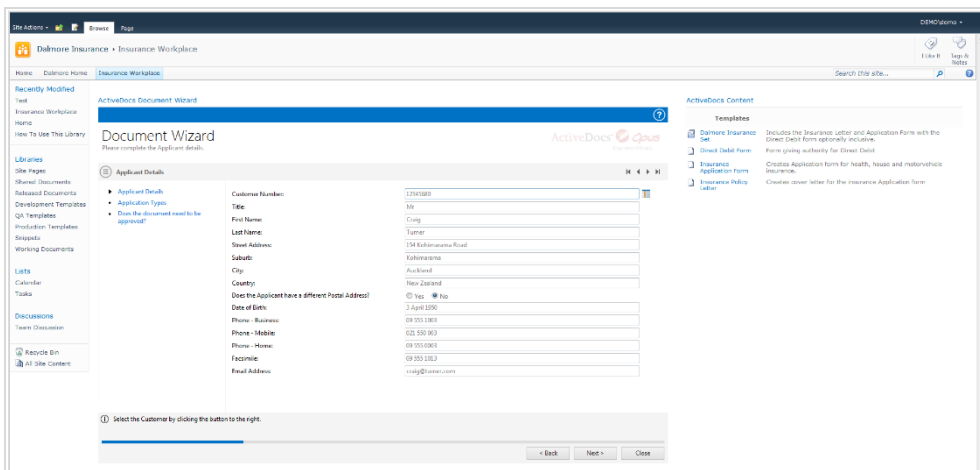
Further information about ActiveDocs integration with Microsoft® SharePoint 2010 is available in the next section of this document.

5.2   Document Wizard Invocation from Microsoft® CRM

The Microsoft® Dynamics CRM is an ideal candidate for ActiveDocs integration, allowing end users to generate documents from ActiveDocs Templates using the ActiveDocs Document Wizard.
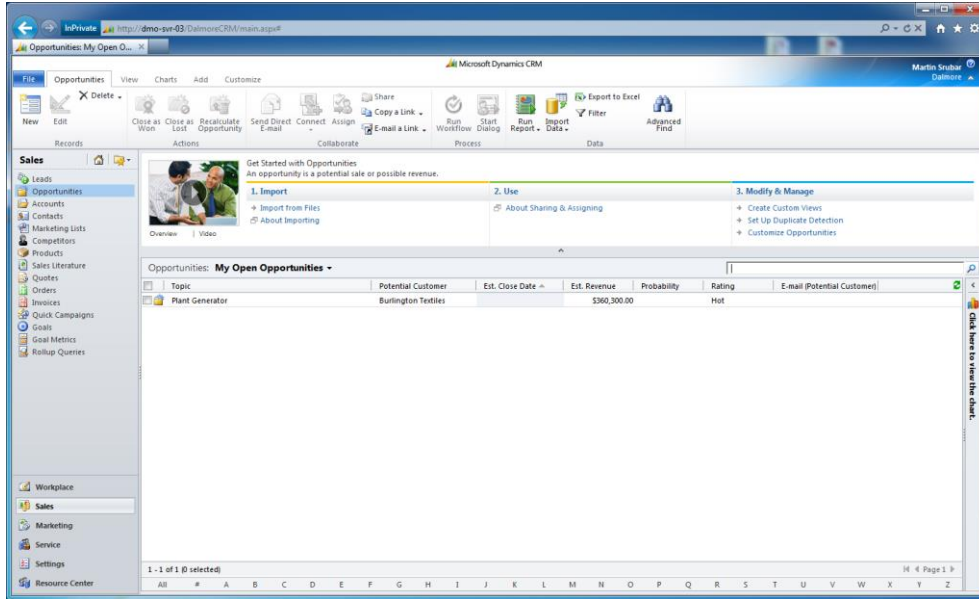
The opportunity's details are available through double-click. Templates to be used through the ActiveDocs Document Wizard are accessible through the opportunity ribbon:
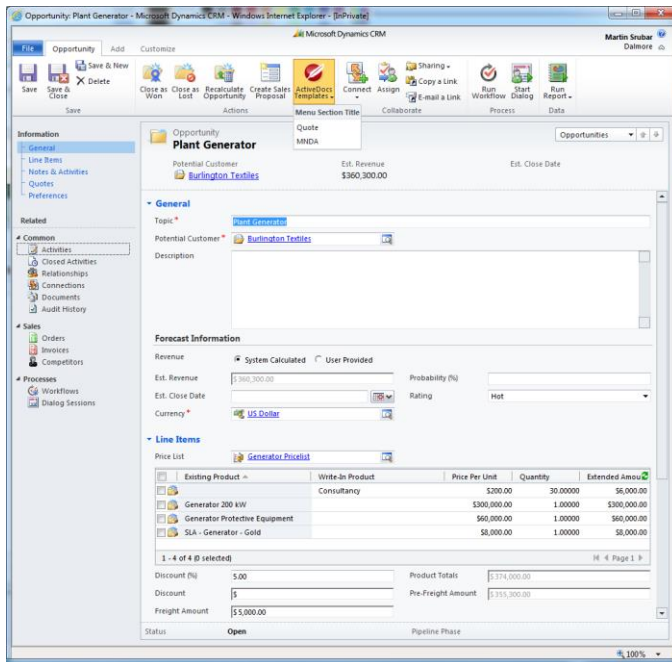
Behind the scenes the customized integration pre-populates the Answer data for the Document Wizard using the account details.
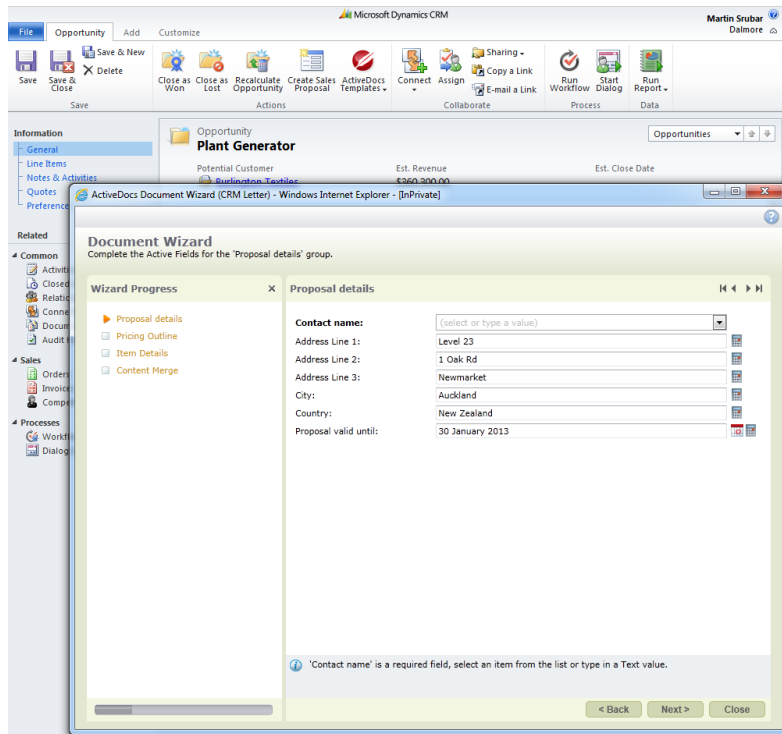
5.3   Document Wizard Invocation from other applications

The integration examples shown above give an indication of the possibilities for integrating the ActiveDocs Document Wizard with popular applications and thus extending the power of the ActiveDocs solution across the enterprise.

The principles and techniques used for those examples should be reusable in most applications that provide for customization, either as bespoke applications or via the Software Development Kit available for most reputable packages.

6   Microsoft® SharePoint 2010 Integration

ActiveDocs includes Web Parts and Document Libraries for Microsoft® SharePoint 2010 for superior integration.

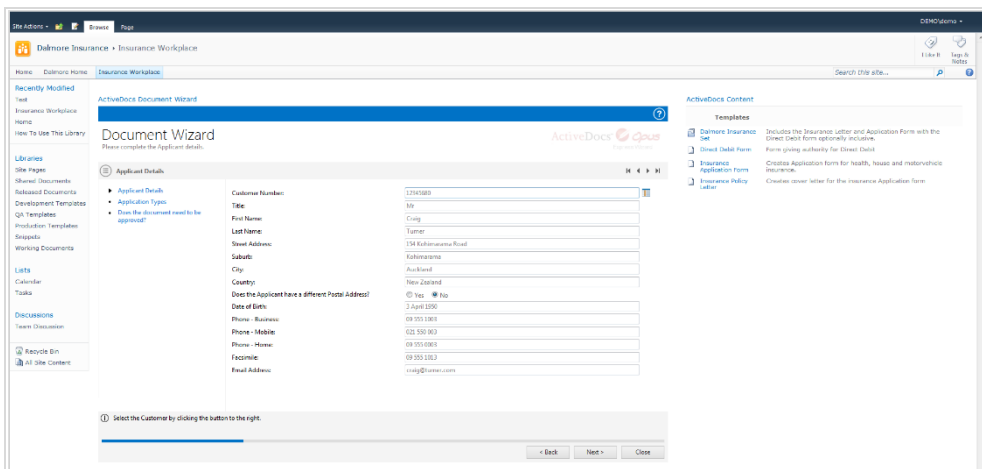## 6.1   ActiveDocs Web Parts for Microsoft® SharePoint 2010

ActiveDocs Web Parts for Microsoft® SharePoint 2010 include:

- a context-dependent list of available ActiveDocs Templates
- a list of a user's in-progress documents
- an embedded ActiveDocs Document Wizard

These are shown combined into a user's workplace page in Microsoft® SharePoint 2010:
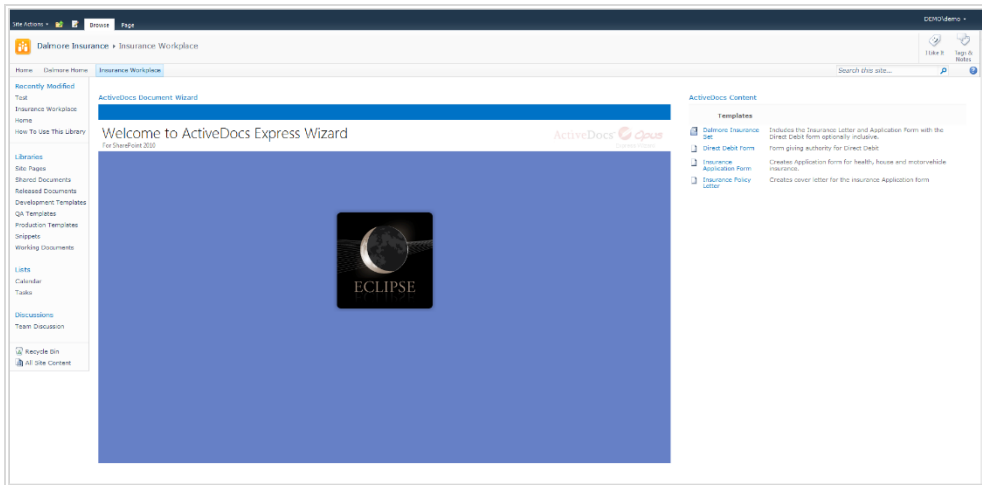
By clicking on a Template's name in the Template list, the Document Wizard is invoked automatically:

On completion of the Document Wizard steps, the document is assembled.

6.2   ActiveDocs Document Library for Microsoft® SharePoint 2010

The user is taken to the group's Working Documents library in SharePoint on completion of the document assembly step:
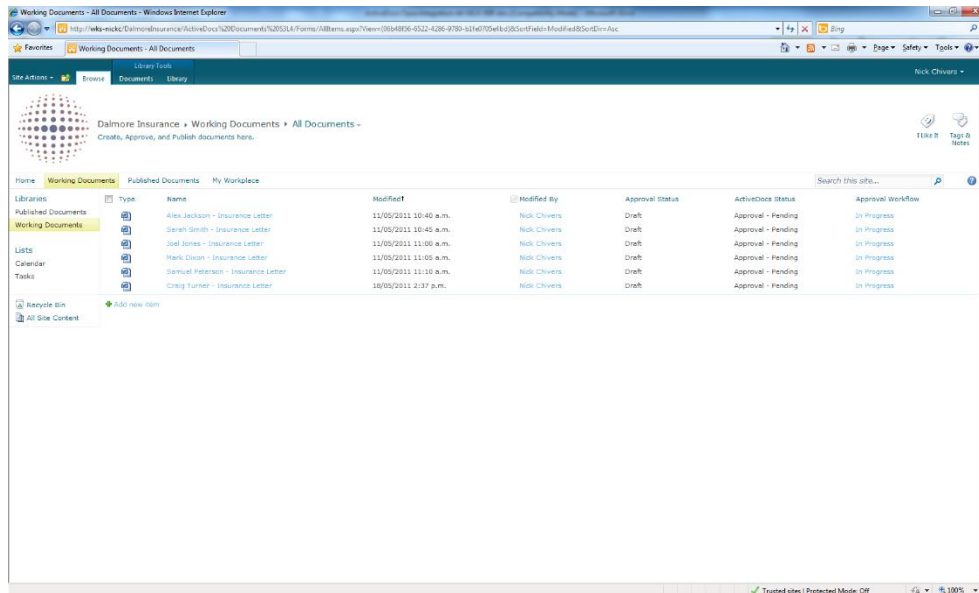

For illustrative purposes, the document library columns show three different forms of document approval:

- Approval Status (SharePoint Library Content Approval) is 'Draft'
- Approval Workflow (SharePoint Library Approval Workflow) is 'In Progress'
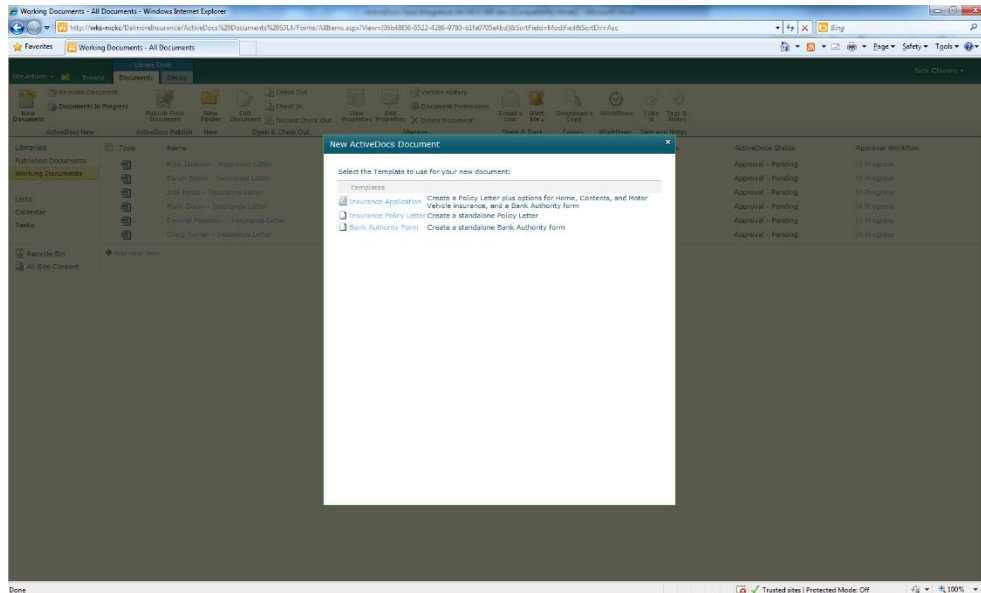- ActiveDocs Status (ActiveDocs Workflow) is 'Approval – Pending'

ActiveDocs Workflows integrate with Microsoft® SharePoint Workflows to control drafting, approval, and finalization of documents.

The user can also start Document Creation from within the Working Documents library by clicking on the library's Documents tab:
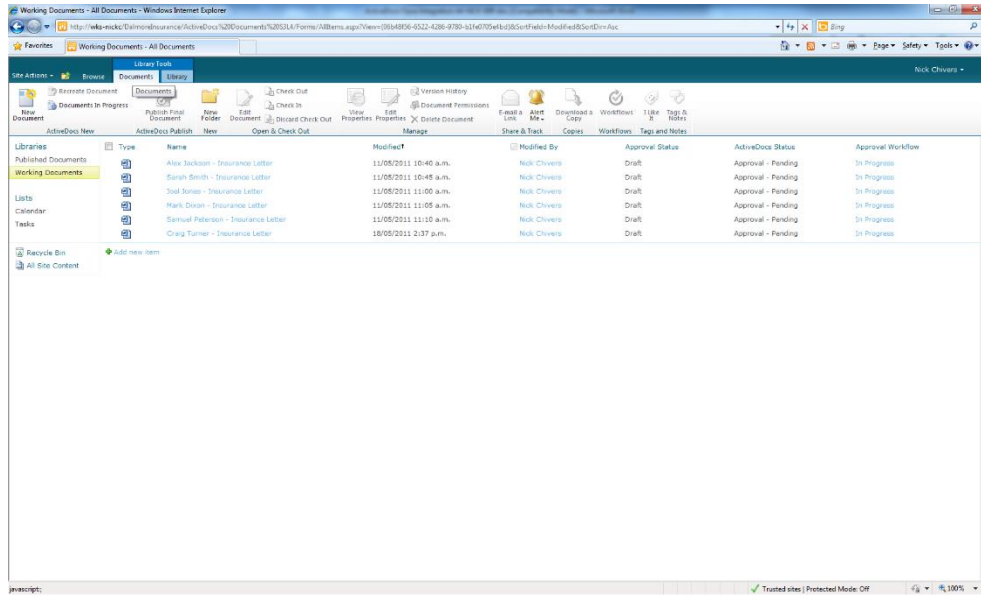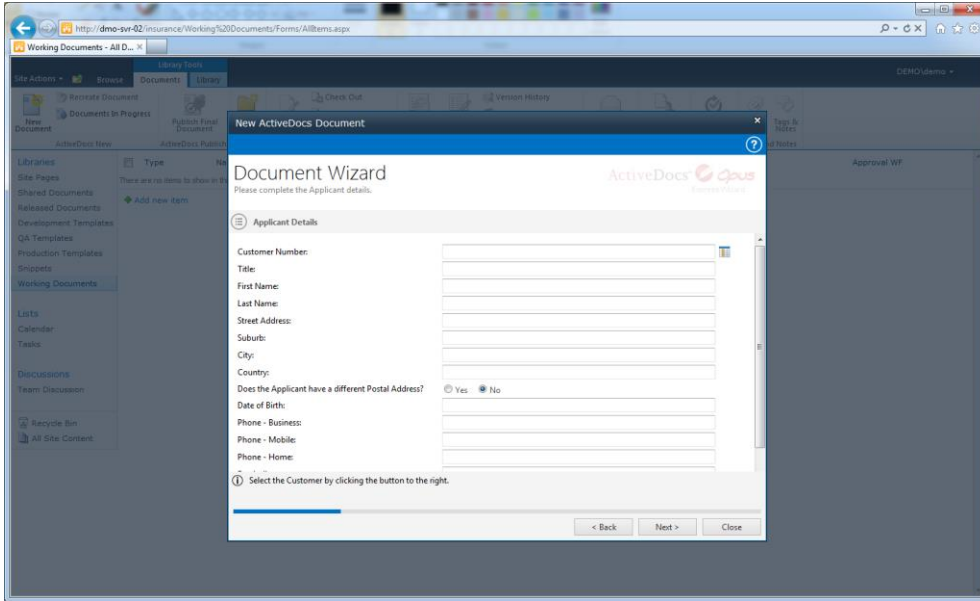

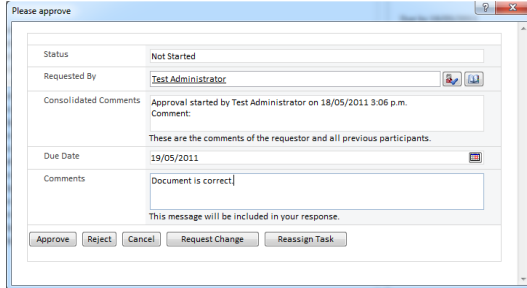and then selecting New Document:

As in the workplace example, the user is presented with a context-dependent list of available ActiveDocs Templates. Clicking on one of these invokes the ActiveDocs Document Wizard:

On completion of the Document Wizard steps, the document is assembled. The user is returned to the group's Working Documents library in SharePoint on completion of the document assembly step:
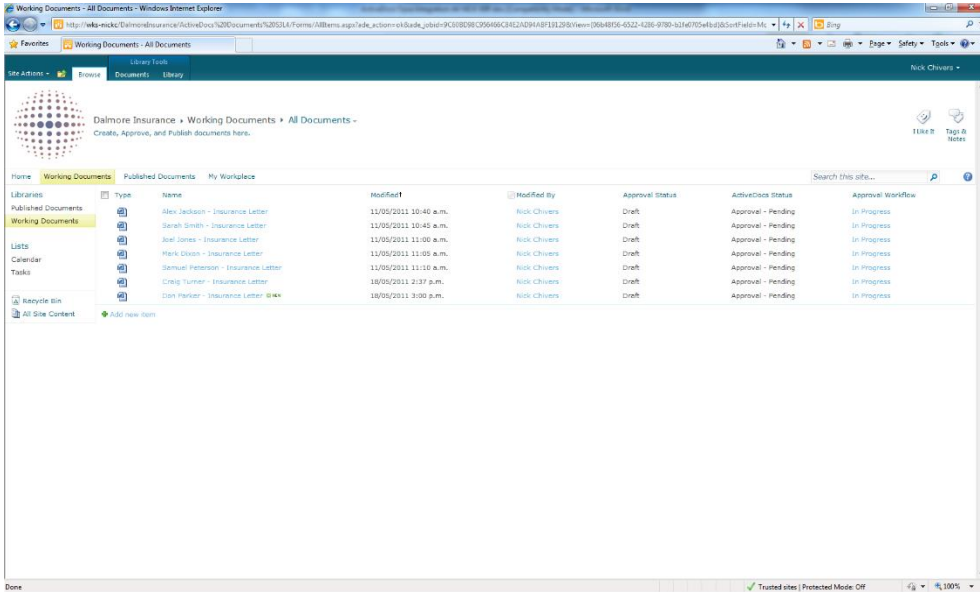
The SharePoint workflow (Approval Workflow) takes control when the document is added to the library. The configuration of the workflow determines how the approval process proceeds e.g. via emailed tasks and/or library tasks. In this example the approval process is completed via Outlook 2010 for the latest document:
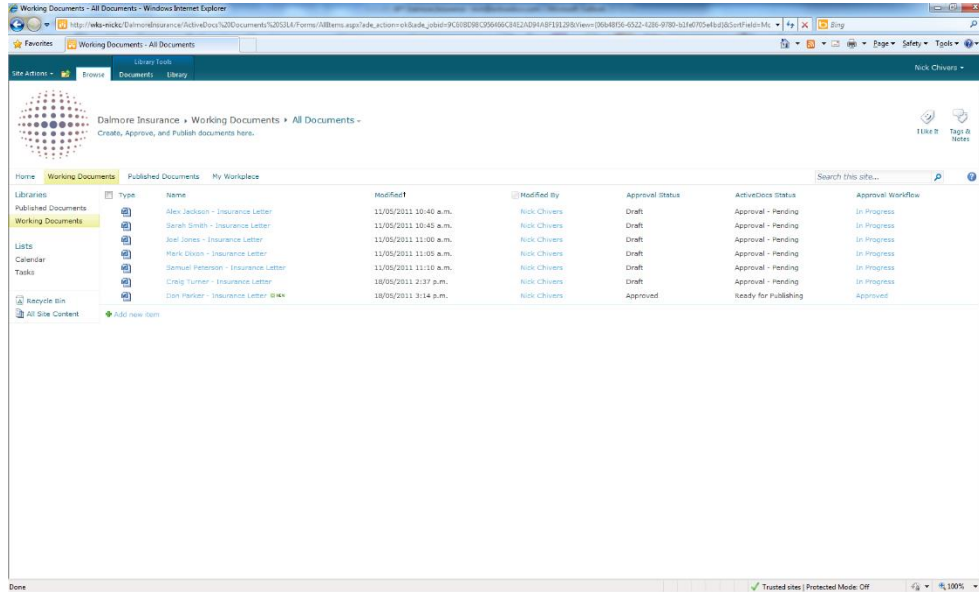
The document status changes automatically in the library:

- Approval Status (SharePoint Library Content Approval) is 'Approved'
- Approval Workflow (SharePoint Library Approval Workflow) is 'Approved'
- ActiveDocs Status (ActiveDocs Workflow) is 'Ready for Publishing'

By selecting the document, the Documents tab's functions are displayed. The user clicks on Publish Final Document and confirms that ActiveDocs can Finalize the document.
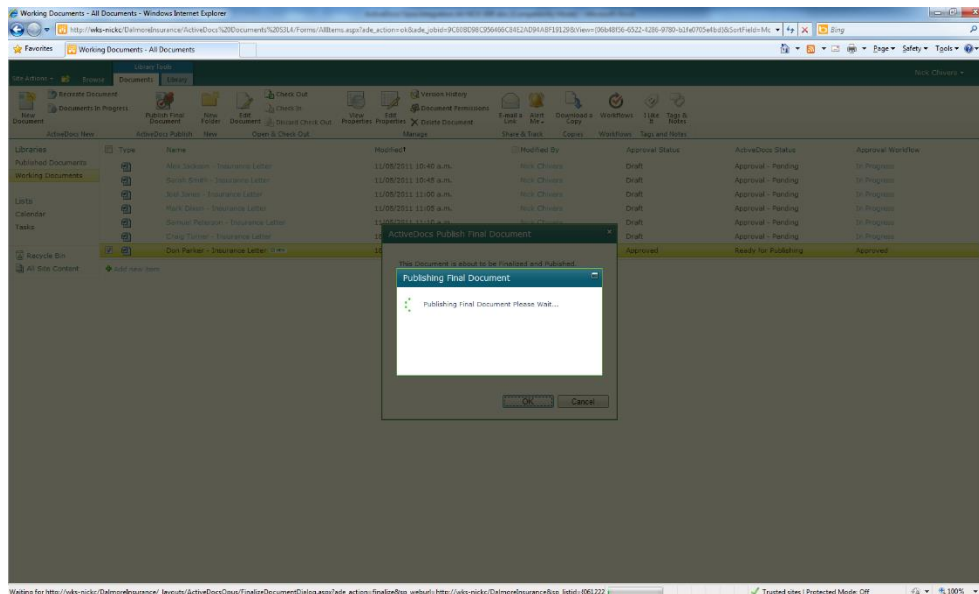
In this example the ActiveDocs Workflow's settings cause the document to be converted to PDF and placed in the Published Documents SharePoint library.
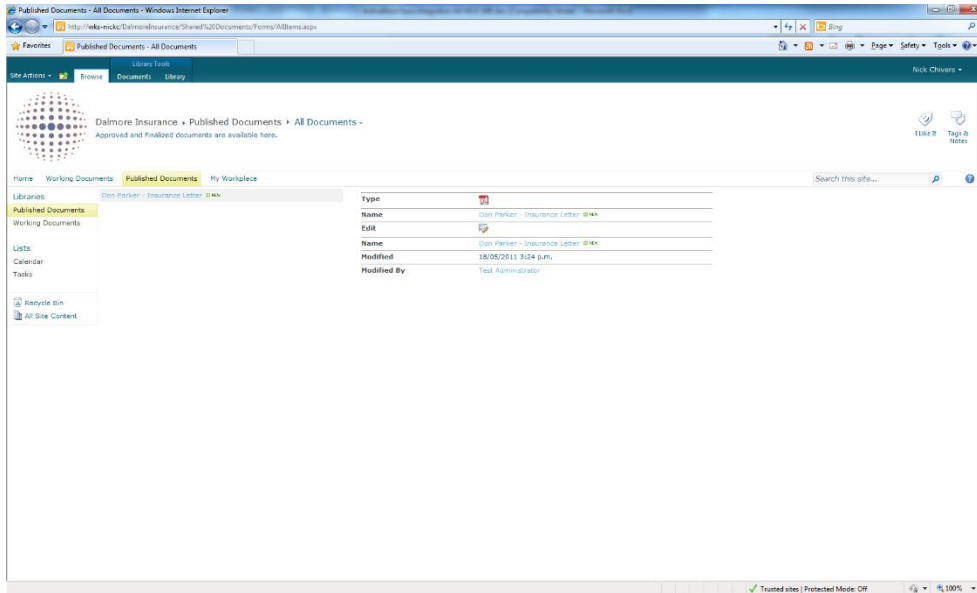
To reiterate the steps that have taken place:

- A user created a document, using an ActiveDocs Template and the ActiveDocs Wizard, from a SharePoint workplace-styled page or from a specialized ActiveDocs SharePoint Document Library (called Working Documents in this example).
- The document was created in the Working Documents document library.
- The Template was associated with an ActiveDocs Workflow which in turn initiated a SharePoint Approval Workflow in the Working Documents document library.
- The SharePoint Approval Workflow started and completed.
- The ActiveDocs Workflow took over again and enabled Finalization of the document.
- The Finalized document in PDF format was placed in the Published Documents SharePoint library.

Alternative process flows could include post-creation editing of the document from the document library, dependent on the user's permissions in SharePoint. Checking the document back into the document library after editing restarts the SharePoint Approval Workflow and synchronizes the ActiveDocs Workflow automatically.

7   Fully Automated Integration

An application often has sufficient information to populate a document without requiring input from an end user. ActiveDocs fully supports this mode of using its Templates, by providing a web service and a simple XML-based job stream for Automated Document Production (ADP).

The XML job stream typically contains the name or ID of the ActiveDocs Template to use, and a collection of Answer data with which to populate the resulting document (as if the Answers had been created by an end user).

As an example, a simple control in a CRM or ERP type of application could be configured to produce a standard letter using an ActiveDocs Template with contextual information such as the current customer's details. On a larger scale, an application producing statements or invoices could also use ActiveDocs Templates to significantly enhance the quality and content of documents.

The application simply creates the Job XML, opens a connection to the ActiveDocs Composition Server's web service, and uses the web service's appropriate method to generate the document.

The Job XML stream may optionally specify precise storage and delivery instructions for the finished document.

The diagram below shows unattended document creation in both modes. In Example 1 the process is initiated by a user of another application with no further input from that user. Example 2 shows another application initiating the process itself.
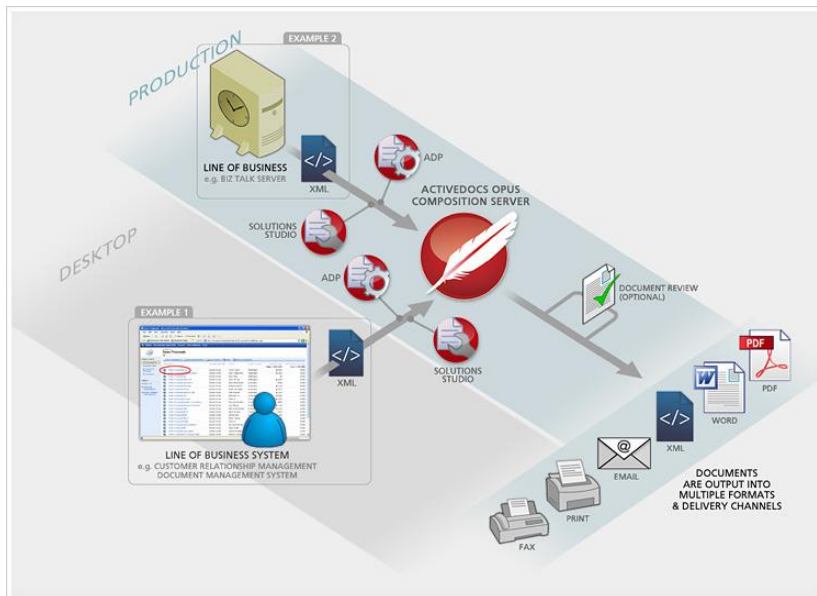
Further details may be found in ActiveDocs' companion whitepaper, "Using ActiveDocs in Automated Mode".

Using fully automated integration with another application requires licensed copies of the ActiveDocs Solutions Studio and ADP (Automated Document Production) Modules, and some customization of the other application. The degree of such customization depends on the required functionality.

8   Conclusion

Using ActiveDocs Templates gives businesses the ability to manage document content and generation to a degree that cannot be matched by traditional methods.

Developed by the business in the familiar Microsoft® Word environment, ActiveDocs Templates add powerful data validation, shared content, and rule-based optional content.

ActiveDocs Templates help to ensure that documents are accurate and standardized across the organization, while allowing the content to be precisely focused and customized to be fit for purpose.

Integrating ActiveDocs with incumbent data sources and applications for interactive or automated use extends the business' ability to create and manage documents across the enterprise.